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IFT 365 – Applied Programming Language for Information Technology

# Coding Project – Topic Approval

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The topic of your application must be approved by your instructor. Complete the following questions and submit it via Canvas. **For the purposes of this course and to not hold you back in beginning development, assume your topic is approved by the instructor. In the event your topic is not approved, you will be contacted directly via e-mail.**

1. What is the name and topic of your application?

   **I want to monitor network traffic on my home network, so my tool will be called network monitoring tool.**

2. What do you want the application to accomplish? What opportunity, problem, or issue is your application addressing? Discuss why this opportunity, problem, or issue exists.

   **I have a very unreliable internet provider, and they are not truthful with network speeds I am provided. I want to create a tool to log network speeds, users on the network, and bandwidth usage. It will log this information by hour and save it to a csv file.**

3. Who is your intended audience? Remember to discuss age, gender, interests, socioeconomic class, etc.

   **This tool can be used by anyone who is interested in monitoring their home network.**

4. What type of data might be included in your application? Describe the type of data and any important data characteristics you think would be good to use in your application.

   **This tool will capture the following data:**
   1. **IP addresses and MAC addresses**
   2. **Download and upload speeds**
   3. **Bandwidth usage**
   4. **Timestamp**
   5. **Device host names**
   6. **Latency**

5. Are there any similar applications you could use as models? Describe these applications explain why you chose them.

   **I will use TShark for network monitoring, which is the CLI friendly version of WireShark – which will also provide this information. How this application will differ is that it will automate the monitoring, and translate that data into a human readable metric so non-technical users and interpret the information being provided. At a high level what I want to capture is; internet service provider claims to provide 1GB service, but I am being limited to 500MB service. Ultimately meaning I am paying for a service I am not being provided. Additionally, we can see if there is a discrepancy between different times. For example, at 2am I am receiving 1GB speed, but at 6pm its at 500MB speed. I'm not the only person who struggles with internet speed and usage.**

   **Also, I want to build an application that will be useful for my future career in Information Technology – instead of an application for a hobby (like a NFL advanced metric tool). If this project is not sufficient for this project, I can switch the a NFL DVOA/EPA tool and integrate APIs to collect data and store advanced metrics in a CSV.**