

Project Title: Develop a computer lab management application using Python

Project Overview:

Each lab contains a number of PC. So, for maintaining the lab you should keep record about all the PCs of the lab.

Therefore, the application should contain the following information and features:

- Each PC should have the information like PC number, operating system installed in the PC, and status of the PC.
- **Adding functionality:** To add a new PC.
- **Updating functionality:** To update information of an existing PC.
- **Remove functionality:** To remove an existing PC from the lab.
- **All PC display functionality:** To display information about all the PCs.
- **Individual PC display functionality:** To display all the information of a PC in the lab.
- **Search functionality:** To search for a particular PC and display the information. If the PC is not present in the application already, then may prompt user to add the new PC in the lab.
- **Checking functionality:** When you add a new PC, make sure you do not add the PC with same PC number. If same PC number is given it will prompt a message showing that this PC number is already exists, and then the application will ask you whether you want to modify information of this existing PC or remove the PC from the lab, or no action will be taken (in this case it will take you to the main window of the application).
- **Store functionality:** Finally, it should have a store functionality to store all the PC available in the application into a text file if user wants to maintain a physical copy in his/her hard drive.

As this **application** would be a **console-based**, so first display a menu containing all the available options of the application, and then user will decide what he wants to do. User can exit from the application when he pressed “**quit**”.

NB: Write and organize your code by following best practices approach.

Project Report:

You have to submit a complete report mentioning everything regarding the project.

The project report should contain the following information:

- A standard coverpage
- Project overview: Write details about the project.
- Project solution design: Write how do you design this project to make the application.
- Implementation: A complete Python code you have written for the project.
- Application Overview: Write the application overview by mentioning all the functionality of the project with output (give screenshot for each of the functionality).

Remember that you must submit a printed version of your project report and face the viva to complete the project (note that viva questions will be asked from the entire term syllabus of the course).