Advanced Programming: Independent (Group) Study Guidelines

This portion of the course is more self-directed. You will be exploring a programming topic of your choosing, either independently or in a small group. Consider exploring one of the following topics:

* JavaScript
* Android App Development
* Raspberry Pi
* Python

While this learning experience will give you lots of freedom to explore the world of programming, you will need to do so within specific guidelines. After all, you will be receiving a grade for the work that you do.

With that said, here are the requirements:

1. **Set a clear purpose for learning**. You will need to write a proposal stating what you intend to accomplish with your exploration. Here’s an example:

*I want to learn more about Java Programming. After briefly looking through the class textbook, I have decided to focus on an exploration of exception handling (chapter 5) and how it can be used to prevent a program from stopping expectantly or even crashing.*

1. **Determine success criteria**. Describe what successful completion of the project will look like. For example:

*By the conclusion of this project, I will create an original PowerPoint presentation describing the basics of exception handling in Java. I will share this presentation with the class. Further, I will produce an original Java program that utilizes exception handling to demonstrate this function. Finally, I will include a list of resources used in researching this topic.*

1. **Reflect on your learning**. For each day that you work in class, you should keep a log entry of **1)** what you did, **2)** what you learned, and **3)** what you will do during the next class. The ***most important*** part of this log entry is reflecting on what you learned. This should be more than just a sentence and may include descriptions of misunderstandings that you corrected, surprising developments in your discoveries, and/or questions you still have not found answers to. Each log entry might look something like the following:

|  |  |  |
| --- | --- | --- |
| Date | **What I did** | *Today I read the textbook chapter on exception handling (Chapter 5) and took notes on important points I wanted to remember.* |
| **What I learned** | *I learned that exceptions are problems that can be fixed whereas errors are problems that usually cannot be fixed. Also, exceptions are said to be “thrown” when they are sent to the code that will respond to them and they are said to be “caught” when that code handles them.* |
| **What I’ll do next** | *Next time I plan to copy one of the example programs from the textbook into Eclipse to get a sense for how it works.* |

 **Notice that the log was completed using complete sentences and is grammatically correct!**

1. **Lay out assessment plans**. Create a rubric that shows how your grade should be determined. You may use something like the following example as a starting point:

|  |
| --- |
| Grading Rubric |
| **Component** | **Description** | **Points Possible** | **Points Earned** |
| Topic Research |  | 25 |  |
| Presentation Creation |  | 25 |  |
| Presentation Sharing |  | 10 |  |
| Example Java Program |  | 20 |  |
| Resources |  | 5 |  |
| Daily Reflections |  | 15 |  |
| Final Grade | 100 |  |