Criterion A: Planning

**Defining the problem:**

My client is Hritik Sampat, who is also the Computer Science and Physics teacher at UWC-USA. For the Lab equipment inventory, there isn't an existing system where all the Science teachers can access the inventory to keep track of the equipment all the Science classes need for different experiments. For example, my client knows what equipment he has in his own class. However, he doesn't know where and what equipments are there in other classes if he needs that equipment for use in the class. If there is a common inventory system where all the Science teachers can access, it will be easy to keep the stock of equipment and to know what equipment they need for use in classes by specific units or topics of the subjects.

At this stage, everything is done manually and to solve the existing problems my client is facing, my client agreed to me to be his developer to build the GUI application program. My Computer Science teacher, Hritik Sampat agreed to be my adviser and my client for this project.

Word count: 177 words

**Stating Success Criteria:**

After a productive discussion with my client, these are the basic functionalities my client wants to have in the program.

* Record the equipment by its subject with its specific use of it in its specific topic, name of the teacher, quantity.
* Search the equipment done with the form. There is an entry for the subject and the specific use of it in its specific topic. The results are shown in the table below in the same form.
* Order new equipment needed.
* It will be known which teacher recorded or ordered the equipment.

Word Count: 92 words

**The rationale for the proposed solution:**

After giving a lot of thoughts over the solution to build the system, I have decided to use Java language because of the better understanding of the language I have currently and also it is the expertise of my adviser as well. Java is a great programming language to develop a GUI for the program for which Java is one of the most versatile programming languages I can use to solve and create the application. One of the major advantages of Java is the feature of Object Oriented Programming which will make the development much easier. For the common database, I am going to use Excel and the application to be commonly accessible to the school’s faculty server network.

Use of Netbeans as the environment for the project:

1. The primary environment we used and the suggested IDE from the Adviser.
2. JFrame form and the ability to control the GUI much easier.
3. Free to use.
4. Efficient Error detection

Word Count: 157 words