

## **Mobile Applications (V05)**

### **Description**

Contestants will develop a mobile phone and/or tablet application based upon the given scenario. Permitted platforms include and are limited to Google Android™, Apple iOS™, and Microsoft Windows Phone™. The application will be pre-submitted for technical judging. Contestants will then be required to present their application to a panel of technical judges.

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- There are no restrictions on number of entries per chapter or per state.

### **Event Registration**

- Advisors register contestants for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, “Virtual Event Registration.” Enter the name of each student into the “notes” field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

### **Entry Fee**

There will be a \$10 fee for each entry (invoiced during event registration).

### **Competencies**

- Implement system analysis and design concepts
- Develop a project plan and timeline
- Demonstrate knowledge of how to resolve program implementation and deployment issues
- Apply Google Android™, Apple iOS™, or Microsoft Windows Phone™ language specific programming tools/techniques to create a mobile application
- Demonstrate and employ computer language concepts to include Object Oriented, Structured and Procedural techniques
- Utilize variables, assignment statements, mathematical operators and mathematical concepts to include arithmetic, algebraic and trigonometric functionality in the solution as needed
- Demonstrate the use of design and color principles to create GUI for a mobile device.
- Employ database skill sets to manage data
- Apply programming concepts such as sequential file access and I/O operations.
- Use internal and external function and/or procedure calls.
- Use internal programming documentation.
- Create User Input Controls to accept input from users
- Employ Decision Making Controls as needed
- Include icons, images and other graphic objects as needed
- Utilize list, arrays and iteration structures to solve programming problems as needed

## Specifications

- The contestant will research the topic, and then create a mobile application based upon the topic presented in this document. The contestant will create the application in a platform of the contestants choice from the list of platforms designated in the technical specifications
- The projects may be cross platform compatible between Google's Android™, Apple iOS™, or Microsoft Windows Phone™ platforms.
- The application may *not* be deployed as a web application delivered over HTTP.
- The application must be installed on the contestant's mobile device.
- The contestant must demonstrate the application from the contestants mobile device for presentation to the technical judges at the region, state, and national level (projection equipment may be used).
- The application need NOT be available for download from a digital-distribution multimedia-content service such as Google Play™, or Apple App Store™.
- Final project components must be uploaded to a file sharing site (Dropbox, etc.) and should include:
  - a written description of the project and details of a design concept
  - source code (as a zipped root folder)
  - application screenshots
- It is recommended that you set the access level of your project to one of BPA's recommended settings. See page 15 for settings recommendations.
- Submit the [Individual Entry Form](#), including the URL to the project and [Release Form](#)(s) in a combined PDF document to <http://www.bpa.org/submit> no later than 11:59 p.m. Eastern Time on February 22, 2017.
- Contestants will receive an automated response confirmation at the time of submission. Individual confirmation of receipt cannot be provided by the National Center.
- No fax or mailed copies will be accepted.
- No exceptions can be made for missed due dates.
- Multiple submissions cannot be accepted.
- No changes can be made to the project after the date of submission.
- The contestant is responsible for securing a [Release Form](#) from any individual whose name, photograph, and/or other information is included on in the mobile application.
- All text/graphics materials must follow the organization's [Graphic Standards](#) and make proper use of the logo and/or organization's name, if used. (Refer to the [Graphic Standards](#) in the [Style & Reference Manual](#).) National Business Professionals of America grants permission for the use of the logo and/or organization's name.
- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The [Style & Reference Manual](#) contains guidelines for Copyright and Fair Use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.
- Contestants' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to contestants that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will sent to those contestants eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.

- The ten contestants with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten contestants may participate in the Virtual Event Forum for all participants and advisors.

## Topic

### My School App

The mobile device has become an essential device in today's world. Mobile applications allow us to do all types of tasks from our devices. We use the mobile device's GPS and map system to find directions from one place to another. More and more businesses and institutions are building mobile applications to provide information and services to members and customers. Your task in this project is to build a mobile application for your school that will provide information and services that may be used by students, administrators, parents and visitors.

Possible features may include:

- Campus map
  - Evacuation plans
  - WiFi based maps to find locations around campus
  - Accessibility
- Campus news
- Announcements
- Alerts
- Calendar updates

## Method of evaluation

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

## Length of event

No more than three (3) minutes set-up

No more than ten (10) minutes presentation time room

No more than five (5) minutes judges' questions

**Please note: Those contestants who wish to receive judges' comments must submit an e-mail address at the time of submission.**

This event sponsored by:



## Mobile Applications (V05)

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

### Technical Scoring Rubric

	Below Average	Average	Good	Excellent	Points Awarded
<b>TECHNICAL POINTS</b>					
<b>User Interface</b>					
Grammar, Spelling, Punctuation, and Usage	5	10	15	20	
o Content without errors/No copyright violations	(3+ errors)	(2 errors)	(1 error)	(0 errors)	
Work is original, innovative and unique	1-5	6-10	11-15	16-20	
Graphic design is optimized for use on mobile devices	1-5	6-10	11-15	16-20	
Effective and aesthetic use of color, typography, and graphics	1-5	6-10	11-15	16-20	
Interface adheres to platform interface guidelines	1-5	6-10	11-15	16-20	
Interface is clear, uncluttered and easily understood	1-5	6-10	11-15	16-20	
<b>TOTAL USER INTERFACE (120 points maximum)</b>					
<b>Code and Data</b>					
Application makes use of at least one (1) of the permitted platforms: Google Android, Apple iOS, or Microsoft Windows Phone	0 (No)			20 (Yes)	
Code is clear, readable and well structured	1-5	6-10	11-15	16-20	
Code demonstrates clear understanding of object-oriented programming and design patterns	1-5	6-10	11-15	16-20	
Code is utilized to access location services/GPS, contacts, and other proximity-based API/developer tools.	1-5	6-10	11-15	16-20	
Code is well-documented	1-5	6-10	11-15	16-20	
<b>TOTAL CODE AND DATA (100 points maximum)</b>					
<b>User Functionality</b>					
Application runs on and/or deploys to a smartphone or tablet device running the chosen permitted platform	1-5	6-10	11-15	16-20	
Application loads and accurately retrieves nearby locations	1-5	6-10	11-15	16-20	
Application retrieves users' contacts based on their location	1-5	6-10	11-15	16-20	
Application allows user to find additional information about location(s), such as reviews / directions / special offers	1-5	6-10	11-15	16-20	
Application contains additional functionality (ranking system, friend request, comments, chat/call functionality, open in browser, etc.)	1-5	6-10	11-15	16-20	
<b>Total User Functionality (100 points maximum)</b>					
<b>Project Plan</b>					
Grammar, Spelling, Punctuation w/o errors.	1-5	6-10	11-15	16-20	
Plan adequately details the how contestant will meet project requirements within the time allotted	1-5	6-10	11-15	16-20	
<b>TOTAL PROJECT PLAN (40 points maximum)</b>					
<b>TOTAL TECHNICAL POINTS (360 points maximum)</b>					

## Mobile Applications (V05)

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

### Presentation Scoring Rubric

	Below Average	Average	Good	Excellent	Points Awarded
<b>PRESENTATION POINTS</b>					
Ability to explain development/design process	1-5	6-10	11-15	16-20	
Ability to demonstrate how the application works through the use of the User Interface	1-5	6-10	11-15	16-20	
Ability to explain the logical design of application and design patterns used	1-5	6-10	11-15	16-20	
Ability to explain the code structures that retrieve locations via GPS services and contacts via proximity	1-5	6-10	11-15	16-20	
Ability to explain the code structures that allow for additional functionality (ranking system, friend request, comments, chat/call functionality, open in browser, etc.)	1-5	6-10	11-15	16-20	
Offered clear and direct responses to interview questions	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Presentation quality/style	1-5	6-10	11-15	16-20	
<b>TOTAL PRESENTATION POINTS (160 points maximum)</b>					

<b>SPECIFICATION POINTS:</b> All points or none per item are awarded per item.		Points Awarded
Equipment set-up lasted no more than three (3) minutes	5	
Presentation lasted no more than ten (10) minutes	10	
Contestant prepared appropriate equipment and documentation prior to presentation	5	
<b>TOTAL SPECIFICATION POINTS (20 points maximum)</b>		

**TOTAL MAXIMUM POINTS = 540**

## **Promotional Photography (V06)**

### **Description**

Students will demonstrate their skill and creative vision using a DSLR and image editing. This national event will be submitted and judged virtually. Awards will be presented at the National Leadership Conference.

### **Eligibility**

Any student member may enter this event.

### **Topic**

Professionals Business Associates will be hosting a career fair. They have hired you, as a photographer, to take the photos for their promotional material, which will be used in brochures and flyers to promote the event. They need a portrait photo in portrait orientation, a leading lines photo, and a photo to represent the career fair.

### **Event Registration**

- Advisors register members for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, “Virtual Event Registration.” Enter the name of each student into the “notes” field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

### **Entry Fee**

There will be a \$10 fee for each entry (invoiced during event registration).

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- There are no restrictions on number of entries per chapter or per state.

### **Competencies**

#### **Business Professionals of America Essential Skills**

- Demonstrate effective written and oral communication skills.
- Demonstrate critical thinking skills to make decisions and to solve problems.
- Demonstrate professionalism and ethical behavior.
- Demonstrate effective leadership and teamwork skills.
- Conduct accurate research using various resources and methods.
- Demonstrate appropriate technology concepts and digital citizenship.
- Demonstrate knowledge of employability skills.
- Develop products using creativity and innovation.
- Demonstrate skills needed to function effectively in today's global economy.
- Perform mathematical calculations.

#### **Information Technology Common Standards**

- Utilize digital tools to gather, evaluate, and use information.
- Demonstrate a sound understanding of technology concepts, systems, and operations.
- Design and produce quality IT product/service.

- Explain how IT increases business productivity and effectiveness.
- Demonstrate an understanding of project management concepts in IT.
- Explain the key functions and applications of software.
- Demonstrate an understanding of how new IT technologies influence business practices.
- Demonstrate technical knowledge of the Internet.
- Demonstrate knowledge of basic web page design and functioning.

### Event Specific Skills

- Apply basic camera techniques
- Demonstrate technical proficiency in the areas of proper focus.
- Demonstrate knowledge of lighting techniques.
- Demonstrate knowledge of exposure.
- Demonstrate the ability to use creative compositional techniques.
- Demonstrate knowledge of digital editing.
- Demonstrate ability to print digital images.
- Apply knowledge of software, equipment, and skills related to photography.
- Demonstrate knowledge of copyright laws.

### Specifications

- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The *Style & Reference Manual* contains guidelines for Copyright and Fair Use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.
- Submit the [Individual Entry Form](#), all three (3) final photos and Release Form(s) in a combined PDF document to <http://www.bpa.org/submit> no later than 11:59 p.m. Eastern Time, on February 8, 2017.
  - **NOTE: Member ID will be required for all submissions.**
- No fax or mailed copies will be accepted.
- No exceptions can be made for missed deadlines due to incorrect submission or technical difficulties.
- Multiple submissions cannot be accepted.
- Materials from non-registered contestants, those missing contestant number and/or projects received after the deadline will not be accepted.
- Photos with any type of text on the photo will not be accepted.
- Photographs must be in digital format. The photograph must be taken with a digital camera; no scans of negatives, transparencies, or photographic prints are acceptable. Each file must be no larger than 5 megabytes must be in JPEG or JPG format, and must be at least 1,600 pixels wide (if a horizontal image) 1,600 pixels tall (if vertical image) OR Image Size must have a long dimension of at least 1,000 pixels and no more than 3,000 pixels.
- The photograph, each in its entirety, must be a single work of original material taken by the contest entrant.
- Only minor burning, dodging and/or color correction is acceptable, as are hand tinting and cropping.
- Photographs must not constitute copyright infringement or fraud.
- Watermarks are not acceptable.
- Photos may not be edited using mobile app software.
- The contestant is responsible for securing a release form from any person whose image is used in the production.

- Contestants' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to contestants that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will be sent to those teams eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.
- Contestants will be assigned to sections prior to their preliminary presentation.
- The top two contestants from each section will move to a final presentation.
- Students must display their original and final photo during their presentations and may use digital presentation tools (i.e., PowerPoint) if desired or unmounted photos. Photos must be 8"x10".
- For those students advancing to the National Showcase, photos must meet the following specifications:
  - Display shows original photo on 5 inches by 7 inches and final photo on 8 inches by 10 inches photo paper, dry-mounted on a board no larger than 24 inches by 18 inches.
  - Photos can be mounted on the board horizontally or vertically.
  - You may print in glossy or matte
  - All 3 photos must be mounted on one board that will fit on an easel for the showcase
- Mount the photos ONLY on the board. Please do not include any text or names, borders, stickers, etc.
- The ten contestants with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten contestants may participate in the Virtual Event Forum for all participants and advisors.

### **Method of evaluation**

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

### **Length of event**

No more than three (3) minutes set-up time

No more than seven (7) minutes presentation time

No more than five (5) minutes judges' questions

**Please note: Those contestants who wish to receive judges' comments must submit an e-mail address at the time of submission.**

This event is sponsored by:





**Promotional Photography (V06)**

Judge Number \_\_\_\_\_

Team Number \_\_\_\_\_

**Technical Scoring Rubric**

Contestant Violated the Copyright and/or Fair Use Guidelines	<input type="checkbox"/> Yes (Disqualification)	<input type="checkbox"/> No
If yes, please stop scoring and provide a brief reason for the disqualification below:		

Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Photo shows imagination, creativity, and originality	1-5	6-10	11-15	16-20	
Photo is sharp and well-focused	1-5	6-10	11-15	16-20	
Photo gains attention and has eye appeal	1-5	6-10	11-15	16-20	
Photo shows use of proper lighting and exposure	1-5	6-10	11-15	16-20	
Photo delivers pleasing selection and arrangement of subjects within the picture area	1-5	6-10	11-15	16-20	
Photo shows proper image manipulation techniques	1-5	6-10	11-15	16-20	
<b>TOTAL TECHNICAL POINTS (120 points maximum)</b>					

## Promotional Photography (V06)

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

### Presentation Scoring Rubric

Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Oral presentation/stage presence/delivery	1-5	6-10	11-15	16-20	
Content of presentation	1-5	6-10	11-15	16-20	
Effectiveness of presentation	1-5	6-10	11-15	16-20	
Answers to judges' questions	1-5	6-10	11-15	16-20	
<b>TOTAL PRESENTATION POINTS (80 points maximum)</b>					

### Specification Scoring Rubric

<b>SPECIFICATION POINTS:</b> All points or none per item are awarded per item.		Points Awarded
Set-up lasted no longer than three (3) minutes	10	
Presentation lasted no longer than seven (7) minutes	10	
Contestant name does not appear on submitted output	10	
<b>TOTAL SPECIFICATION POINTS (30 points maximum)</b>		

**TOTAL MAXIMUM POINTS = 230**

## **Software Engineering Team (V03)**

### **Description**

Teams will collaborate on the engineering of a computer software application that performs tasks and operations as outlined in the provided topic. Project submissions will consist of software source code and assets in addition to a functional executable version of the application. Submissions will be judged on technical merit by software engineering professionals. Teams will be further required to formally present their project to a panel of judges via videoconference, and the presentation will be judged independently of the project's technical merits.

### **Event Registration**

- Advisors register teams for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, "Virtual Event Registration." Enter the name of each student into the "notes" field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

**Teams must also register their participation at the event website at [www.bpatechnical.org](http://www.bpatechnical.org).** Each team must choose a name for their project at registration time, and provide the names and membership numbers of each participant. Team advisors will be sent a copy of the registration. The event website will publish all event news and updates, and all project submissions will be taken via the website.

### **Entry Fee**

There will be a \$20 fee for each entry.

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- A team will consist of 2-4 members.
- There are no restrictions on number of entries per chapter or per state.

### **Competencies**

#### **Business Professionals of America Essential Skills**

- Demonstrate effective written and oral communication skills.
- Demonstrate critical thinking skills to make decisions and to solve problems.
- Demonstrate professionalism and ethical behavior.
- Demonstrate effective leadership and teamwork skills.
- Conduct accurate research using various resources and methods.
- Demonstrate appropriate technology concepts and digital citizenship.
- Demonstrate knowledge of employability skills.
- Develop products using creativity and innovation.

#### **Information Technology Common Standards**

- Utilize digital tools to gather, evaluate, and use information.
- Demonstrate a sound understanding of technology concepts, systems, and operations.
- Design and produce quality IT product/service.
- Demonstrate an understanding of project management concepts in IT.

- Demonstrate an understanding of how new IT technologies.
- Demonstrate technical knowledge of the Internet.

### **Event Specific Skills**

- Apply technical skills in the given programming languages to develop the system of applications required.
- Evaluate and delegate responsibilities needed to perform required tasks as a team.
- Develop a project plan and timeline.
- Apply problem solving techniques.
- Implement system analysis and design concepts.
- Use internal programming documentation.
- Use object-oriented programming concepts and techniques.
- Demonstrate knowledge of how data is organized in software development.
- Apply programming concepts such as sequential file access, databases, and I/O operations.
- Use internal and external function and/or procedure calls.

### **Technical Specifications**

Minimum functionality required:

- Interactive game environment
- Menu interface for non-gameplay user interaction (e.g. starting game, resuming game, choosing levels, exiting the game.)
- On-screen HUD for display of vital gameplay information
- Minimum average framerate of 30 frames-per-second (FPS)
- Serialization of game state to local filesystem or permitted database (see below) for saving and resumption of gameplay sessions.

Technology Requirements:

The following languages/frameworks are permitted:

- Java 6 or higher
- Javascript (server technologies such as node.js only; clients must not be web-based)
- Python 2.6+
- Ruby 1.8.6+
- Microsoft C#
- Objective-C / Cocoa

The following database systems are permitted (but are optional):

- Oracle Express 11g
- Microsoft SQL Server
- Oracle MySQL
- PostgreSQL
- SQLite
- JavaDB (Derby)

The use of game development frameworks (e.g. XNA, pygame, cocos2d, et al.) is permitted if, and only if, the framework is freely available for educational or non-profit use. The use of paid proprietary development frameworks is expressly prohibited. Additionally, Realm Crafter and other “programming light” tools that provide a ready-made gaming engine and/or graphical assets are also prohibited. Any submission using a game development framework must clearly show the extent of original work done via source code comments.

## Event Specifications

- Event registration shall open on September 1, 2016 at 12:01 a.m. Eastern Time. Participating students will register via the event website, and each participant's BPA membership ID number from the national registration database shall be required for event registration. Registration shall close on November 16, 2016 at 11:59 p.m. Eastern Time.
- The final project submission deadline will be February 22, 2017 at 11:59 p.m. Eastern Time.
- All projects will be submitted via [www.bpatechnical.org](http://www.bpatechnical.org). **See Note on Final Project Submission for more details.**
- Teams' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to contestants that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will be sent to those teams eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via the event website and e-mail notification.
- During the presentation phase of the event, school names shall not be visible on any equipment, screen savers, or any other content displayed before judges.
- A written [Release Form](#) shall be obtained by teams from any individual whose work, name, likeness or personal information is used as part of an event submission.
- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The [Style & Reference Manual](#) contains guidelines for Copyright and Fair Use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.
- The ten teams with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten teams may participate in the Virtual Event Forum for all participants and advisors.

### NOTE ON FINAL PROJECT SUBMISSION

All project documents including, but not limited to: source code, game manual, project plan, resources, libraries, etc. must be packaged together in a compressed format and uploaded to a file sharing site (e.g. Dropbox, etc.). The [Team Entry Form](#) and [Release Form\(s\)](#) (as a combined .pdf file) are the only things that you will upload to [bpatechnical.org](http://www.bpatechnical.org). You MUST note the URL for your compressed project files, including any necessary login information, if applicable, on your [Team Entry Form](#).

We strongly recommend that participants use integrated development environments (e.g. Microsoft Visual Studio, Eclipse, Oracle NetBeans, Apple XCode).

**Method of evaluation**

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

**Length of event**

No more than three (3) minutes set-up time

No more than ten (10) minutes presentation time

No more than ten (10) minutes judges' questions

**Topic**

After another successful year in the game publishing industry, Cognitive Thought Media is now looking to make a new addition to their game lineup. The Palo Alto, CA based publisher has decided that in order to get ahead in the entertainment industry, they need to create a new intellectual property.

Your executive producer at Cognitive Thought Media has asked you to produce an original RPG (Role-Playing Game). You are encouraged to not create a clone of existing games, but instead take what makes the games in the Pokemon®, Final Fantasy, Gauntlet, The Legend of Zelda, Diablo, and The Elder Scrolls series entertaining and create a unique game using your own themes. Titles can be either 2D or 3D, or a mix. Be creative!

**NOTE TO CONTESTANTS**

This is NOT an all or nothing event. You will be given credit for portions of the event you complete. You should therefore complete as many tasks as possible. You will be required to work as a team in order to complete all tasks. The presentation aspect of this contest will be done over Skype, iChat, or Google Hangouts so be prepared for a video conference style presentation.

## Software Engineering Team (V03)

Judge Number \_\_\_\_\_

Team Number \_\_\_\_\_

### **PROJECT PREVIEW SCORING (100 POINTS)**

Items To Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Explains design of media elements (sounds, graphics, etc.)	1 – 3	4 – 10	11 – 20	21 – 25	
Explains design of game and game mechanics	1 – 3	4 – 10	11 – 20	21 – 25	
Explains project workflow and team roles	1 – 3	4 – 10	11 – 20	21 – 25	
Explains how the code will be structured	1 – 3	4 – 10	11 – 20	21 – 25	

### **TECHNICAL SCORING (475 POINTS)**

Items To Evaluate	Below Average	Average	Good	Excellent	Points Awarded
<b>Object-Oriented Programming (100 points)</b>					
Proper class design and organization	1 – 3	4 – 15	16 – 27	28 – 30	
Code reuse (minimize code duplication)	1 – 2	3 – 10	11 – 18	19 – 20	
Use of encapsulation	1 – 2	3 – 10	11 – 18	19 – 20	
Use of inheritance	1 – 3	4 – 15	16 – 27	28 – 30	
<b>Design Analysis (40 points)</b>					
Data Flow Diagram(s)	1 – 4	5 – 20	21 – 36	37 – 40	
<b>Code Documentation (70 points)</b>					
Comment blocks explaining classes, methods and complex sections of logic	1 – 4	5 – 20	21 – 36	37 – 40	
Provide an in-game tutorial or walkthrough for instructional purposes	1 – 3	4 – 15	16 – 27	28 – 30	

Items To Evaluate	Below Average	Average	Good	Excellent	Points Awarded
<b>Crash Reporting (50 points)</b>					
Generation of crash reports (via text file or dialog box) on application failure	1 – 3	4 – 15	16 – 27	28 – 30	
Option to email crash report on application failure	1 – 2	3 – 10	11 – 18	19 – 20	
<b>Data Driven Design (90 points)</b>					
Application makes use of data driven design for runtime settings via flat file or database	1 – 3	4 – 15	16 – 27	28 – 30	
Session data (saved games, high scores, etc.) are stored via flat file or database for later reuse	1 – 3	4 – 15	16 – 27	28 – 30	
Application makes use of data driven design for game content via flat file or database	1 – 3	4 – 15	16 – 27	28 – 30	
<b>Error Handling (65 points)</b>					
Proper use of error handling techniques	1 – 2	3 – 10	11 – 18	19 – 20	
Proper use of exception handling techniques	1 – 2	3 – 10	11 – 18	19 – 20	
Clear user alerts on recoverable and non-recoverable error conditions	1 – 3	4 – 10	11 – 20	21 – 25	
<b>Logging (60 points)</b>					
Log system events to dedicated text file for debugging	1 – 3	4 – 15	16 – 27	28 – 30	
Log system errors to dedicated text file	1 – 3	4 – 15	16 – 27	28 – 30	



## TECHNICAL SPECIFICATIONS (75 POINTS)

NOTE: Specification points are awarded once per team by the event proctor, not by individual judges. Teams will be awarded points for specifications in full or not at all, i.e., these are “all or nothing” point awards.

Evaluation Item		Points Awarded
Project submission includes a manual containing directions for compiling/building and explains the features of the submission	50	
Installer included for project application.	25	

## GAMEPLAY SCORING (150 POINTS)

Items To Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Interface Design	1 – 3	4 – 15	16 – 27	28 – 30	
Inclusion of Audio	1 – 3	4 – 15	16 – 27	28 – 30	
Logical Controls	1 – 3	4 – 15	16 – 27	28 – 30	
Amount of Content	1 – 3	4 – 15	16 – 27	28 – 30	
Lasting Appeal	1 – 3	4 – 15	16 – 27	28 – 30	

## PRESENTATION SCORING (200 POINTS) (AVERAGED PER JUDGE)

Items To Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Explain the design and development process from start to finish	1 – 5	6 – 10	11 – 15	16 – 20	
Explain the flow or data (game saves, high scores, etc.)	1 – 5	6 – 10	11 – 15	16 – 20	
Explain the design of game and game mechanics	1 – 5	6 – 10	11 – 15	16 – 20	
Explain the use and design of media elements (sounds, graphics, etc.)	1 – 5	6 – 10	11 – 15	16 – 20	
Explain the software engineering principles utilized	1 – 5	6 – 10	11 – 15	16 – 20	
Explain how the game is innovative	1 – 5	6 – 10	11 – 15	16 – 20	
Team offered clear and direct responses to interview questions	1 – 5	6 – 10	11 – 15	16 – 20	
Demonstrate the entire team's role in the development of the game	1 – 5	6 – 10	11 – 15	16 – 20	
Presentation quality and style	1 – 5	6 – 10	11 – 15	16 – 20	
Presentation lasted no more than 10 minutes	1 – 5	6 – 10	11 – 15	16 – 20	

## EVENT SCORING TOTALS

NOTE: Technical specification points are awarded once per team by the event proctor, not by individual judges. Final Project Preview, Technical, Gameplay, and Presentation points are awarded by the average judge score for that category.

Scoring Category	Points Awarded
Project Preview Points	100
Technical Scoring Points	475
Gameplay Points	150
Presentation Points	200
Technical Specifications Points	75
<b>TOTAL (1,000 points maximum)</b>	

## **Start-up Enterprise Team-Pilot (V08)**

### **Description**

Develop an operating plan and organizational structure to initiate a small business. Teams are to assume they are presenting their products/services to potential buyers.

### **Event Registration**

- Advisors register teams for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, “Virtual Event Registration.” Enter the names of all team members into the “notes” field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

### **Entry Fee**

There will be a \$20 fee for each entry (invoiced during event registration).

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- A team will consist of 2-4 members.
- There are no restrictions on number of entries per chapter or per state.

### **Competencies**

- Demonstrate knowledge and understanding of entrepreneurship
- Communicate research in a clear and concise manner both orally and in writing
- Demonstrate effective persuasive and informative communication and presentation skills
- Identify and utilize internal and external resources
- Develop a written business plan for a start-up business
- Identify customer base including consumer and organizational markets and demographics
- Identify customer relations or markets
- Demonstrate successful price selection including the reasoning and methods used in determining the price
- Competitors will provide the reasoning and justification for the loan amount being requested to establish their business.
- In addition, an analysis of the necessary financial data required to establish their business

### **Specifications**

- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The *Style & Reference Manual* contains guidelines for copyright and fair-use. Participant(s) will be DISQUALIFIED for violations of the above guidelines or of state or Federal copyright law.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.

- Submit the [Team Entry Form](#) along with the Business Plan and supporting documentation in a combined PDF document to <http://www.bpa.org/submit>, no later than 11:59 p.m., on February 22, 2017.

**NOTE: Member ID will be required for all submissions.**

- Teams' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to contestants that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will be sent to those contestants eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.
- Information in the business plan must be authentic; however, contestants may choose to use a fictitious address and telephone number.
- Teams will demonstrate oral communication skills.
- Entries outlining the purchase of a franchise do not satisfy the topic and are subject to disqualification.
- The business plan must not exceed fifteen (15) pages, single-sided (excluding the Title page, Table of Contents, and supporting documentation) and must follow the Business Plan format in the [Style & Reference Manual](#).
- Any business plan submitted beyond the maximum number of pages will be disqualified.

The completed plan must include, but is not limited to, the following:

- Title Page and Table of Contents  
**(excluded from 15 page maximum)**
- Executive Summary
- Description of proposed business
- Objectives of the business
- Proposed business strategies
- Product(s) and/or service(s) to be provided
- Management and ownership of the business
- Marketing analysis
- Financial analysis
- Supporting documentation  
**(excluded from 15 page maximum)**
  - Financial analysis (include requested loan amount, income statement, balance sheet, cash flow statement, and other analyses)
  - Supporting documents (research, charts, brochures, résumés, etc.)
- Contestants will receive an automated response confirmation at the time of submission.
- Individual confirmation of receipt cannot be provided by the National Center.
- No fax or mailed copies will be accepted.
- No exceptions can be made for missed deadlines due to incorrect submission or technical difficulties.
- Multiple submissions cannot be accepted.
- The limit for file size is five (5) MB.
- No changes can be made to the project after the date of submission.

- It is the policy of Business Professionals of America to comply with state and federal copyright laws, which are available on the Web at [www.copyright.gov/title17/circ92.pdf](http://www.copyright.gov/title17/circ92.pdf). Use the Copyright and Fair Use Guidelines in the *Style & Reference Manual*.
- The ten teams with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten teams may participate in the Virtual Event Forum for all participants and advisors.

### **Method of evaluation**

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

### **Length of event**

No more than three (3) minutes set-up

No more than ten (10) minutes presentation time

No more than five (5) minutes judges' questions

**Start-up Enterprise Team (V08)**

Judge Number \_\_\_\_\_

Team Number \_\_\_\_\_

**Technical Scoring Rubric**

Team Violated the Copyright and/or Fair Use Guidelines	<input type="checkbox"/> Yes (Disqualification)	<input type="checkbox"/> No
If yes, please stop scoring and provide a brief reason for the disqualification below:		
Team followed topic	<input type="checkbox"/> Yes	<input type="checkbox"/> No (Disqualification)

Written Business Plan Evaluation	Below Average	Average	Good	Excellent	Points Awarded
Team submitted the correct information and in the correct format. <ul style="list-style-type: none"> <li>• <a href="#">Team Entry Form</a> - .pdf format (must be keyed but does not have to be signed for pre- submission)</li> <li>• Business Plan and supporting documentation - .pdf format</li> </ul> <p style="text-align: center;"><i>All points or none are awarded by the technical judge.</i></p>				10	
Executive summary for business	1-5	6-10	11-15	16-20	
Description of proposed business	1-5	6-10	11-15	16-20	
Objectives of business	1-5	6-10	11-15	16-20	
Proposed business strategies	1-5	6-10	11-15	16-20	
Product(s) and/or service(s) description	1-5	6-10	11-15	16-20	
Management and ownership of the business	1-5	6-10	11-15	16-20	
Marketing analysis	1-5	6-10	11-15	16-20	
Financial Analysis Included requested loan amount, income statement, balance sheet, cash flow statement, and other analyses	1-5	6-10	11-15	16-20	
Overall appearance, conciseness, and completeness	1-5	6-10	11-15	16-20	
<b>TOTAL TECHNICAL POINTS (190 points maximum)</b>					

## **Start-up Enterprise Team-Pilot (V08)**

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

### **Presentation Scoring Rubric**

<b>Oral Presentation Evaluation</b>	<b>Below Average</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>	<b>Points Awarded</b>
Opening and summary	1-5	6-10	11-15	16-20	
Content of presentation	1-5	6-10	11-15	16-20	
Effectiveness of presentation	1-5	6-10	11-15	16-20	
Supporting documentation	1-5	6-10	11-15	16-20	
Answers to judges' questions	1-5	6-10	11-15	16-20	
<b>TOTAL PRESENTATION POINTS (100 points maximum)</b>					

### **Specification Scoring Rubric**

<b>SPECIFICATION POINTS:</b> All points or none per item are awarded by the proctor per contestant, not per judge.		<b>Points Awarded</b>
Set-up lasted no longer than three (3) minutes - 5 points Presentation lasted no longer than ten (10) minutes - 5 points	10	
Plan used the correct format for Title Page, Table of Contents, and Business Plan according to the <a href="#"><i>Style &amp; Reference Manual</i></a>	10	
<b>TOTAL SPECIFICATION POINTS (20 points maximum)</b>		

**TOTAL MAXIMUM POINTS = 310**

## **Virtual Multimedia and Promotion - Individual (V01)**

### **Description**

Create a **1:00 to 2:30** minute digital promotion based upon the assigned topic. This national event will be submitted and judged virtually. Awards will be presented at the National Leadership Conference.

### **Topic**

A new business has come to town and needs to make a presence. This company is looking for strategies to grow and expand. Develop materials to promote this company successfully in the area.

### **Event Registration**

- Advisors register members for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, “Virtual Event Registration.” Enter the name of each student into the “notes” field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

### **Entry Fee**

There will be a \$10 fee for each entry (invoiced during event registration).

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- There are no restrictions on number of entries per chapter or per state.

### **Competencies**

#### **Business Professionals of America Essential Skills**

- Demonstrate effective written and oral communication skills.
- Demonstrate critical thinking skills to make decisions and to solve problems.
- Demonstrate professionalism and ethical behavior.
- Demonstrate effective leadership and teamwork skills.
- Conduct accurate research using various resources and methods.
- Demonstrate appropriate technology concepts and digital citizenship.
- Demonstrate knowledge of employability skills.
- Develop products using creativity and innovation.
- Demonstrate skills needed to function effectively in today's global economy.
- Perform mathematical calculations.

#### **Information Technology Common Standards**

- Utilize digital tools to gather, evaluate, and use information.
- Demonstrate a sound understanding of technology concepts, systems, and operations.
- Design and produce quality IT product/service.
- Explain how IT increases business productivity and effectiveness.
- Demonstrate an understanding of project management concepts in IT.
- Explain the key functions and applications of software.
- Demonstrate an understanding of how new IT technologies influence business practices.
- Demonstrate technical knowledge of the Internet.
- Demonstrate knowledge of basic web page design and functioning.



## Event Specific Skills

- Develop a project plan and timeline.
- Apply problem solving techniques.
- Demonstrate knowledge of multimedia and promotion.
- Demonstrate utilization of various audio and video software applications.
- Demonstrate knowledge of graphic design including color, animation, audio, and video.

## Specifications

- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The *Style & Reference Manual* contains guidelines for Copyright and Fair Use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.
- Completed projects may be uploaded to a video/file sharing site (Vimeo, YouTube, or Dropbox, etc.) It is recommended that you set the access level of your project to one of BPA's recommended settings. See page 15 for settings recommendations.
- Submit the [Individual Entry Form](#) including the URL to the project and [Release Form\(s\)](#) in a combined PDF document to: <http://www.bpa.org/submit>, no later than 11:59 pm, on February 22, 2017.
  - **NOTE: Member ID will be required for all submissions.**
- Completed final product dimensions should be *at least* 720 x 480.
- Participants must include the BPA logo, tagline, and colors in the video.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.
- The contestant is responsible for securing a [Release Form](#) from any person whose image is used in the production.
- All text/graphic materials must follow the organization's [Graphic Standards](#) and make proper use of the logo and/or organization's name. (Refer to the [Graphic Standards](#) in the *Style & Reference Manual*.)
- Contestants' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to contestants that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will sent to those contestants eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.
- The ten contestants with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten contestants may participate in the Virtual Event Forum for all participants and advisors.

## Method of evaluation

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

**Length of event**

No more than three (3) minutes set-up

No more than ten (10) minutes presentation time

No more than five (5) minutes judges' questions

**Please note: Those contestants who wish to receive judges' comments must submit an e-mail address at the time of submission.**

## Virtual Multimedia and Promotion Individual (V01) Scoring Rubric/Rating Sheet

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

Contestant Violated the Copyright and/or Fair Use Guidelines	<input type="checkbox"/> Yes (Disqualification)	<input type="checkbox"/> No
If yes, please stop scoring and provide a brief reason for the disqualification below:		

Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Production Layout Visual organization is easily understood Aesthetic use of colors and fonts Consistent format	1-5	6-10	11-15	16-20	
Graphics/Media Use Enhances assigned topic Creativity Originality of graphics Effective use of innovative technology (may include animations) Use of transitions and continuity must exist in the production	1-5	6-10	11-15	16-20	
Content Depth of research Aligns to topic Effectiveness Supports task and influences audience	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	0 (3+ errors)	5 (2 errors)	10 (1 error)	15 (0 errors)	
<b>TECHNICAL SCORE (255 points maximum)</b>					

## Presentation Scoring Rubric

	Below Average	Average	Good	Excellent	Points Awarded
<b>PRESENTATION POINTS</b>					
Ability to explain development/design process	1-5	6-10	11-15	16-20	
Offered clear and direct responses to interview questions	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Presentation quality/style	1-5	6-10	11-15	16-20	
<b>TOTAL PRESENTATION POINTS (80 points maximum)</b>					

	Points Awarded
<b>SPECIFICATION POINTS: All points or none per item are awarded.</b>	
Submitted required documentation.	10
Adhered to time specifications of 1:00 minute to 2:30 minutes.	10
Video has motion graphics.	10
Adhered to specified dimensions of at least 720 x 480.	10
Conformed to BPA <a href="#">Graphic Standards</a> . Logo and tagline must be used together. Color could be the same either in black, navy, or the official colors.	10
<b>TOTAL SPECIFICATION POINTS (50 points maximum)</b>	

**TOTAL MAXIMUM POINTS = 385**

## **Virtual Multimedia and Promotion - Team (V02)**

### **Description**

Create a **1:00 to 2:30** minute digital promotion based upon the assigned topic. This national event will be submitted and judged virtually. Awards will be presented at the National Leadership Conference.

### **Topic**

Professional Business Associates, who will be hosting an upcoming conference, has requested a corporate training video that helps train employees to properly use social media to market and promote the conference. Also, they would like to include a segment on professional use of personal social media as you represent their company and conference.

### **Event Registration**

- Advisors register teams for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, “Virtual Event Registration.” Enter the names of all team members into the “notes” field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

### **Entry Fee**

There will be a \$20 fee for each entry (invoiced during event registration).

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- A team will consist of 2-4 members.
- There are no restrictions on number of entries per chapter or per state.

### **Competencies**

- Demonstrate effective written and oral communication skills.
- Demonstrate critical thinking skills to make decisions and to solve problems.
- Demonstrate professionalism and ethical behavior.
- Demonstrate effective leadership and teamwork skills.
- Conduct accurate research using various resources and methods.
- Demonstrate appropriate technology concepts and digital citizenship.
- Demonstrate knowledge of employability skills.
- Develop products using creativity and innovation.
- Demonstrate skills needed to function effectively in today's global economy.
- Perform mathematical calculations.

### **Information Technology Common Standards**

- Utilize digital tools to gather, evaluate, and use information.
- Demonstrate a sound understanding of technology concepts, systems, and operations.
- Design and produce quality IT product/service.
- Explain how IT increases business productivity and effectiveness.
- Demonstrate an understanding of project management concepts in IT.
- Explain the key functions and applications of software.
- Demonstrate an understanding of how new IT technologies influence business practices.

- Demonstrate technical knowledge of the Internet.
- Demonstrate knowledge of basic web page design and functioning.

### Event Specific Skills

- Develop a project plan and timeline.
- Apply problem solving techniques.
- Evaluate and delegate responsibilities needed to perform required tasks.
- Demonstrate teamwork skills needed to function in a business setting.
- Demonstrate knowledge of multimedia and promotion.
- Demonstrate utilization of various audio and video software applications.
- Demonstrate knowledge of graphic design including color, animation, audio, and video.

### Specifications

- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The *Style & Reference Manual* contains guidelines for copyright and fair-use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America grants permission for the use of the copyrighted logo and tagline.
- Completed projects may be uploaded to a video/file sharing site (Vimeo, YouTube, or Dropbox, etc.) It is recommended that you set the access level of your project to one of BPA's recommended settings. See page 15 for settings recommendations.
- Submit the [Team Entry Form](#) including the URL to the project and [Release Form](#)(s) in a combined PDF document to: <http://www.bpa.org/submit>, no later than 11:59 pm, on February 22, 2017.
  - **NOTE: Member ID will be required for all submissions.**
- Completed final product dimensions should be *at least* 720 x 480.
- Participants must include the BPA logo, tagline, and colors in the video.
- The team is responsible for securing a [Release Form](#) from any person whose image is used in the production.
- All text/graphic materials must follow the organization's [Graphic Standards](#) and make proper use of the logo and/or organization's name. (Refer to the [Graphic Standards](#) in the *Style & Reference Manual*.)
- Teams' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to teams that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will sent to those teams eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.
- The ten teams with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten teams may participate in the Virtual Event Forum for all participants and advisors.

### Method of evaluation

Application  
 Technical Judges' Rating Sheet  
 Presentation Judges' Rating Sheet

**Length of event**

No more than three (3) minutes set-up

No more than ten (10) minutes presentation time

No more than five (5) minutes judges' questions

**Please note: Those teams who wish to receive judges' comments must submit an e-mail address at the time of submission.**

## Virtual Multimedia and Promotion Team (V02) Scoring Rubric/Rating Sheet

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

Team Violated the Copyright and/or Fair Use Guidelines	<input type="checkbox"/> Yes (Disqualification)	<input type="checkbox"/> No
If yes, please stop scoring and provide a brief reason for the disqualification below:		

Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Production Layout					
Visual organization is easily understood	1-5	6-10	11-15	16-20	
Aesthetic use of colors and fonts	1-5	6-10	11-15	16-20	
Consistent format	1-5	6-10	11-15	16-20	
Graphics/Media Use					
Enhances assigned topic	1-5	6-10	11-15	16-20	
Creativity	1-5	6-10	11-15	16-20	
Originality of graphics	1-5	6-10	11-15	16-20	
Effective use of innovative technology (may include animations)	1-5	6-10	11-15	16-20	
Use of transitions and continuity must exist in the production.	1-5	6-10	11-15	16-20	
Content					
Depth of research	1-5	6-10	11-15	16-20	
Aligns to topic	1-5	6-10	11-15	16-20	
Effectiveness	1-5	6-10	11-15	16-20	
Supports task and influences audience	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	0 (3+ errors)	5 (2 errors)	10 (1 error)	15 (0 errors)	
<b>TECHNICAL SCORE (255 points maximum)</b>					



## Presentation Scoring Rubric

	Below Average	Average	Good	Excellent	Points Awarded
<b>PRESENTATION POINTS</b>					
Ability to explain development/design process	1-5	6-10	11-15	16-20	
Offered clear and direct responses to interview questions	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Presentation quality/style	1-5	6-10	11-15	16-20	
<b>TOTAL PRESENTATION POINTS (80 points maximum)</b>					

	Points Awarded
<b>SPECIFICATION POINTS:</b> All points or none per item are awarded.	
Submitted required documentation.	10
Adhered to time specifications of 1:00 minute to 2:30 minutes.	10
Video has motion graphics.	10
Adhered to specified dimensions of at least 720 x 480.	10
Conformed to BPA <a href="#">Graphic Standards</a> . Logo and tagline must be used together. Color could be the same either in black, navy, or the official colors.	10
<b>TOTAL SPECIFICATION POINTS (50 points maximum)</b>	

**TOTAL MAXIMUM POINTS = 385**

## **Web Application Team (V04)**

### **Description**

The team will create a database-driven Website with server-side functionality. The team is provided with the opportunity to design, build and present a working web application. Teams will be further required to formally present their project to a panel of judges via videoconference, and the presentation will be judged independently of the project's technical merits.

### **Eligibility**

- Any Business Professionals of America student member may enter this event.
- A team will consist of 2-4 members.
- There are no restrictions on number of entries per chapter or per state.

### **Event Registration**

- Advisors register teams for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, "Virtual Event Registration." Enter the names of all team members into the "notes" field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

### **Entry Fee**

There will be a \$20 fee for each entry (invoiced during event registration).

### **Topic**

Where in the World Do You Want to Go?

You are developing a website for a travel company. Your mission is to create a travel website. This website will be a mashup of technology from various sources providing information to a prospective traveler about a location of their choosing. The site should inform the visitor about your travel company, types of services your company will provide, allow the visitor to select a travel location and present information about that location. The site may include the information of your choosing such as current local weather, activities, travel conditions, popular attractions, lodging and transportation information and special offers.

In addition, think about what types of features a travel site should include such as:

- Reservation application
- Photo gallery
- Videos gallery
- Currency converter
- Contact information
- Trip planning calendar

The project should be documented, easy for the visitor to navigate and understand. Create a clever name for your travel company, be creative and imaginative! Most of all have fun with the project!

### **Competencies**

- Demonstrate database development and structured query language (SQL) skills
- Demonstrate application security features
- Demonstrate knowledge of server side scripting and Internet concepts

- Evaluate and delegate responsibilities needed to perform required tasks
- Demonstrate teamwork skills needed to function in a business setting
- Apply database development skills in order to create the back-end of the web application
- Apply Web design skills and standards in order to complete the front-end of the website
- Implement problem-solving techniques
- Describe the process, methodology, and lifecycle of your Web application
- Create an audit trail of how you built your application

**Teams who do not submit an entry that follows this topic will be disqualified.**

### **Specifications**

- Final projects must be uploaded to a file sharing site (Dropbox, etc.) and should include:
  - a written description of the application as a .pdf file
  - the source code (as a zipped root folder)
  - the database schema
- It is recommended that you set the access level of your project to one of BPA's recommended settings. See page 15 for settings recommendations.
- Submit the [Team Entry Form](#), including the URL to the project and [Release Form\(s\)](#) in a combined PDF document to <http://www.bpa.org/submit> no later than 11:59 p.m. Eastern Time on February 22, 2017.
- Contestants will receive an automated response confirmation at the time of submission. Individual confirmation of receipt cannot be provided by the National Center.
- No fax or mailed copies will be accepted.
- No exceptions can be made for missed deadlines due to incorrect submission or technical difficulties.
- Multiple submissions cannot be accepted.
- No changes can be made to the project after the date of submission.
- The website must be available for viewing on the Internet on February 22, 2017. If the ISP is experiencing technical difficulty, the advisor will be contacted and a reasonable amount of time will be provided to solve the problem. No changes can be made to the website after this date. Technical judging of the website will be conducted prior to the NLC.
- The following information must be included in the website: chapter name and number, team member names this information can be included in any format and location.
- The team members must create the conceptual model for the database identifying relationships between tables in the database. Each team will be expected to articulate the design of the database associated with the web application.
- Each team must create forms and associated considerations needed for the scenario.
- Teams may select the database, web server, and middleware solution they prefer. A careful review of the evaluative criteria presented in the competition guidelines will aid in the selection of development technologies. The source code that powers each team's web application will be scrutinized; therefore, it is imperative that team members are capable of answering questions regarding this aspect of the application.
- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The [Style & Reference Manual](#) contains guidelines for Copyright and Fair Use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.

- The event tests the team's ability to write code and incorporate database. As such, application frameworks, such as Drupal, Joomla, DotNetNukes and WordPress cannot be used. IDE's such as Microsoft® Visual Studio/ASP and Dreamweaver are acceptable. Packages that assist the developer to create components, menus and similar such as JavaScript, JQuery and Ajax are acceptable and encouraged. However, downloading third party code to create a major component of a web application, such as a shopping cart in an e-commerce application, is not permissible.
- Code must be original work of team.
- Teams' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to teams that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will sent to those teams eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.
- The ten teams with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten teams may participate in the Virtual Event Forum for all participants and advisors.

### **Method of evaluation**

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

### **Length of event**

No more than three (3) minutes set-up

No more than ten (10) minutes presentation time

No more than ten (10) minutes judges' questions

**Please note: Those teams who wish to receive judges' comments must submit an e-mail address at the time of submission.**

This event sponsored by:



# Web Application Team (V04)

Judge Number \_\_\_\_\_

Team Number \_\_\_\_\_

Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
<b>TECHNICAL POINTS</b>					
<b>Page Design</b>					
Visual organization is easily understood	1-5	6-10	11-15	16-20	
Aesthetic use of colors and fonts	1-5	6-10	11-15	16-20	
Images and page file size have been optimized for performance	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Sufficient contrast between text and background color	1-5	6-10	11-15	16-20	
<b>Total Page Design Points (100 points maximum)</b>					
<b>Customer Functionality</b>					
Navigational links consistent and working	1-5	6-10	11-15	16-20	
End-user instructed on the proper formatting for forms and given feedback upon submission	1-5	6-10	11-15	16-20	
Cross-browser & cross platform compatibility	1-5	6-10	11-15	16-20	
Ability to utilize a search feature	1-5	6-10	11-15	16-20	
<b>Total Customer Functionality Points (80 points maximum)</b>					
<b>Database Development</b>					
A relational database is employed ( <i>as opposed to flat file</i> )	1-5	6-10	11-15	16-20	
Conceptual model correctly implemented.	1-5	6-10	11-15	16-20	
Minimal data redundancy in tables	1-5	6-10	11-15	16-20	
Sensitive data encrypted in the database	1-5	6-10	11-15	16-20	
Database access is controlled through passwords, access control lists etc.	1-5	6-10	11-15	16-20	
Use of unique key concepts are employed	1-5	6-10	11-15	16-20	
<b>Total Database Development Points (120 points maximum)</b>					
<b>Application Design</b>					
A System/Application diagram was created and employed	1-5	6-10	11-15	16-20	
Maintains state through sessions with and without cookies	1-5	6-10	11-15	16-20	
Encrypts highly sensitive user information	1-5	6-10	11-15	16-20	
Forms fields are validated before submission	1-5	6-10	11-15	16-20	
SQL queries and/or stored procedures are utilized	1-5	6-10	11-15	16-20	
Error capture routines are employed where needed	1-5	6-10	11-15	16-20	
<b>Total Application Design Points (120 points maximum)</b>					

<b>TECHNICAL POINTS CONTINUED</b>					
<b>Administration</b>					
<b>Items to Evaluate</b>	<b>Below Average</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>	<b>Points Awarded</b>
Appropriate Web-based reports are generated for the application	1-5	6-10	11-15	16-20	
Administrator has the ability to add, modify and delete data through a password protected Web interface	1-5	6-10	11-15	16-20	
Code is documented	1-5	6-10	11-15	16-20	
<b>Total Administration Points (60 points maximum)</b>					
<b>Application functions as indicated (it works)</b>					
Reports generate accurate results	1-5	6-10	11-15	16-20	
Search functions return accurate results	1-5	6-10	11-15	16-20	
Administration functions work as indicated (add, modify, delete)	1-5	6-10	11-15	16-20	
Security functions as it should	1-5	6-10	11-15	16-20	
<b>Total Application Points (80 points maximum)</b>					
<b>TOTAL TECHNICAL POINTS (560 points maximum)</b>					

**Web Application Team (V04)**

Judge Number \_\_\_\_\_

Team Number \_\_\_\_\_

**Presentation Scoring Rubric**

	<b>Below Average</b>	<b>Average</b>	<b>Good</b>	<b>Excellent</b>	<b>Points Awarded</b>
<b>PRESENTATION POINTS</b>					
Ability to explain development/design process	1-5	6-10	11-15	16-20	
Ability to demonstrate how the application works through the use of the User Interface	1-5	6-10	11-15	16-20	
Ability to explain the logical design of application and design patterns used	1-5	6-10	11-15	16-20	
Ability to explain the code structures that perform front end and backend functionality	1-5	6-10	11-15	16-20	
Offered clear and direct responses to interview questions	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Presentation quality/style	1-5	6-10	11-15	16-20	
<b>TOTAL PRESENTATION POINTS (140 points maximum)</b>					

<b>SPECIFICATION POINTS: All points or none per item are awarded per item.</b>	<b>Points Awarded</b>
Equipment set-up lasted no more than three (3) minutes	5
Presentation lasted no more than ten (10) minutes	10
Team prepared appropriate equipment and documentation prior to presentation	5
<b>TOTAL PRESENTATION SPECIFICATION POINTS (20 points)</b>	

**TOTAL MAXIMUM POINTS = 720**