Student Management System In Object Oriented Programming In C++

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DEDICATION

Dedicated to

“The Teacher of the Universe”

(Peace be Upon Him)

With whose existence
and
by having the charity of His knowledge
the cosmos got illuminated with the light of
insight and wisdom
and
the journey of human enlightenment was made possible.

ACKNOWLEDGEMENT

Praise to Allah Almighty, Lord of the worlds, the Merciful and the Beneficent, who gave us strength, thoughts and co-operative people to enable us to accomplish this goal and fulfill the required functionalities.

This was all not possible without the guidance, continuous appreciation and moral support by our honorable Supervisor **Mr. Muhammad Wakeel Ahmad.** He was always there whenever we need his help and ideas. We are really thankful to him who made our concepts clearer. We are very thankful to him for helping us.

At last, we would like to acknowledge all of the assistance and contributions of UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA for supporting us with all that is needed starting from the books, and ending with the full care that it is providing us with, to help us to be professionals in the field of Information Technology.

DECLARATION

We hereby declare that we have made this project and accompanied report entirely on the basis of our personal efforts. Not any of the portion of the application work presented has been submitted of any application for any other qualification or degree of this or any other university or institute of learning.

Students Name & Signature

Student 1	Student 2	Student 3	Student 4
Zarar Azwar khalid	Mehreen Fatima	Shiza Khurram	Danish Abbas
_____	_____	_____	_____

CERTIFICATE OF APPROVAL

It is to certify that the semester project of BS (CS) "**Student Management system in Object Oriented Programming "** was developed by **Zarar Azwar Khalid, Mehreen Fatima, Danish Abbas and Shiza khurram** under the supervision of "**Mr. Muhammad Wakeel Ahmad**" and that in his opinion, it is in scope, fully adequacy and quality of the degree of Bachelors of Science in Computer Sciences.

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ABSTRACT

This project is meant to help us to develop skills at working with hash tables and writing entire programs from scratch. In this project we will only be provided with a project description and list of program requirements. It means we will need to learn to design and implement an entire program on our own. It would be beneficial for us.This software is based upon the **UET TAXILA**. In this software students are added in 9 different departments of university. In This software there are two main parts one for the admin and another for students. Admin has authority to add the students and creating their marksheets. And students are enable to check their marksheets. This software is batter than other because this software is much private and protected. Students can check their marksheets and data by their id's. And admin also need password to access the Data of students. By making this project we can be able to make our good understanding with the hash tables and its different techniques.

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CHAPTER # 1

INTRODUCTION

1.INTRODUCTION

1.1 Introduction

This project is work for the students of **UET Taxila**. This system is used for entering the data of the students and creating their marksheet. This system is better than other system. Because in our previous system the marksheet and data of student is not private. This system provide the facility of doing this. The student need to enter his password to access his result.

1.2 Statement of the problem

In our previous system the data of the student is not private. But this system helps a lot to make private our system. And in this software only specific person who is allowed to create marksheet or enter the data because there is need of password to do this.

1.3 Introduction to the Software tools and Technologies

In order to develop this semester year project, following software tools are used:

1. Dev C++
2. C++

1.3.1 Why Dev C++ is used?

Dev C++ is a free, open-source cross-platform IDE that is the best for the beginners. And this is specially made for the source of **C++** language**.** This is also best because this is very easy to use. Another best thing of this compiler is that it can find any minor mistake which helps the programmer to learn his mistake.

1.3.2 Why C++ is used?

C++ is fast. Since, **C++** is an extended version of C, the C part of it is very low level. This offers a huge boost in speed that high level languages like Python, Java don't give you. **C++** is statically typed. **C++** is a statically typed programming language.

1.4 Objectives

The objectives of a project are important to achieve goal. The main objectives our project are to give our university such a system to make the system private. And this software helps us to achieve our goal.

1.5 Proposed Solution

For the solution of this system we need a system which makes our system private. For this purpose, the admin create an id of the student while adding the data of student. And he also make the marksheet. But the admin also need to sign in for adding the data. And the student has only access his data by entering his id and password.

1.6 Scope of Proposed Solution

This project is made for the help of our **directorate of student affairs DSA** and **student** of UET Taxila. This project helps them to safe the record of students easily. And this help them a lot that only those special admin works in this projects that are selected by university. This project helps the students to check their marksheet easily and only student himself access their data.

1.7 Relevance to Courses

1.7.1 Object Oriented Programming In C++

This course helped us to understand the basic concept of Object Oriented Programming which are used in our project. Classes and objects are the basic tools of C++. Inheritance and file handling are another basic tools of object oriented programming. All these tools help me a lot to complete my function in proper way. Through file handling, I made a database which store my data and at time of need I can easily accessed my data.

CHAPTER # 2
STATE OF THE ART

2. STATE OF THE ART

In this chapter, we will discuss what is Dev C++? What is management system? How we'll make the problem easy to handle? How we make our data safe?

2.1 What is Dev C++?

According to wikipedia :
Dev-C++ is a free full-featured integrated development environment (IDE) distributed under the GNU General Public License for programming in C and C++. It is written in Delphi.

It is bundled with, and uses, the MinGW or TDM-GCC 64bit port of the GCC as its compiler. Dev-C++ can also be used in combination with Cygwin or any other GCC-based compiler.[1]

Dev-C++ is generally considered a Windows-only program, but there are attempts to create a Linux version: header files and path delimiters are switchable between platforms.

2.2 What is Management system?

A management system is such a system, which is basically designed for the help of the administration branch of that organization. The key feature of any management system is to get the complete information about their organization, manage their database. The work of all management system will be different according to their organization. But the following key features are necessary and including in all system.

Insert:

This function is used to enter the records of user of that organization. The data will be store in file through file handling tool.

Delete:

Delete function is another basic function of management system. This function deletes the unnecessary data from file, which was stored through file handling.

2.3 How can this system helps the organization?

This project is totally based upon the system of **UET Taxila.** This project helps the DSA to kept the record of student in an easy way. This project helps the admin to enter the record and create mark sheet of the student and this system allows only the student to check his data himself and the admin can only himself work on the data. He can easily delete ,search, modify and view the record of student. This project helps to keep the system private. And the admin verification is also necessary to work on data.

CHAPTER # 3

METHODOLOGY

&

WORKPLAN

3. METHODOLOGY & WORK PLAN

In this chapter, we will discuss that what are the existing methodologies and which one we have chosen for implementation of this project in an effective way, also we will discuss advantages of adopted methodology [14, 15].

What is methodology and why we need it?

Whenever a small or large project has started to develop, first thing all of programmers required is methodology. Methodology is a way of developing a project, in which all of the programmers gather the user's requirements, design the project, implement it, and after all this testing and maintenance of the project, in a satisfaction of user and according to the project requirements.

3.1 Adopted Methodology

Incremental model is used to develop this project, in which we divided our work in multiple modules. All these modules are further divided into more easily managed modules which made up the actual implementation of the requirements.

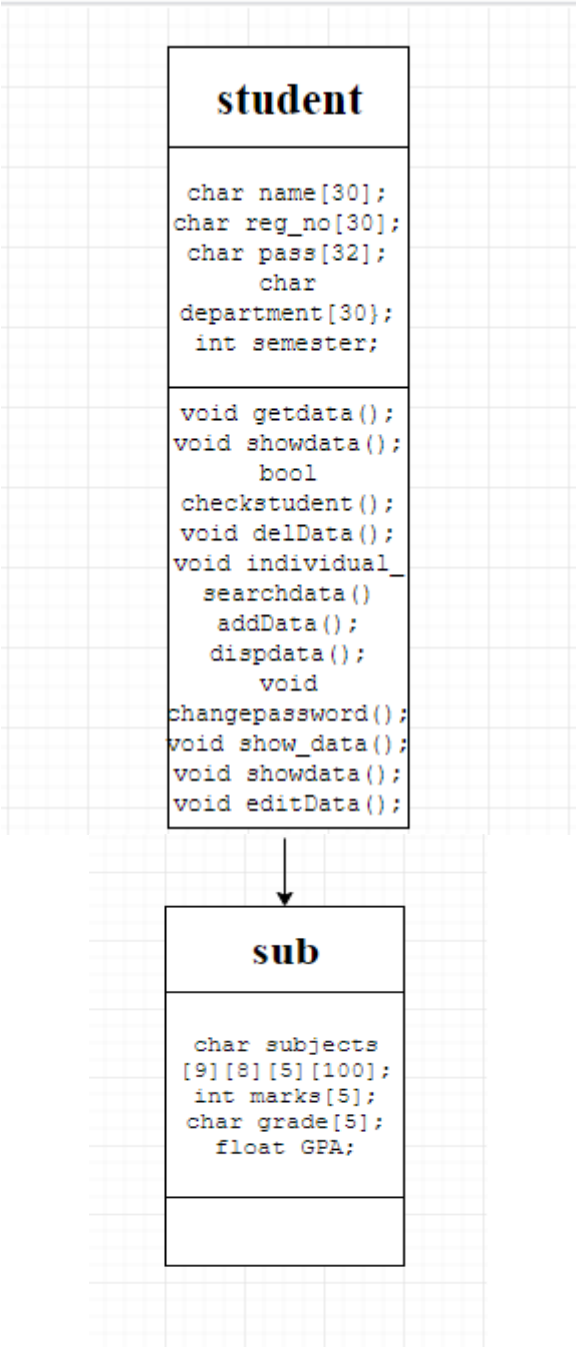
Reason behind using this model is:

- It is easy to test and debug the product during iterations.
- We incrementally developed our project and handled efficiently any changes made by supervisor.

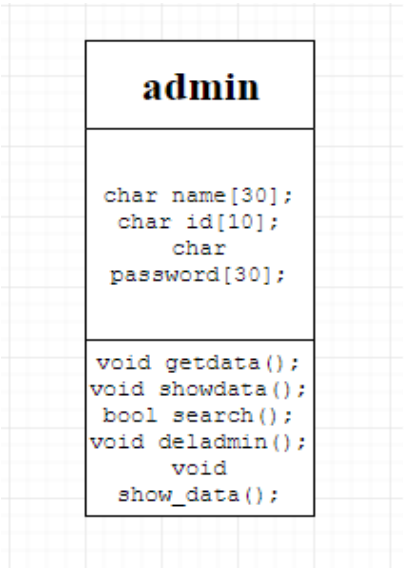
3.2 Roles & Responsibilities

Project development team is consisting of four members. To accomplish a goal, documentation and development is equally distributed among them and each member work on parallel to avoid wastage of time. It is the duty of the students to pay their attention towards their projects and must be dedicated towards it. Students should consult their supervisor as much as they can because it removes their shyness between the teacher and the students. We have made a good co-ordination between our group mates in doing our project. The task was equally divide among all. Everyone among of us give his / her time to the project and we have learnt a lot of thing by completing this project. We are very thankful to our supervisor and co-supervisor. We have also made our concepts clear regarding hash tables and hash functions , collisions etc.

3.3 UML diagram:



Admin uml:


admin
char name[30];
char id[10];
char password[30];
void getdata();
void showdata();
bool search();
void deladmin();
void show_data();

3.4 Algorithms

3.3.1 Displayclass()

1. ad.searchdata()//firstly checking the admin
2. show_data() //call in main by object of student class//file handling
3. cin>>department , semester.//getting department and semester
4. displist()//function of student class call in show_data.

3.3.2 Display individual_data()

1. Ad.searchdata()//firstly checking the admin
2. Searchdata() //call in main by object of student class//file handling
3. cin>>registration no.
4. showdata ()//function of student class call in show_data

3.3.3 Display_marksheet()

1. Ad.searchdata()//firstly checking the admin
2. searchdata() //call in main by object of sub class//file handling
3. cin>>registration no
4. showdata ()//function of sub class call in show_data

3.3.4 Search individual()

```
1. char r[30];
2. cin>>r;
3. while(!eof.file)
4.       if(strcmp(reg_no,r)
5.            Showdata();
```

3.3.5 Search class()

```
1. char d[30]; //department
2. int s;//semester
3. while(!eof.file){
4.  if(strcmp(department,d)
5.        if(semester==s)
6.           showdata;
7. }
```

3.3.6 Insrert()

1. Ad.searchdata()//firstly checking the admin
2. AddData();//student class

3.3.7 Create_marksheet()

1. Ad.searchdata()//firstly checking the admin
2. AddData();//sub class

3.3.8 DeleteData()

```
1. char r[30];
2. cin>>r;
3. while(!eof.file)
4.     if(!strcmp(reg_no,r)
5.         file.write();//write on temporary file
6.         remove(  old file);
7.         Rename(temporary file,old file)
```

3.3.9 ModifyData()

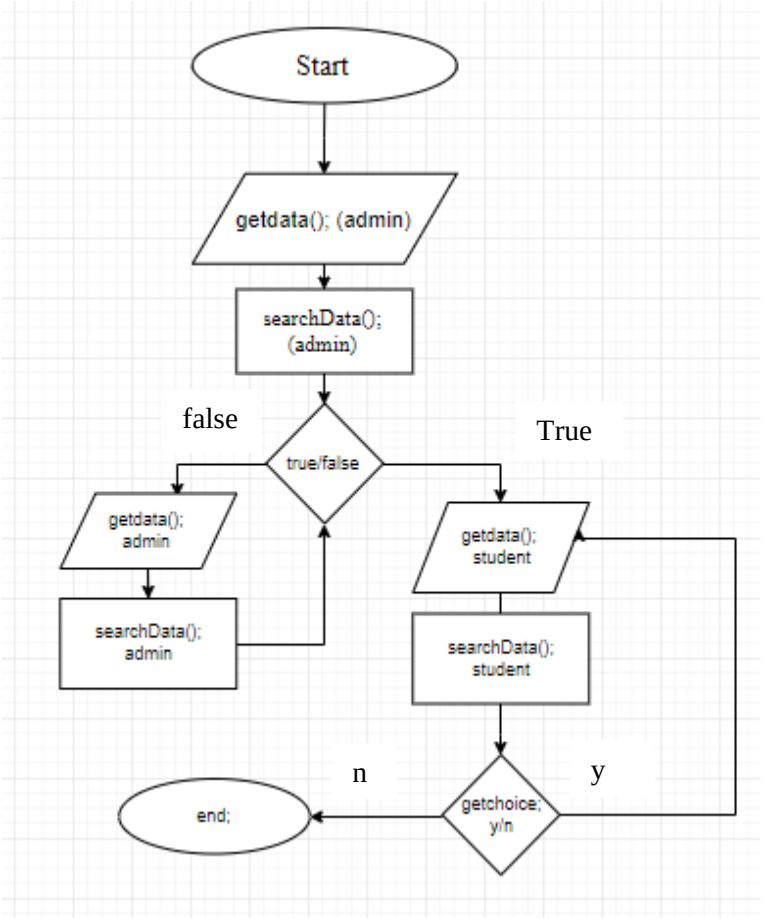
```
1. char r[30];
2. cin>>r;
3. while(!eof.file)
4.     if(!strcmp(reg_no,r)
5.         getdata();
6.         file.seekp(file.tellp()-sizeof(*this));
7.         file.write();
```

3.3.10 Modifypassword()

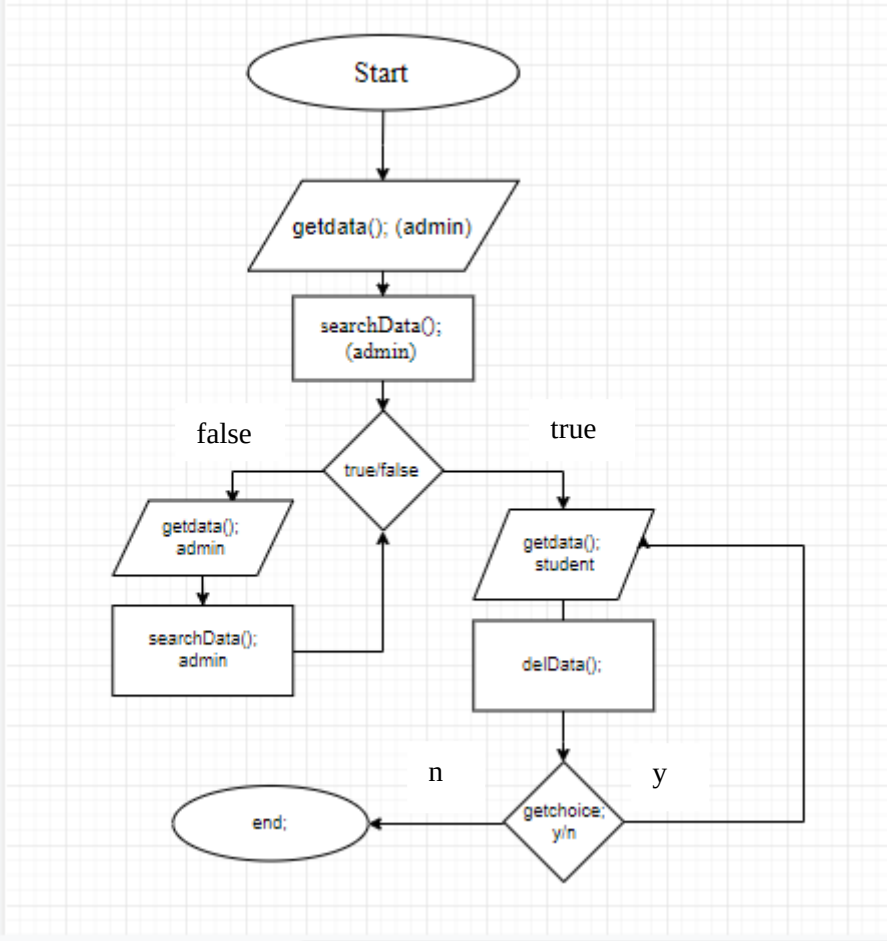
```
1. char r[30],p[32];
2. cin>>r;
3. while(!eof.file)
4.     if(!strcmp(reg_no,r)
5.         cin>>p;
6.         strcpy(pass,p);
7.         file.seekp(file.tellp()-sizeof(*this));
8.         file.write();
```

3.4 Flow charts

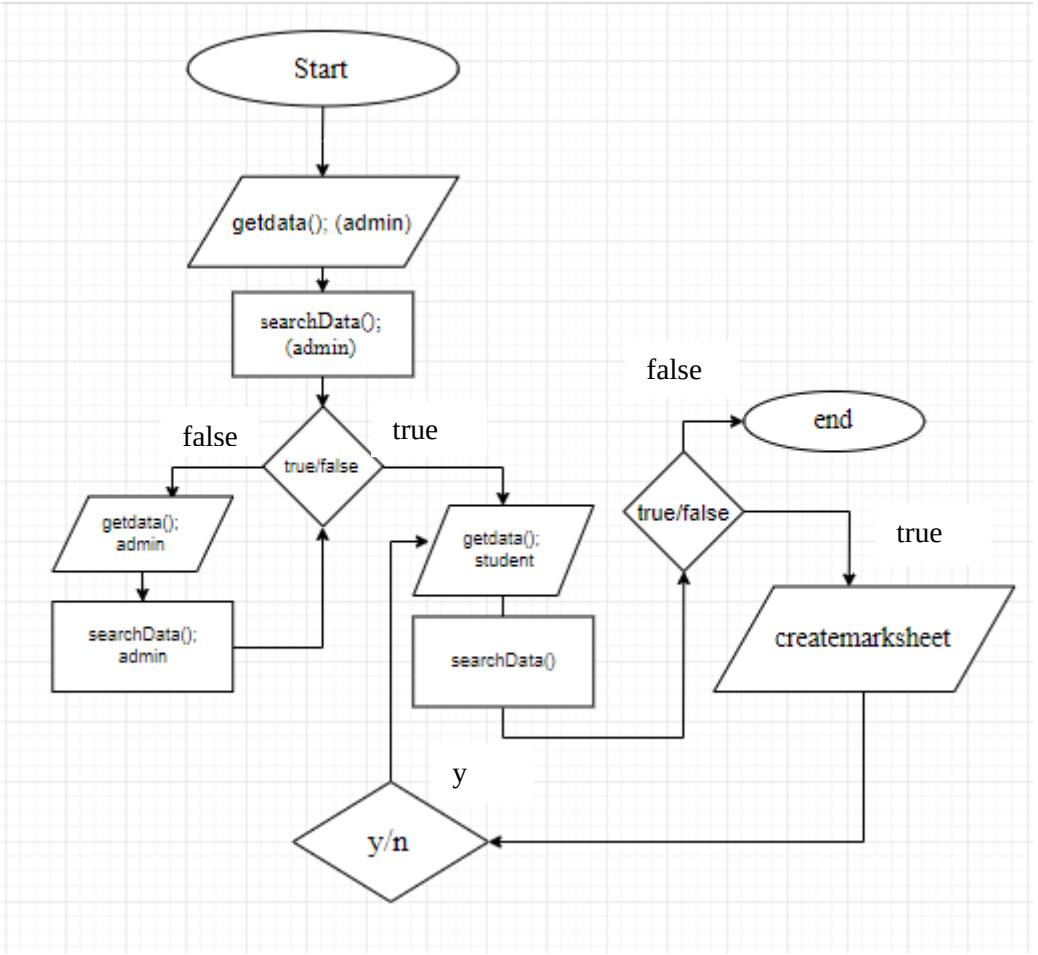
3.4.1 addData()



3.4.2 Delete data:

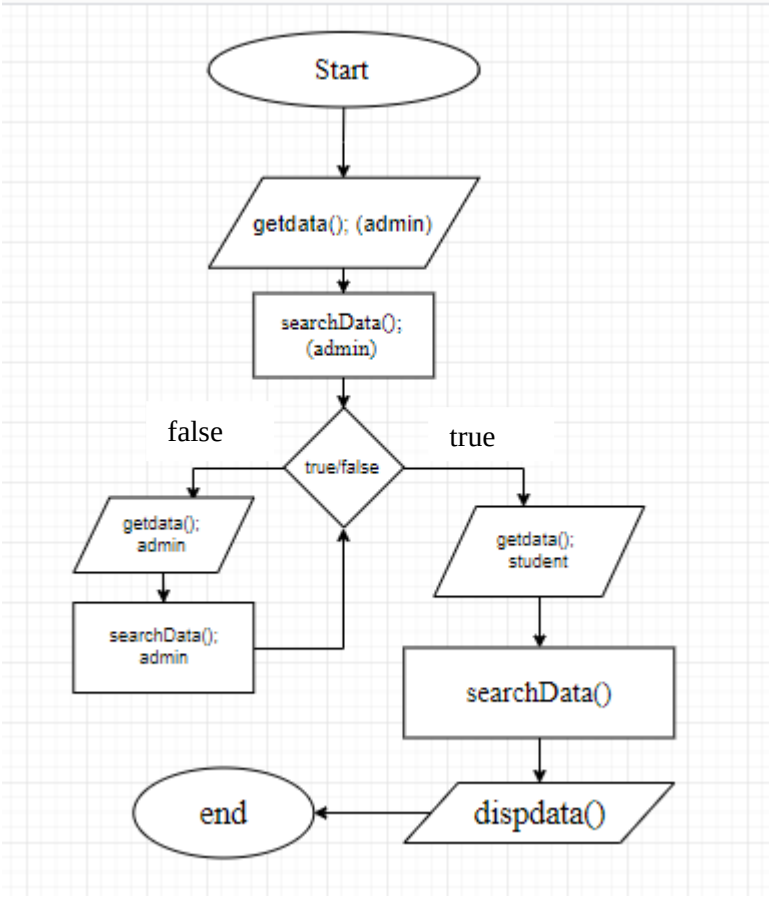


3.4.3 create mark sheet:

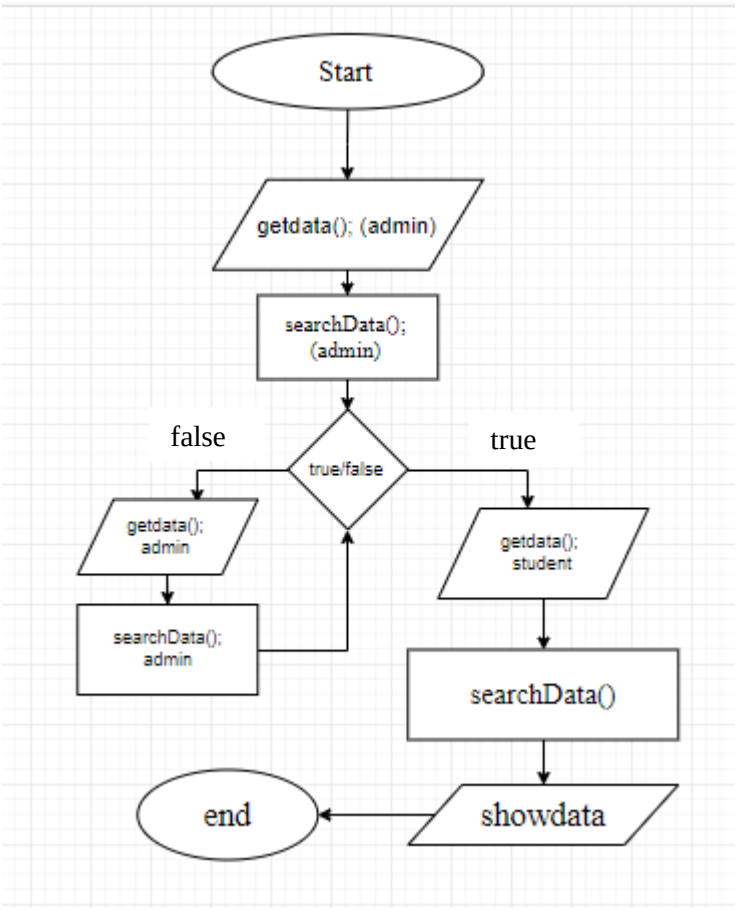


3.4.4 view record:

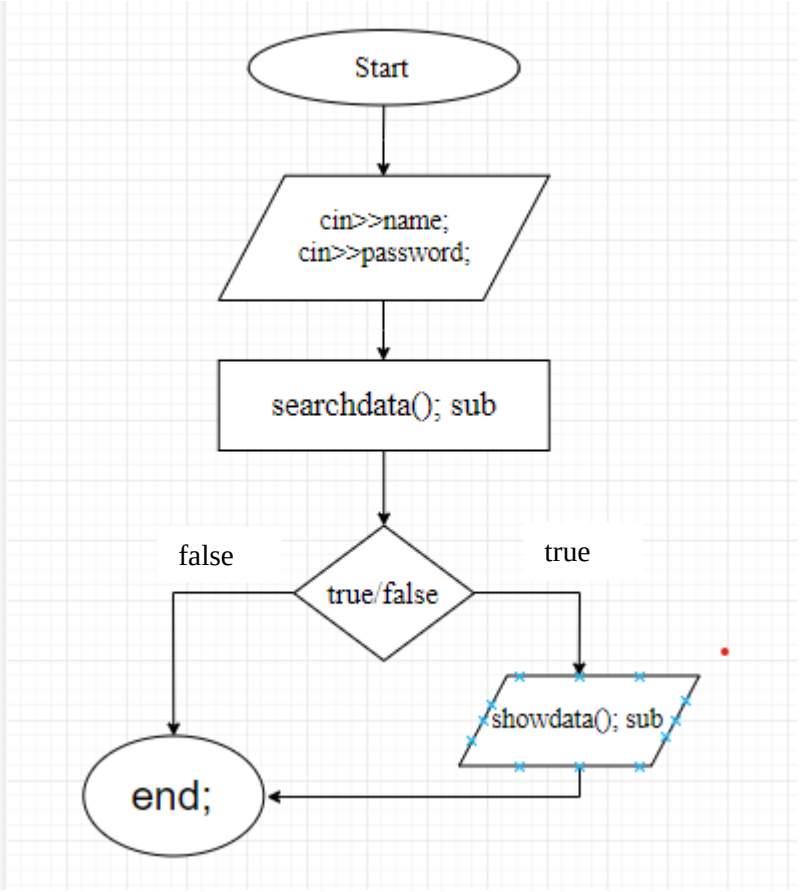
view class data:



View single data:

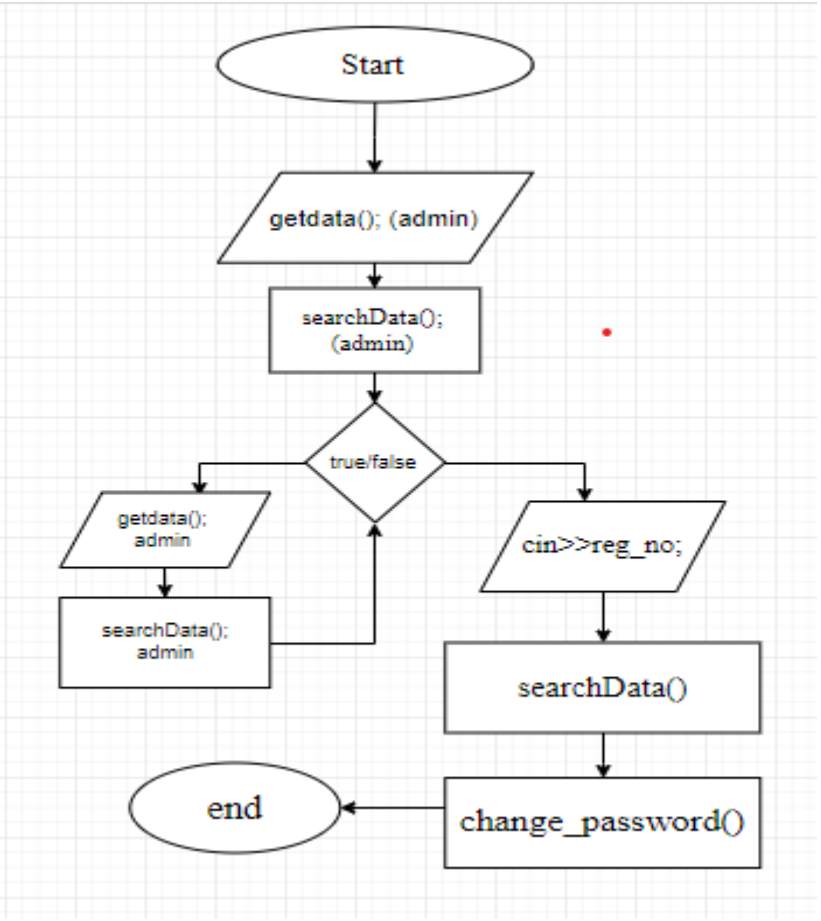


3.4.5 view marks sheet:

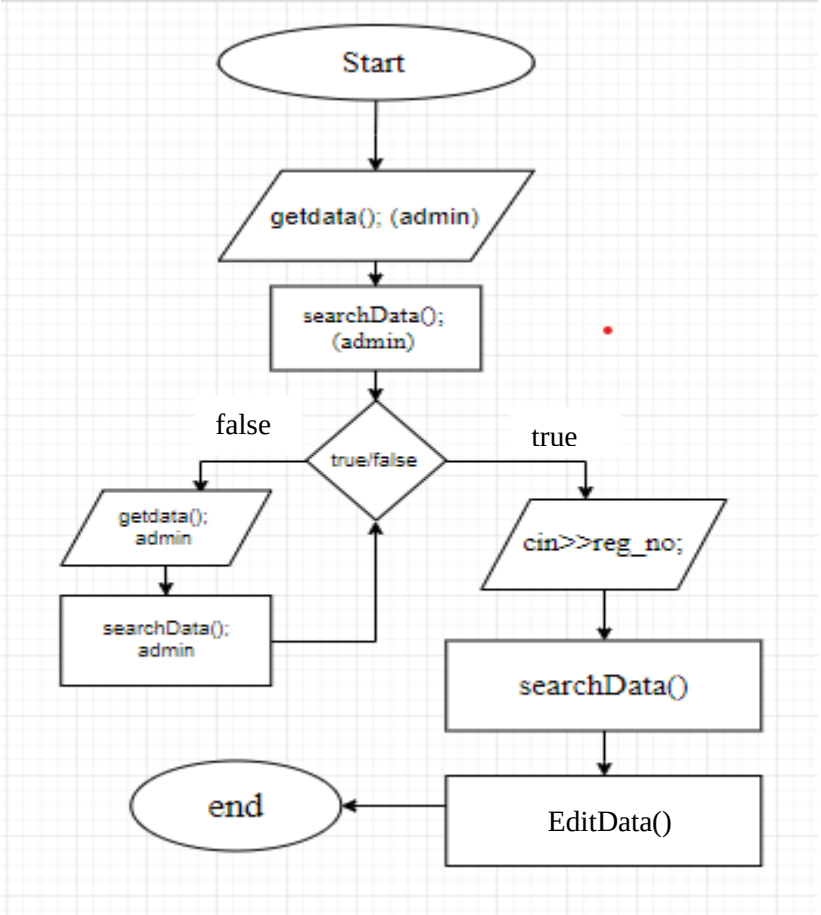


3.4.6 Modify data:

Change password:



Modify complete data:



CHAPTER # 4

SYSTEM ANALYSIS & DESIGN

4. SYSTEM ANALYSIS & DESIGN

In this chapter requirements analysis, feasibility study, planning, forecasting, modeling, scheduling and design of the project is discussed. For developing any project, the major problem is requirement gathering. We will also focus on functional and non-functional requirements.

The procedure for gathering requirements has its own defined procedure according to the complexity of the application. To define project schedule and processing, different models and techniques also focused on this chapter.

4.1 Requirements Gathering Techniques

A requirement can be defined as a condition or capability that must be processed by a product or an application. Techniques that can be used for collecting requirements are as follows:

- By analysis and observations
- Using software tools

4.2 Requirement Analysis

Requirements analysis is the process of planning, forecasting and studying the overall former needs of the application requirements. Requirements analysis is further divided into two parts based on our project:

1. Functional Requirements
2. Non-Functional Requirements

4.2.1 Functional Requirements

A functional requirement' is that it essentially specifies something the system should do**.** Typically, functional requirements will specify a behavior or function, for example. Display the name, total size, available space and format of a flash drive connected to the USB port."

4.2.2 Functional Requirements of system management system

Functional requirements of system management system are as follow.
The system has no such management system which is secured by other people. The data entry or creating mark sheet can be easily done when someone who access their computers either he is the staff member or not. And the marks sheet of students can be seen by everyone. Because the marksheet is simply upload on internet which is in the access of every one. But this system gave them a secure environment to secure their data. Data entry will also be secure method. And other function can also be done with full security. The student himself only check his marksheet.

4.2.3 Non-Functional Requirements

Non-functional requirements describe how the system works, while functional requirements describe what the system should do. The definition for a non -functional requirement is that it essentially specifies how the system should behave and that it is a constraint upon the syst ems behaviour. One could also think of non -functional requirements as quality attrib utes for of a system.

4.2.4 Non-Functional Requirements of a student management system

Following are the non-functional requirements of a project we will discuss them as follow.

- Scalability
- Capacity
- Availability
- Reliability
- Recoverability
- Maintainability
- Serviceability
- Security
- Regulatory

4.3 Project Quality Attribute

4.3.1 Availability

High availability software is software used to ensure that systems are running and available most of the time. High availability is a high percentage of time that the system is functioning. It can be formally defined as (1 – (down time/ total time))*100Application must be responsive and available at every time. For example if you want to search any record either it is your own mark sheet or some other kind then the program must be in use so that there is no excuse to this. It must be available every time because It is the quality of a good program to be responsive every time. 100 %.

4.3.2 Maintainability

Making modifications or upgrade-potential in the utility will not be so much difficult. It means then program must be easy to debug and easy to maintain. This is because it is the practice of a good programmer to type his code in such a way so that it can easily be understand by its user. This can be done by adding comments and major task must be performed in the functions so that everyone can understand and if anybody wants to make amendments in it. He can easily carry on with this. If you write your line of codes in an in-efficient manner then program will become bulky and become difficult to maintain debug.

4.3.3 Consistency

When a developer is updating information, consistency must hold there. It means there must be consistency in your line of codes. Consistency is a broad term for any action that results in fewer ways to do any given thing in a system. Consistency can be achieved at the individual line level or even in the process level that lives outside of the code. Consistency isn't the only principle that matters, but it is a high-impact one to a project's long-term maintainability. You increase the number and frequency of correct assumptions by making your code consistent, and these correct assumptions (and verifications) lead to the many actionable steps you take during development. If you interact with me regularly you'll be guaranteed to have heard this phrase:

"Consistently bad is better than inconsistently good."

4.3.4 Efficiency

The project must be efficient in performing the task. **Program efficiency** the ratio of program output to input. It is a basic measure that can be used to benchmark programs against each other. The following are common types of program efficiency.

Calculation

Efficiency is a financial metric based on the value of inputs and outputs:

Program efficiency = (output / input) x 100

Efficiency is best applied to highly optimized processes that produce a regular steam of outputs such as a production line.

4.3.5 Time consumption

The project must consume less time as much as possible. It means be efficient like this so that it can performs the task as soon as early as possible. The user should not wait for long to get his task complete. Time consumption plays a very important role in doing the valuation of the project.

4.3.6 Scalability

Scalability is the capability of a system, network, or process to handle a growing amount of work, or its potential to be enlarged to accommodate that growth. It is a highly significant issue in electronics systems, databases, routers, and networking. For example, a system is considered scalable if it is capable of increasing its total output under an increased load when resources are added.

4.3.7 Interoperability

Interoperability is the ability of different information technology systems and **software** applications to communicate, exchange data, and use the information that has been exchanged.

4.3.8 Security

Secure coding is the practice of developing computer software in a way that guards against the accidental introduction of security vulnerabilities. Defects, bugs and logic flaws are consistently the primary cause of commonly exploited software vulnerabilities.

4.3.9 Serviceability

Serviceability (RAS) is a set of related attributes that must be considered when designing, manufacturing, purchasing or using a computer product or component. ... Availability is the ratio of time a system or component is functional to the total time it is required or expected to function

CHAPTER # 5

SYSTEM IMPLEMENTATION

5. SYSTEM IMPLEMENTATION

In this chapter, we'll focus on an implementation of our project i.e word game using hash function.

5.1 Introduction

Once the student management system completes, how can it works? It works in first the admin entered the records of students in this system. For adding firstly the admin should verified then he adds the system. Then for deletion, the above system is once again happening. The admin verify, then check the student and then then the student delete. And for creating mark sheet, then again firstly the verification of admin is done, after this the process of verification of student is happening, then admin can enter the data. Same as the admin can check the whole class data and one student data. And the modification of data can be done with two methods one through changing of all data and other is to change only password of data. All the system is private.

5.1.1 Pre-requisite of student management system:

Our product is student management system gives all the services that must be provided to a student over the internet to find fee details provided by that administrator of the college. This product contains each and every data regarding student, payment etc., personal details which can be updated by the student and viewed by the administrator. It provides the detailed information about the fee details and the location (place) of college. Our product is a subpart of university management system.

Our Student Management System product usage makes work done at the faster way the software is applicable to view the fee details provided by the administrator of the organization and student can edit his personal details which can be viewed by the administrator.

5.1.2 Functions

We have used different functions in our program. Following functions are used.

Void addData()

This addData function is such function which insert the data enter by the user to file. This function firstly get the data from user through **void getdata().** And then add this data into file. Basically this function insert the data into file so this function works on writing the data through **fstream** function **obj.write**.

Void show_data()

This function is used to show the record of file. This function basically works on the extracting the object data from the file. This function works on **fstream** function **obj.read.**

Void delData()

This function works on both reading and writing of file. This function basically works on deleting the data from the file. Firstly this function make a temporary file then it search the data asked by user. After this the student write all the data of file on temporary file except the data which was to be delete. After this the function change the name of the file and then delete the temporary file and the data asked by the user is delete.

Void search()

This search function read the data from the file and then return the value of that function. In this program the search function is of many types the function search individuals and search the whole class. And search is happening to search the admin in admin file. That admin is either true or false.

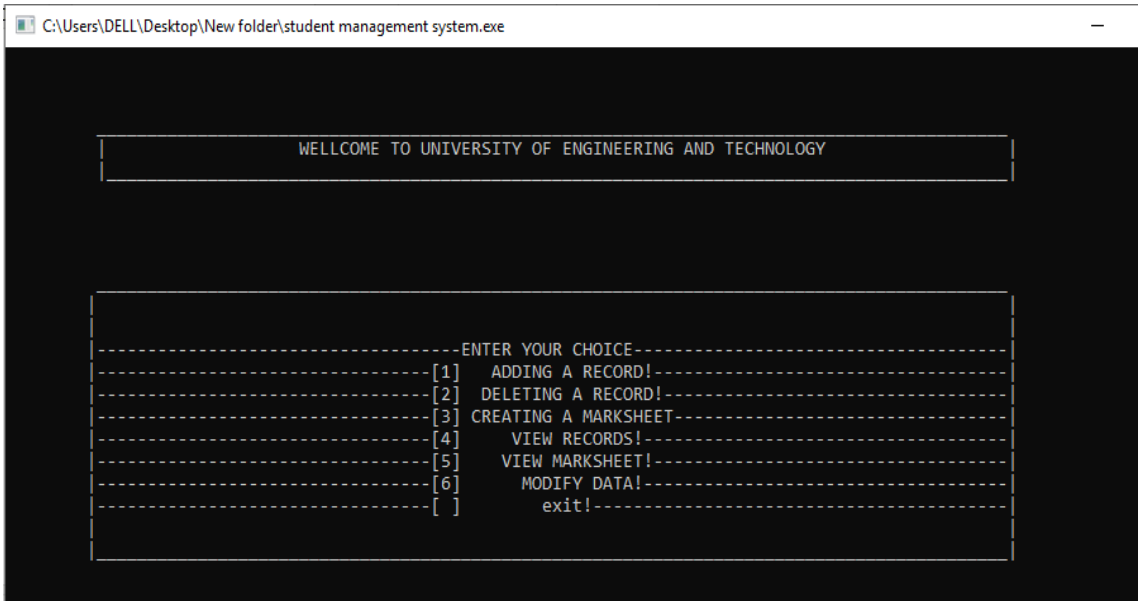
Void editData()

This function is used to change a specific data for which the admin want to change. This function works on two method one to change the complete data and other one is used to just change the password in file. This both things can be done by admin. This function removes the mistake of data which happens during the editing of data. The function also works on the basis of search in which firstly the compiler search the data then according to user it will change.

5.1.3 How do our project work?

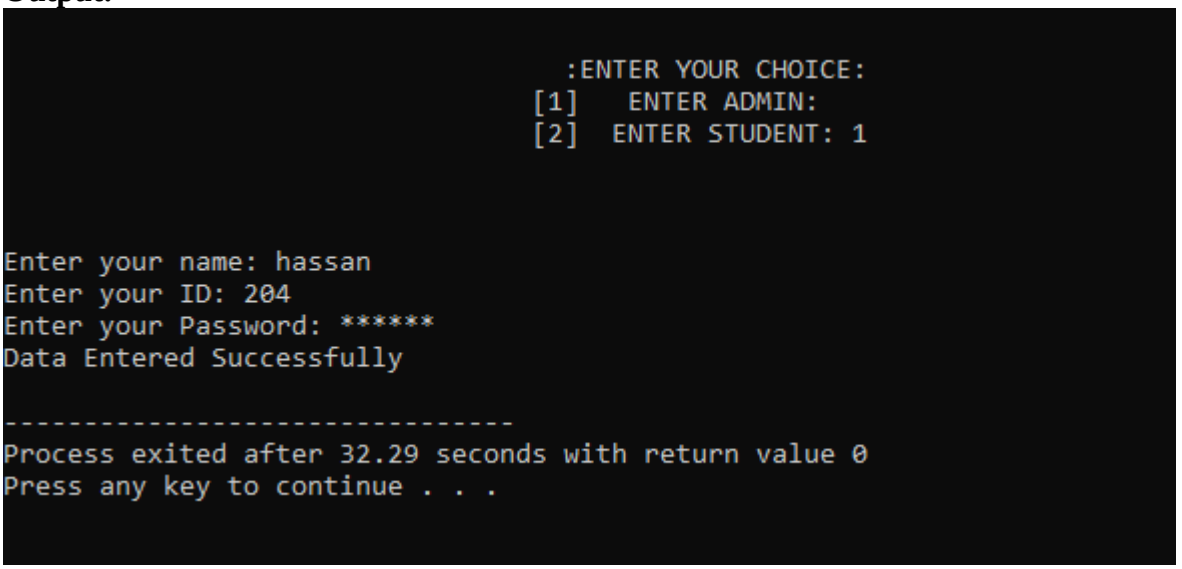
This project performs the following tasks.

Output :



Adding a record

Output:



Output:

```
                                  :ENTER YOUR CHOICE:
                                [1]   ENTER ADMIN:
                                [2]  ENTER STUDENT: 2



        Enter ID: 201
Enter the password: ***Data Found
Enter your choice y to add record and n to back!y
Enter student Name fazeel
Enter student Registration_No 15-ME-01
Enter student Password ******
Enter your department: mechanical

Enter the semester: 8
Data Entered Successfully
Enter your choice y to add record and n to back!n

--------------------------------
Process exited after 68.36 seconds with return value 0
Press any key to continue . . .
```

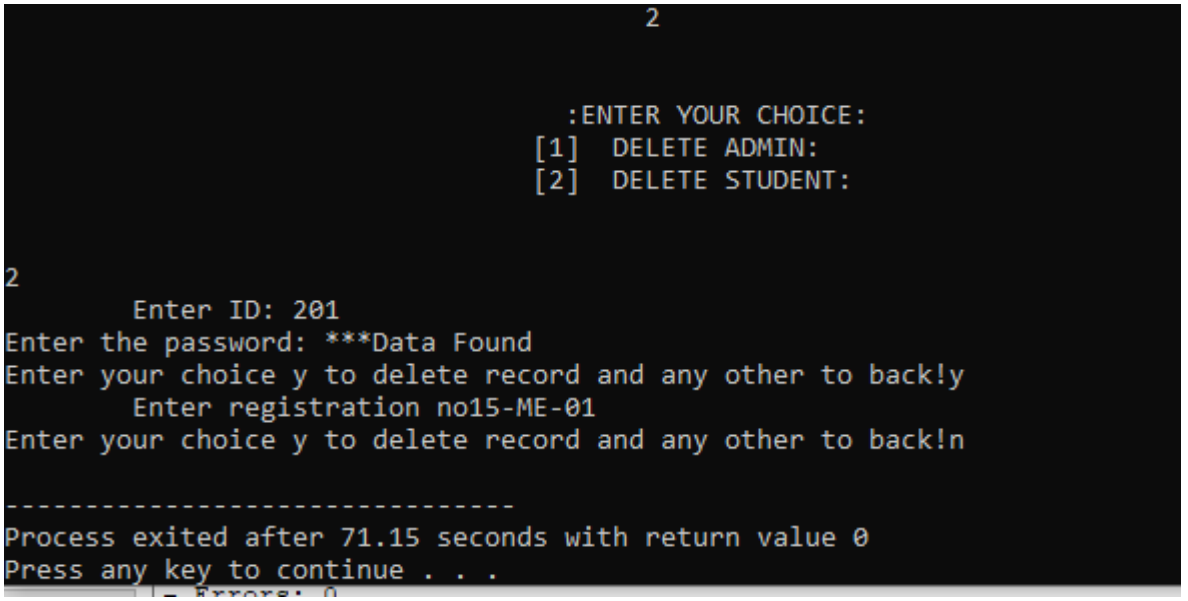
Deleting Record:

Output:

C:\Users\DELL\Desktop\New folder\student management system.exe

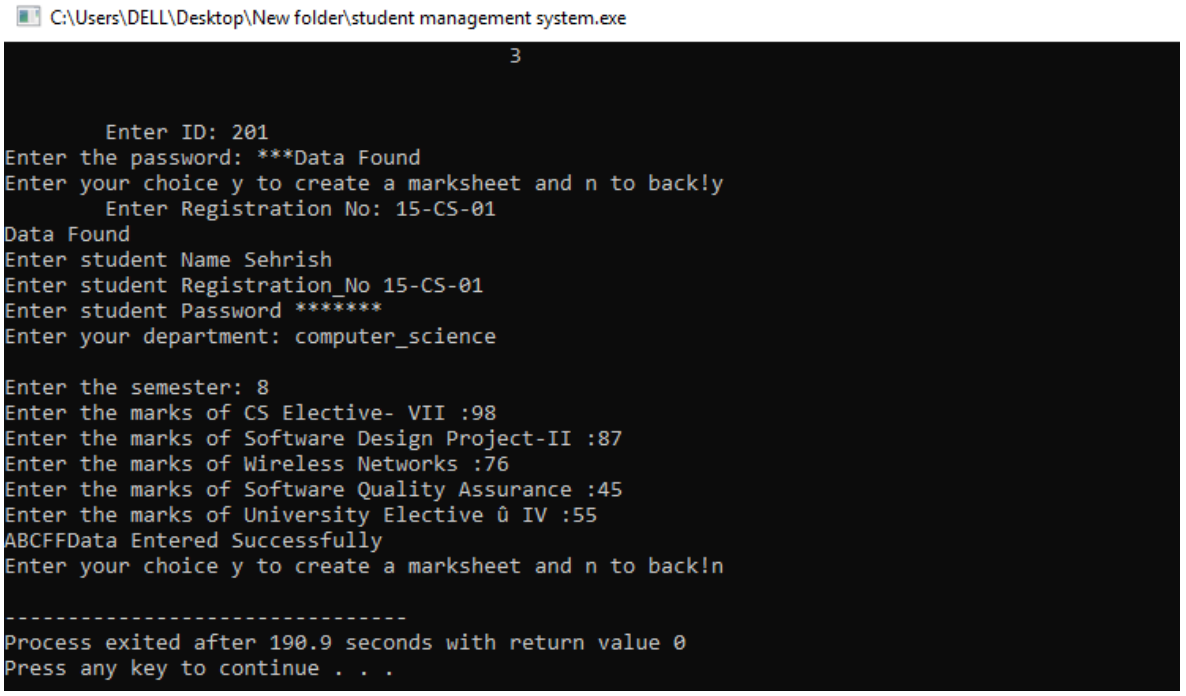
```
                                [1]  DELETE ADMIN:
                                [2]  DELETE STUDENT:


1

The admin of Entry purpose are: The name of admin is: ali
The ID of admin is: 201
The name of admin is: aslam
The ID of admin is: 202
The name of admin is: ahmad
The ID of admin is: 203
The name of admin is: ahmad
The ID of admin is: 203
The name of admin is: hassan
The ID of admin is: 204
       Enter ID to delete202
if you want to delete furthor record!
press 1 other than press 21
       Enter ID to delete203
if you want to delete furthor record!
press 1 other than press 22
The name of admin is: ali
The ID of admin is: 201
The name of admin is: hassan
The ID of admin is: 204

--------------------------------
Process exited after 52.33 seconds with return value 0
Press any key to continue . . .
```

Output:



Create marks sheet:

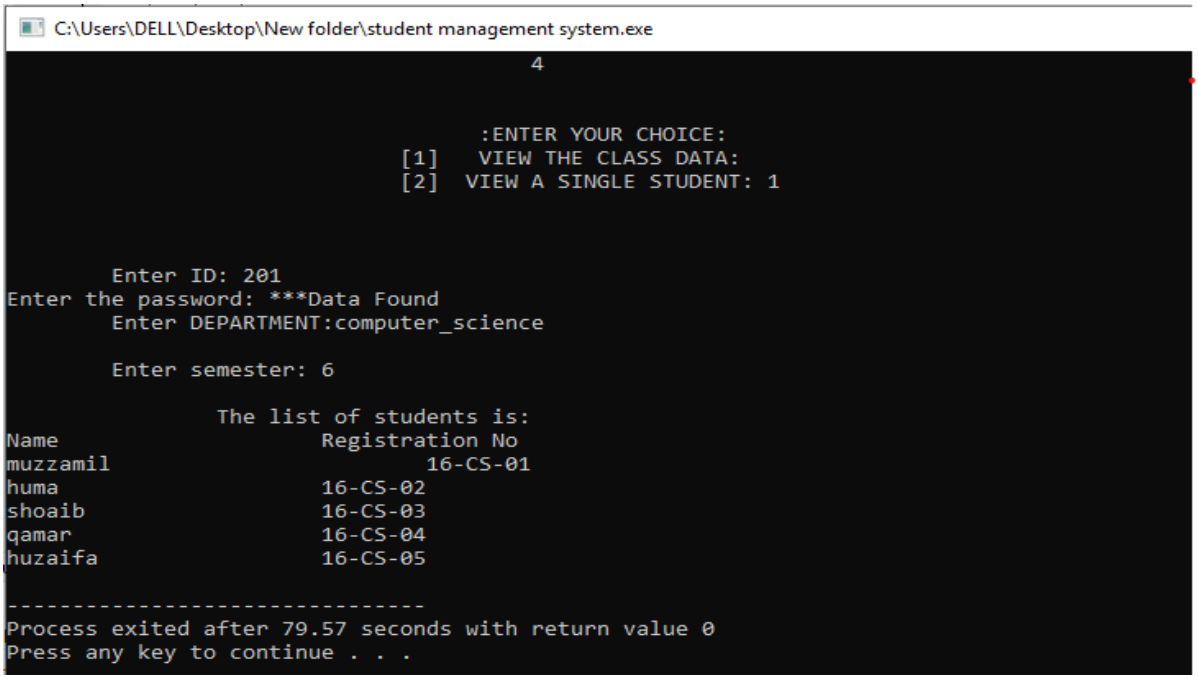
Output:



View records:

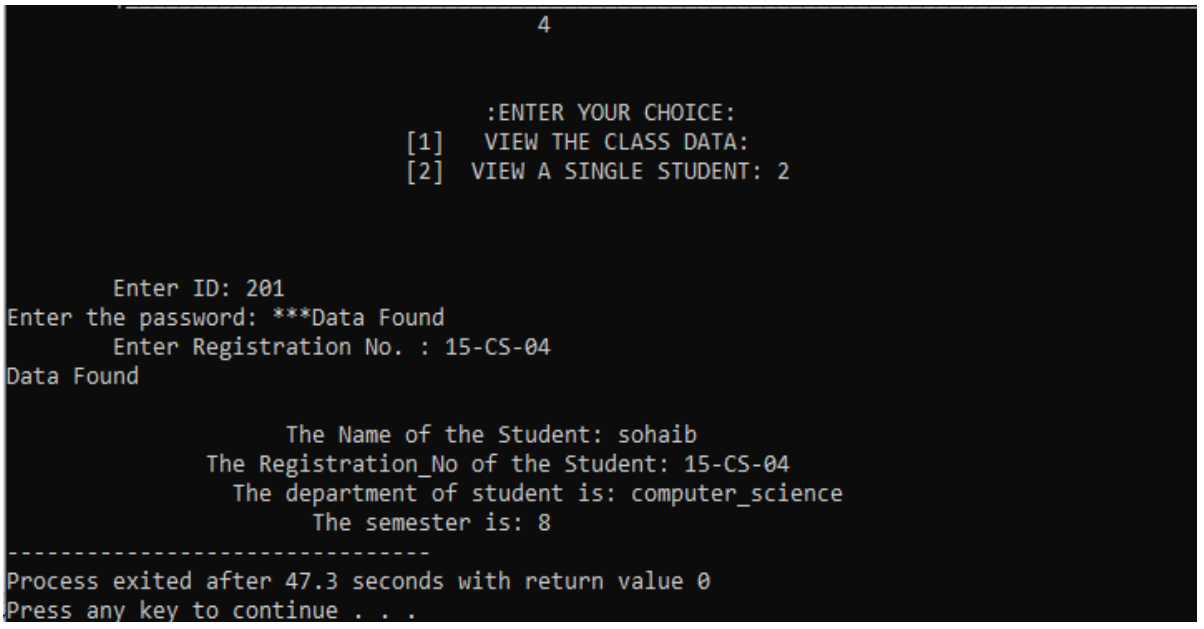
View class record:

Output:



View single record:

Output:



View marks sheet:

Output:

```
                                        5


       Enter Registration No.: 15-CS-01
Enter your password: sehrish
Data Found

                    The Name of the Student: Sehrish
               The Registration_No of the Student: 15-CS-01
                 The department of student is: computer_science
                       The semester is: 8
          The GRADE of the CS Elective- VII                    A
          The GRADE of the Software Design Project-II                  B
          The GRADE of the Wireless Networks                   C
          The GRADE of the Software Quality Assurance                  F
          The GRADE of the University Elective û IV                    F
The GPA of the student is: 1.8
--------------------------------
Process exited after 36.08 seconds with return value 0
Press any key to continue . . .
```

Modify data:

Change password:

Output:

```
                                        6


                                     :ENTER YOUR CHOICE:
                                [1]   CHANGE THE PASSWORD:
                                [2]  CHANGE THE COMPLETE DATA: 1
        Enter ID: 201
Enter the password: ***Data Found
        Enter registration no15-CS-02
Enter old password: *****
Enter new password: *****
Password is successfully changed!
--------------------------------
Process exited after 92.06 seconds with return value 0
Press any key to continue . . .
```

Change complete data:

```
                                        6


                                      :ENTER YOUR CHOICE:
                                 [1]   CHANGE THE PASSWORD:
                                 [2]  CHANGE THE COMPLETE DATA: 2
        Enter ID: 201
Enter the password: ***Data Found
        Enter registration no15-CS-01
Enter student Name sehrish
Enter student Registration_No 15-CS-01
Enter student Password *******
Enter your department: computer_science

Enter the semester: 8

Your Data is modified successfully!
--------------------------------
Process exited after 70.99 seconds with return value 0
Press any key to continue . . .
```

CHAPTER # 6

SYSTEM TESTING

6. SYSTEM TESTING

In this chapter, we will discuss the testing phase of our project **"Word game using hash function"** in different manner to know that how much efficient and effective project is.

6.1 Introduction

System testing is a procedure of executing an application or program with the expectation of discovering mistakes and whether the project is satisfying client needs. It can also be described as the capacity of a program in meeting the required or wanted outcomes.

Generally in the field of software engineering, a separate phase is carried out which is called testing phase it is done after the implementation phase has been completed. This approach has a benefit that it is difficult for an individual to look for his mistakes, but a different perspective and fresh eye can readily find the observable errors much quicker than the individual that has written or read the said material several times.

6.2 Testing Plan

A process of performing as application or program with the intention of finding errors and whether the application is fulfilling user needs.

6.2.1 Unit Testing

The software units in an application are modules and subroutines that are incorporated and integrated to play a particular function. Unit testing first of all focuses around modules, irrespective of one another's functionalities, to find errors. This enables the developers to recognize errors in the code and the logic within each individual module. This testing includes performing practically. All the feature controls are tested to make sure that each performs its action as required.

6.2.2 System Testing

To test the complete "student management system", system testing has been used. It is beneficial to check whether the application meets its requirements and fulfill Quality Standards.

6.2.3 Integration Testing

Integration testing allows the software developers to integrate all the components of the "student management system" within one program and then test them in a group. Basically, this testing level is used to catch the defects in the user interface between the functions/ modules. It is useful to determine how logically and efficiently all the units/ components are running together.

6.2.4 User Acceptance Testing

User acceptance of "student management system" is the key factor for the success of our application. The application under consideration has been tested for user compliance by frequently keeping in touch with the application users during developing period and making required changes.

If student wants to **enter some record**:

The result will be like this.

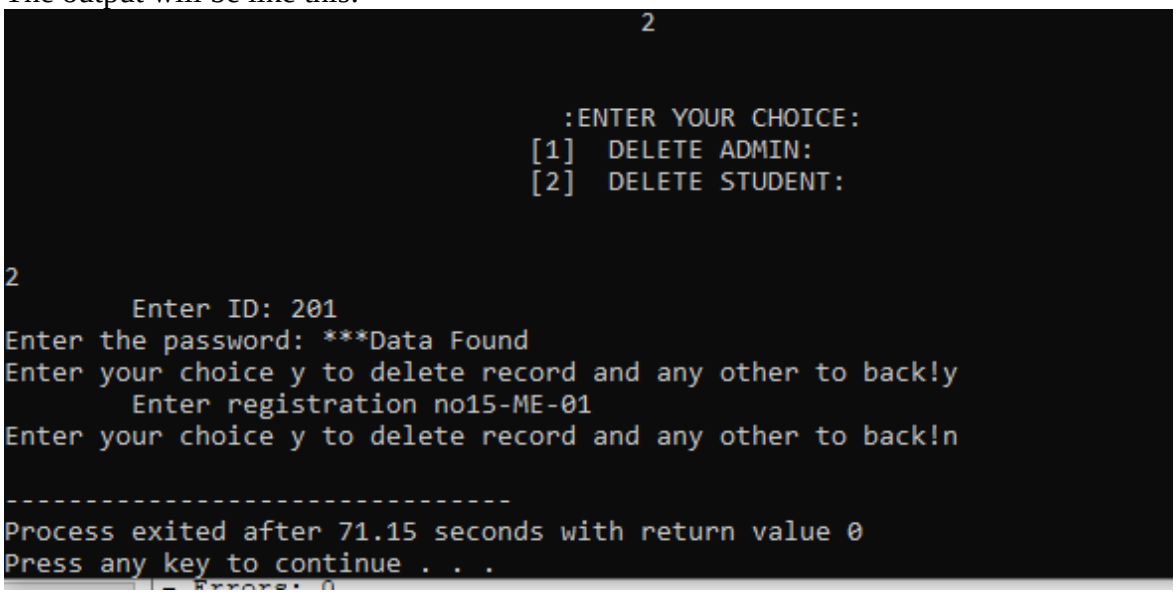
```
                                  :ENTER YOUR CHOICE:
                                [1]   ENTER ADMIN:
                                [2]  ENTER STUDENT: 2



        Enter ID: 201
Enter the password: ***Data Found
Enter your choice y to add record and n to back!y
Enter student Name fazeel
Enter student Registration_No 15-ME-01
Enter student Password ******
Enter your department: mechanical

Enter the semester: 8
Data Entered Successfully
Enter your choice y to add record and n to back!n

--------------------------------
Process exited after 68.36 seconds with return value 0
Press any key to continue . . .
```

If student want to create marks sheet:

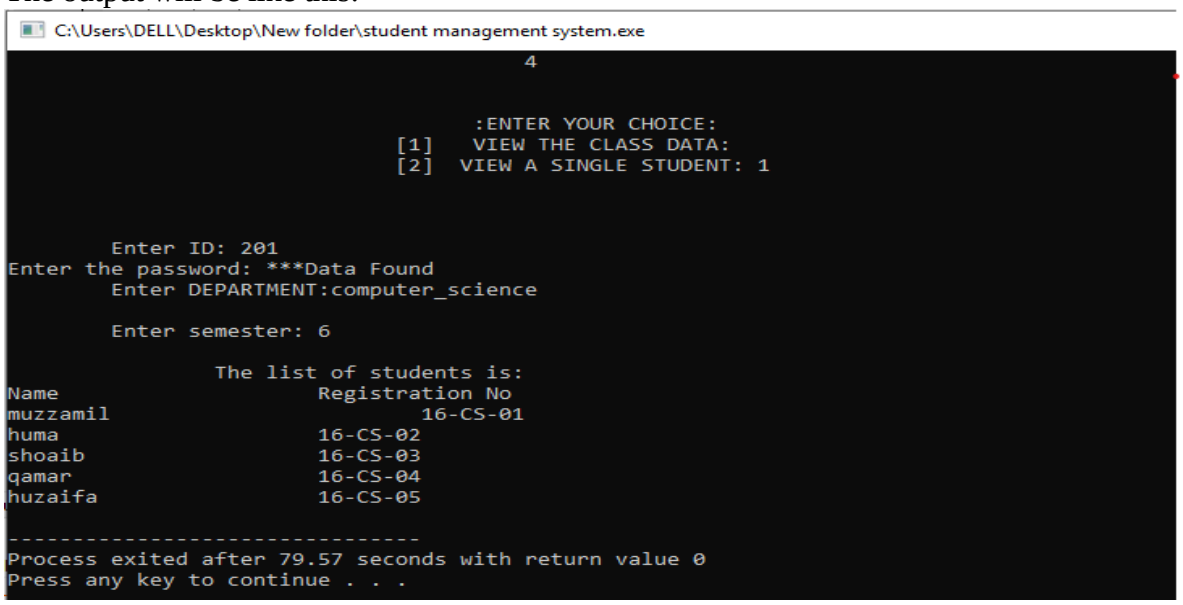
The result will be like this.

```
C:\Users\DELL\Desktop\New folder\student management system.exe
                                       3


       Enter ID: 201
Enter the password: ***Data Found
Enter your choice y to create a marksheet and n to back!y
       Enter Registration No: 15-CS-01
Data Found
Enter student Name Sehrish
Enter student Registration_No 15-CS-01
Enter student Password *******
Enter your department: computer_science

Enter the semester: 8
Enter the marks of CS Elective- VII :98
Enter the marks of Software Design Project-II :87
Enter the marks of Wireless Networks :76
Enter the marks of Software Quality Assurance :45
Enter the marks of University Elective û IV :55
ABCFFData Entered Successfully
Enter your choice y to create a marksheet and n to back!n

--------------------------------
Process exited after 190.9 seconds with return value 0
Press any key to continue . . .
```

If student want to **delete record**:
The output will be like this:



If you want to view **class record**:
The output will be like this:



If you want to view a **single record**:
The output will be like this:

```
                                    4


                                :ENTER YOUR CHOICE:
                            [1]   VIEW THE CLASS DATA:
                            [2]  VIEW A SINGLE STUDENT: 2



       Enter ID: 201
Enter the password: ***Data Found
       Enter Registration No. : 15-CS-04
Data Found

                    The Name of the Student: sohaib
               The Registration_No of the Student: 15-CS-04
                 The department of student is: computer_science
                       The semester is: 8
--------------------------------
Process exited after 47.3 seconds with return value 0
Press any key to continue . . .
```

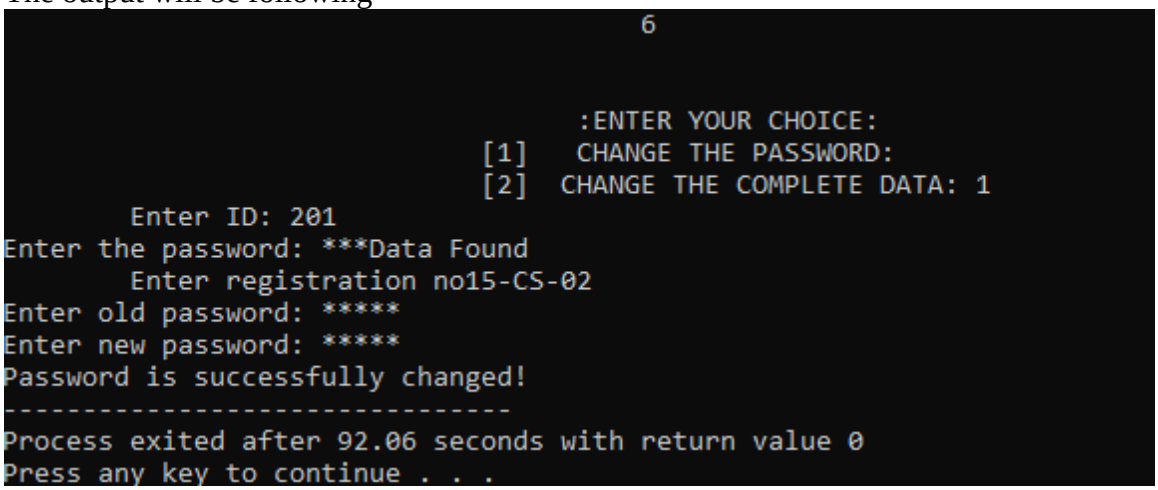
If user want to view **mark sheet**:
The output will be following:

```
                                    5


       Enter Registration No.: 15-CS-01
Enter your password: sehrish
Data Found

                    The Name of the Student: Sehrish
               The Registration_No of the Student: 15-CS-01
                 The department of student is: computer_science
                       The semester is: 8
          The GRADE of the CS Elective- VII                    A
          The GRADE of the Software Design Project-II                    B
          The GRADE of the Wireless Networks                   C
          The GRADE of the Software Quality Assurance                    F
          The GRADE of the University Elective û IV                      F
The GPA of the student is: 1.8
--------------------------------
Process exited after 36.08 seconds with return value 0
Press any key to continue . . .
```

If user want to change complete data:
The output will be following:

```
                                    6


                                :ENTER YOUR CHOICE:
                            [1]   CHANGE THE PASSWORD:
                            [2]  CHANGE THE COMPLETE DATA: 2
       Enter ID: 201
Enter the password: ***Data Found
       Enter registration no15-CS-01
Enter student Name sehrish
Enter student Registration_No 15-CS-01
Enter student Password *******
Enter your department: computer_science

Enter the semester: 8

Your Data is modified successfully!
--------------------------------
Process exited after 70.99 seconds with return value 0
Press any key to continue . . .
```

If user want to **change password**:
The output will be following



CHAPTER # 7
CONCLUSION

&

FUTURE WORK

7. CONCLUSION & FUTURE WORK

In this chapter, we will discuss the results and discussions of this framework "**the student management system**" with conclude remarks and will also discuss related future work of this application.

7.1 Conclusion

"student management system" is developed for a vast purpose. Application and product are specially designed for different Institutions and Government Agencies & Departments. The main objective of this application is to provide the facility of quick data entry in safe way with modern techniques with the development of a practical, reliable and inexpensive real time application that can be used everywhere. The main aim of making this project is to go through the whole concept of Object Oriented Programming that how it works and how it can be implemented on our daily life. It has a vast field of applications. The most important advantage of using this system is that it give the complete framework for the admin. Admin can enter, check, search ,delete ,view record in an easy way. And the data entry process is completely protected system. The only admin can perform these tasks. This helps the administration team of **UET Taxila** to work in an easy and safe way.

7.2 Future Work

In next our first preference is to enhance this project by providing more new features that are as follows:

1. I want to increase its features by working on the faculties member and data system of faculty should be added and perform their different tasks.
2. Other staff members like guards and other lab in-charge and other staff members.
3. The another limitation of this system is that only undergraduate student can be enroll in it all other students of MS and Ph. D can not be enroll in it.

8. REFERENCES

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2. https://support.office.com/en-gb/article/change-the-password-for-an-outlook-data-file-pst-a2eeefc2-aca4-49f9-9761-10e295e9fb85
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