1 Feasibility

1.1 Operational Feasibility

1.1.1 Introduction

The main purpose of this Database software is to automate the Laundry shop, R.S Drycleaners in COS in Thapar University, Patiala. The shop had opened a long time back and till date works on a manual system. The shop maintained no records in form of registers and relied on their memory to know which service was to be done on which clothes. Since they never record anything, there are possibilities of errors. This system is only good for use if less students used it, but with increasing student population in the campus, the need of automation arises since the manual system has drawbacks of its own when services are to be performed in large number. Hence, to serve this purpose, and also taking the opportunity given by our college we are making a DBMS software to automate the shop, thus reducing some amount of workload from the shop workers.

The process that the shop follows is described as follows:

1. The first step is submission of clothes, and then enquiring which service is to be done on which cloth. This is not noted down anywhere and purely remembered by the owner.
2. Then they write the Initials of the name of the student and his/her Hostel name.
3. After this, before closing the shop, they open all the laundry bags one by one and then write the same initials written on the laundry bags on the clothes for ease of identification.
4. Then they take these clothes to their houses for performing the required service.
5. Then they perform the services and after the service is done, bring back the clothes to the shop where they are sorted again.

It is easy to imagine, that when the amount of clothes are more, then there are chances of error for example loss of cloth, sending wrong clothes etc since the identification technique they are using is not upto the mark and plus the added problem of not maintaining a record. These factors are significant, and can result in loss of clientage which is not desired by the shop. Hence, until it’s too late to recover, the necessary steps should be taken.

The advantage of maintaining an automated system is that, all such errors can be avoided plus it reduces the burden on the shop owner as well and hence they can concentrate more on the service rather than worrying about other things.

As we found no manual record of data and transactions we are making some assumptions which may or may not exist in real and proposing the solutions for the same.

The proposed working of the software is very simple approach. The similarity from the manual system is that the steps that the owner followed in the manual system would be almost same as he would follow when automation is in place.

This is what we have proposed for the software

1. We would register all the users separately so that we have all the details of the students/users and then would put all the bills of that user in the same space.
2. We would with each bill enter all the types of clothes the user has submitted and what type of services he/she is going to avail.
3. Then we would place a unique tag number which is going to be the bill number of the student. This would help in sorting clothes after the service has been performed.

1.1.2 Requirements

To make this software as effective and efficient as possible, we had frequent meetings with the shop owner to know the working of the shop so that we don’t change the way they work but just make that work easy. The reason we chose this shop for automation was because we as students availed the facility of this shop and have seen the growth in customers and add to that, we had also heard from some students that some clothes were getting lost or sent to wrong person and moreover the students themselves had to make a record of what they sent for laundry due to this. Hence, we chose the shop for this purpose.

In our meeting with the shop owners, we had asked that if they maintained any records and there answer was no. They only sorted the clothes by writing the initials of the name of the student who had submitted the clothes. Upon being asked if someone demanded different service for example washing and some clothes for dry clean, they said that they relied on their memory to perform the tasks. We had also asked them that whether they would want to automate their shop through a computer and were comfortable with it to which they said yes.

So, it became obvious that automation is required for the shop and hence started to work on the initial design of the databases and then also saw what tables were required and what constraints were required. Hence, we came with this, that each of the facility would now be independent and all the clothes would now be marked with unique bill number generated by the software which would make the sorting easier than it used to be. Also, all the bills would be calculated by the software, further reducing the load. This is required due to the fact that now in the coming years also the students will increase. Hence it is required for the better working of the Shop. In the subsequent meetings also we got to know that some clothes were being reported as lost or exchanged causing discomfort to the students and putting the reputation of the shop at stake and we didn’t want any of the students to complain about it because it was due to the increase in workload of the owners of the shop.

* 1. Technical Feasibility

We have two options for this project, either we make web based service or we make a app based service(android). We are still haven’t consider the best alternative yet.

The technical resources needed will be basic and easy to get. Most of the work would be done on a laptop (Surface Book) with configuration 16GB RAM Windows 10 512 GB Solid State Drive. This is more than enough and powerful for running every tool we require.

If the Project is an APP, we would be using Android Studio for making it which is currently installed on the system and running fine. The coding for backend (SQL) requires Oracle so we have that installed as well.

For a web based approach, we would be either be using java or python and HTML for most of the front-end part. That also won’t be a problem because of the Python IDLE installed on the laptop and Visual Basic Studio and Visual Basic Code installed for easy debugging for both the languages JAVA and Python as well as other considered language which are JavaScript pages and PHP. HTML coding may be mostly done on Text Editor and Visual Studio Code.

Hence we see that most of the required tools and working/Debugging environment is being provided at no cost to us and skill level of the group is also very good to be working on the same (Intermediate in all Respects).

* 1. Social Feasibility

The website will have a user-friendly interface to facilitate easy laundry transactions. Users will be provided with options like number of clothes, type of clothes, etc. which will make the whole process quite easy. It will have a great impact on the life of hostel students. They can simply give laundry orders while sitting in their rooms. Users will get a message a few hours before the return of clothes and they can delay the delivery if they are not available. This will also ensure that no clothes are lost as this is a major problem in current system.

The shop owner will also benefit from this as things will become easier for them too.

1.4 Economic Feasibility

This project will require minimal costing comprising the domain and hosting charges per month. This amount will be easily recovered as it can replace 2-3 persons who are currently required to maintain the records and handle the day to day rigorous paper work and some amount of manual labour might also be eased out.

* 1. Legal Feasibility

There are no legal issues in any aspect of the project, whether it be data collection or working of the software. This has been confirmed from the owner of the laundry shop.

1.6 Alternative Solutions

An alternate solution to make the laundry shop online is to make an android app for the same. Since the group members have a little knowledge about android studio, we are making the project as website based. Also, every user might not have the access to an android phone due to the presence of iPhone and windows phone in the mobile industry, thus the idea to make an android app was dropped.