

## Criteria A

### **Defining the problem:**

My client Mrs.XYZ is managing Community Service projects for school. Community Service is one of the core tenants of The Doon School and the whole student and faculty are involved in the activity. There are wide variety of projects ranging from animal care to sustainable lightning. There are through records maintained related to who works on the projects and how much work is happening. All records are being kept as paperwork. She keeps track of the student's list, the projects done by students. This creates a complete-time consumption, and it is human error-prone. She also has the concern of the data loss due to the paper files. Any update of the student again requires the change in all sections of the manual files. All updating are done manually by her and her colleague. The problems with paper work are more time required for updating and it is not an error-free operation. Additional manpower is required to validate and cross-check the records.

She faces the same kind of problem while adding and removing students and projects. For all these aspects, she feels that it is a problematic approach for maintaining the data in the paper files. If she requires to find out a list in the form of reports, then she needs to follow again a time-consuming process of searching the whole files and then correlate the data to prepare a manual report. Even she is concerned about the time consumption for searching for any particular record.

She also maintains as an attendance register master for recording students' attendance, which is again a manual process, and that needs to be manually referred for every requirement for the project activities. All of these aspects are consuming her major time, and she is finding a problematic situation of organizing the data to be easily manageable. Also, keeping track of twenty community service initiatives that are existing in the school is a tough job for her.

### **Justification of the proposed solution:**

The solution I came up with, was to make a user-friendly window-based application using Python and MySQL Database. The client looks forward to a dedicated system where the application can be hosted in his office and should be accessible only to her and her designated colleagues. Currently, she does not want to create an online application or app. And she prefers to have license-free open-source software to run her application. So, the business logic aspect of the program requires a middle tier of Python Coding, which can be further extended if required. I compared the usage of MySQL Server as the complete solution also with the forms and the VBA coding, but Python is preferable compared to that. For all these aspects, I prefer Python as the

front end and business layer, with MySQL Server for Queries, Reports as the backend. I also thought about an online data base as the coordinator in the school works in different remote areas.

I interviewed the client and took a survey of all the main members of the Social Service Department and the main interview is presented in Appendix 1. The needs of the client were that there should be a clear way of recording attendance and entering reports for the initiative. There should be separate log-ins for the separate initiative heads. There should be a clear and concise way of where the reports are generated. So, through questionnaire and on one interview, the needs of the client were understood in a detailed way.

**Success Criteria:**

- Addition of a project
- Creation of Students and Maintenance of Project Status
- Linking students with projects
- Entering the status of the project
- Log in and password for the product
- Implementation of daily attendance maintenance
- Create Read and Update projects