**Lesson 2.1 – Information Architecture**

**\*\*Instructions:** Please change the text color of your responses to red text. Please organize the endings to each page.

**Activity 2.1.1 – Confidentiality, Integrity, and Assurance**

1. Answer the following questions: (After Step #4)
   1. What is the CIA Triad?
      1. CIA stands for Confidentiality, Integrity, and Availability. The CIA Triad is a well-known security model used to help system architects identify problem areas and necessary solutions for securing information.
   2. Define the Confidentiality component of CIA and list some ways of protecting it.
   3. Define the Integrity component of CIA and list some ways of protecting it.
   4. Define the Availability component of CIA and list some ways of protecting it.
   5. Why is the CIA Triad important to Bikes, Boards, and Beyond as they launch their new website?
2. Watch the video, designing a Security Plan with the CIA Triad, and begin to think how the CIA Triad can be used with the Bikes, Boards, and Beyond system.
   1. What are the trade-offs associated with information being completely confidential?
   2. What are the trade-offs associated with information having complete integrity?
   3. What are the trade-offs associated with information being completely available?
3. Label and Mark one CIA triangle for each of the items and explain your reasoning. *You will need to print your document and then label and mark the triangle below*. (After step #6)

|  |  |
| --- | --- |
| Social security number  Explanation – | Personal health records  Explanation – |
| Family calendar  Explanation – | Online product catalog of a shopping site  Explanation – |

1. Ecommerce CIA Information Table - look at the unit cyber case and really think about the CIA components as they related to each data category in the Bikes, Boards, and Beyond system. Link in step #10.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Confidentiality** | | **Integrity** | **Availability** |
|  | **Who Views** | **Encrypt?**  **Why or Why Not?** | **Who Modifies?** | **When is it needed and by whom?** |
| Product Catalog | Employee **X**  Customer **X** |  | Employee **X**  Customer |  |
| Customer and Order Information | Employee **X**  Customer **X** | Encrypt - Credit Card information, address and etc. for ID theft | Employee **X**  Customer **X** | All times |
| Website Information | Employee  Customer |  | Employee  Customer |  |
| Employee Information | Employee  Customer |  | Employee  Customer |  |

1. Self-Driving Vehicles - Ethical Scenario before step #13.
   1. What are the risks or dangers?
   2. Do the benefits outweigh the risks? Explain your thoughts.
2. Disconnect App – After step #20
   1. How many sites, in addition to disney.com did your browser access?
   2. Which ones, if any, of the additional sites were familiar to you?
3. Thinking back to your digital footprint (Step #22)
   1. List the data, devices, or apps are vulnerable to cyberattacks
   2. Think about the CIA Triad and what you learned in Activity 1.2.1 Firewalls and Malware and Activity 1.2.3 Securing Your Browser.
      1. What appropriate measures could you implement to secure these devices?
      2. Under which CIA component(s) do these security measures fall?
4. Research an IoT-related cyberattack or breach that’s been published in the news (article or video).
   1. When did the attack happen?
   2. What was the targeted device?
   3. Who/what did the attack impact?
   4. In your opinion, what are the ethical concerns related to this attack?
5. Consider a IOT Device (Any device with GPS) and List its pro and cons for functionality and ethically
   1. Pro
   2. Cons
6. Summarize the security considerations that you would suggest to ensure the information architecture meets the CIA Triad model.
   1. Confidentiality
   2. Integrity
   3. Availability