

**FAZAIA BILQUIS POST GRADUATE COLLEGE FOR WOMEN**

**PAF NUR KHAN**



**PROGRAMMING FUNDAMENTAL**

**FINAL SEMESTER PROJECT**

**(USING C++)**

**SUBMITTED TO: MA'AM NAZIA**

**SUBMITTED BY: GROUP 1**

**DEPARTMENT: BSCS 1<sup>ST</sup>**

**SECTION: B**

**GROUP MEMBERS (ROLL NUMBER):**

- 1. AAFREEN ZAHRA KAZMI (GROUP LEADER)(37)***
- 2. AREEEBA QANDEEL (90)***
- 3. ALIHA AFZAL(73)***
- 4. ALIA MEHREEZ(52)***
- 5. MAHZAIB NAEEM(58)***
- 6. FATIMA TARIQ(55)***

# **STUDENT MANAGEMENT SYSTEM** **PROJECT**

# **PROJECT DESCRIPTION:**

## **• INTRODUCTION:**

The final semester project of our group is on **STUDENT MANAGEMENT SYSTEM**

## **• HOW IT IS MADE?**

For making this project we use different concepts of c++ that are:

### **1. STATEMENTS (IF,IF-ELSE,ELSE-IF)**

If statement is used to execute a statement or set of statements by checking a condition. In this project we use if-else and else-if statements mainly.

### **2. FUNCTIONS**

A function is a set of instructions that are designed to perform a specific task. Functions are of two types:

- Built-in Functions
- User-defined Functions

In our project we uses user defined function .the user defined in our project is

- Void enter( )
- Void show( )
- Void search( )
- Void update( )
- Void deleterecord( )

### **3. LOOPS**

A type of control structure that repeats a statement or set of statements is known as looping structure. It is also known as iterative or repetitive structure. There are three types of loops available in C++. These are as follows:

- while loop
- do-while loop
- for loop

In our project we uses **for loop**

### **4. ARRAYS**

An array is a group of consecutive memory locations with same name and type. We use arrays in our project because:

- Arrays can store large number of values with single name.
- Arrays are used to process many values easily and quickly.
- The values in arrays can be sorted easily
- A search process can be applied on arrays easily.

## **WHAT DOES A STUDENT MANAGEMENT SYSTEM DO**

A Student Management System is also known as a Student Information System (SIS). These systems work to coordinate scheduling and communications between faculty regarding students. This system exists to simplify information tracking for both parents and administrative staff.

# **PROGRAM:**

# **PROGRAM IMPLEMENTATION**

## **PROGRAM:**

```
#include<iostream>

using namespace std;

string arr1[20],arr2[20],arr3[20],arr4[20],arr5[20],arr6[100];

int total=0;

void enter()

{

int choice,i;

cout<<"\t\t TELL  HOW MANY STUDENT YOU WANT TO
ENTER  | = ";

cin>>choice;

if(total==0)

{

total=total+choice;

for(int i=0;i<choice;i++)

{

cout<<endl;
```

```

cout<<"\n"<<"\t\t\tENTER STUDENTS DATA | =
"<<i+1<<endl<<endl;

cout<<"\t\t\t\t\tNAME OF THE STUDENT | = ";

cin>>arr1[i];

cout<<"\n"<<"\t\t\t\t\tROLL NUMBER OF THE STUDENT | =
";

cin>>arr2[i];

cout<<"\n"<<"\t\t\t\t\tCOURSE OF THE STUDENT | = ";

cin>>arr3[i];

cout<<"\n"<<"\t\t\t\t\tCLASS OF THE STUDENT | = ";

cin>>arr4[i];

cout<<"\n"<<"\t\t\t\t\tCONTACT OF THE STUDENT | = ";

cin>>arr5[i];

cout<<"\n"<<"\t\t\t\t\tADDRESS OF THE STUDENT | = ";

cin>>arr6[i];

}

}

else

for(int i=total;i<total+choice;i++)

{

```



```

cout<<endl;

cout<<"\t\t\tENTER STUDENTS DATA | =
"<<i+1<<endl<<endl;

cout<<"\n<<""\t\t\t\tNAME OF THE STUDENT | = ";
cin>>arr1[i];

cout<<"\n<<""\t\t\t\tROLL NUMBER OF THE STUDENT | =
";
cin>>arr2[i];

cout<<"\n"<<""\t\t\t\tCOURSE OF THE STUDENT | = ";
cin>>arr3[i];

cout<<"\n"<<""\t\t\t\tCLASS OF THE STUDENT | = ";
cin>>arr4[i];

cout<<"\t\t\t\tCONTACT OF THE STUDENT | = ";
cin>>arr5[i];

cout<<"\n"<<""\t\t\t\tADDRESS OF THE STUDENT | = ";
cin>>arr6[i];
}

total=total+choice;

}

void show()

```

```

{
for(int i=0;i<total;i++)
{
cout<<endl;

cout<<"\t\t\t\tDATA OF THE STUDENT  |"<<i+1<<endl;

cout<<"\t\t\t\tNAME    OF    THE    STUDENT    |    ="
"<<arr1[i]<<endl;

cout<<"\t\t\t\tROLL  NUMBER  OF  THE  STUDENT  |  ="
"<<arr2[i]<<endl;

cout<<"\t\t\t\tCOURSE    OF    THE    STUDENT    |    ="
"<<arr3[i]<<endl;

cout<<"\t\t\t\tCLASS    OF    THE    STUDENT    |    ="
"<<arr4[i]<<endl;

cout<<"\t\t\t\tCONTACT    OF    THE    STUDENT    |    ="
"<<arr5[i]<<endl;

cout<<"\t\t\t\tADDRESS    OF    THE    STUDENT    |    ="
"<<arr6[i]<<endl;
}
}

void search()
{

```

```

string name;

cout<<endl;

cout<<"\t\t\tWRITE THE NAME OF THE STUDENT YOU
WANT TO SEARCH | = ";

cin>>name;

for(int i=0;i<total;i++)
{
if(name==arr1[i])
{
cout<<endl;

cout<<"\t\t\t\tDATA OF THE STUDENT |"<<i+1<<endl;

cout<<"\t\t\t\t\tNAME OF THE STUDENT | =
"<<arr1[i]<<endl;

cout<<"\t\t\t\t\tROLL NUMBER OF THE STUDENT | =
"<<arr2[i]<<endl;

cout<<"\t\t\t\t\tCOURSE OF THE STUDENT | =
"<<arr3[i]<<endl;

cout<<"\t\t\t\t\tCLASS OF THE STUDENT | =
"<<arr4[i]<<endl;

cout<<"\t\t\t\t\tCONTACT OF THE STUDENT | =
"<<arr5[i]<<endl;

```

```

cout<<"\t\t\t\tADDRESS    OF    THE    STUDENT    |    =
"<<arr6[i]<<endl;

}

}

}

void update()
{
string name;
cout<<endl;

cout<<"\t\t\tWRITE THE  NAME OF THE STUDENT YOU
WANT TO UPDATE  |= ";
cin>>name;
for(int i=0;i<total;i++)
{
if(name==arr1[i])
{
cout<<endl;

cout<<"\t\t\tPREVIOUS DATA  !!"<<endl;

cout<<"\t\t\t\tDATA OF THE STUDENT  |"<<i+1<<endl;

```

```

cout<<"\t\t\t\t\tNAME OF THE STUDENT | =
"<<arr1[i]<<endl;

cout<<"\t\t\t\t\tROLL NUMBER OF THE STUDENT | =
"<<arr2[i]<<endl;

cout<<"\t\t\t\t\tCOURSE OF THE STUDENT | =
"<<arr3[i]<<endl;

cout<<"\t\t\t\t\tCLASS OF THE STUDENT | =
"<<arr4[i]<<endl;

cout<<"\t\t\t\t\tCONTACT OF THE STUDENT | =
"<<arr5[i]<<endl;

cout<<"\t\t\t\t\tADDRESS OF THE STUDENT | =
"<<arr6[i]<<endl;

cout<<endl;

cout<<"\t\t\t\t\t-----
-----\n\n\n";

cout<<"\t\t\t\t\t||| ENTER NEW DATA
||| \n\n\n";

cout<<"\t\t\t\t\tNAME OF THE STUDENT | = ";
cin>>arr1[i];

cout<<"\t\t\t\t\tROLL NUMBER OF THE STUDENT | = ";
cin>>arr2[i];

```

```

cout<<"\t\t\t\tCOURSE OF THE STUDENT | = ";
cin>>arr3[i];

cout<<"\t\t\t\tCLASS OF THE STUDENT | = ";
cin>>arr4[i];

cout<<"\t\t\t\tCONTACT OF THE STUDENT | = ";
cin>>arr5[i];

cout<<"\t\t\t\tADDRESS OF THE STUDENT | = ";
cin>>arr6[i];

}

}

}

void deleterecord()

{

int k;

cout<<"\t\t PRESS 1 TO DELETE YOUR FULL RECORD |
= "<<endl;

cout<<"\t\t PRESS 2 TO DELETE SPECIFIC DATA | =
"<<endl;

cout<<"\t\t ENTER YOUR CHOICE | = ";

cin>>k;

```

```

switch(k)
{
case 1:
if(k==1)
{
total=0;
cout<<"\t\t\t\t\t ALL YOUR RECORD IS DELETED
|"<<endl;
}
break;
case 2:
if (k==2)
{
string name;
cout<<"\t\t\tENTER THE STUDENT NAME WHOSE
RECORD YOU WANTED TO DELTED | = ";
cin>>name;
for(int i=0;i<total;i++)
{
if(name==arr1[i])

```

```

{
for(int j=i;j<total;j++)
{
arr1[j]=arr1[j+1];
arr2[j]=arr2[j+1];
arr3[j]=arr3[j+1];
arr4[j]=arr4[j+1];
arr5[j]=arr5[j+1];
arr6[j]=arr6[j+1];
}
total--;

cout<<"\t\t\tYOUR REQUESTED RECORD IS
DELETED.....!!!!!"<<endl;

}

}

}

}

```





```
cout<<endl;

cout<<"\n\n"<<\t\t\tENTER YOUR CHOICE FROM 1 TO 5
| = ";

cin>>choice;

switch(choice)

{

case 1:

enter();

break;

case 2:

show();

break;

case 3:

search();

break;

case 4:

update();

break;

case 5:
```

```
deleterecord();
```

```
break;
```

```
case 6:
```

```
exit(0);
```

```
break;
```

```
default:
```

```
cout<<"||YOU HAVE ENTERED AN INVALID  
CHOICE||"<<endl;
```

```
break;
```

```
}
```

```
}
```

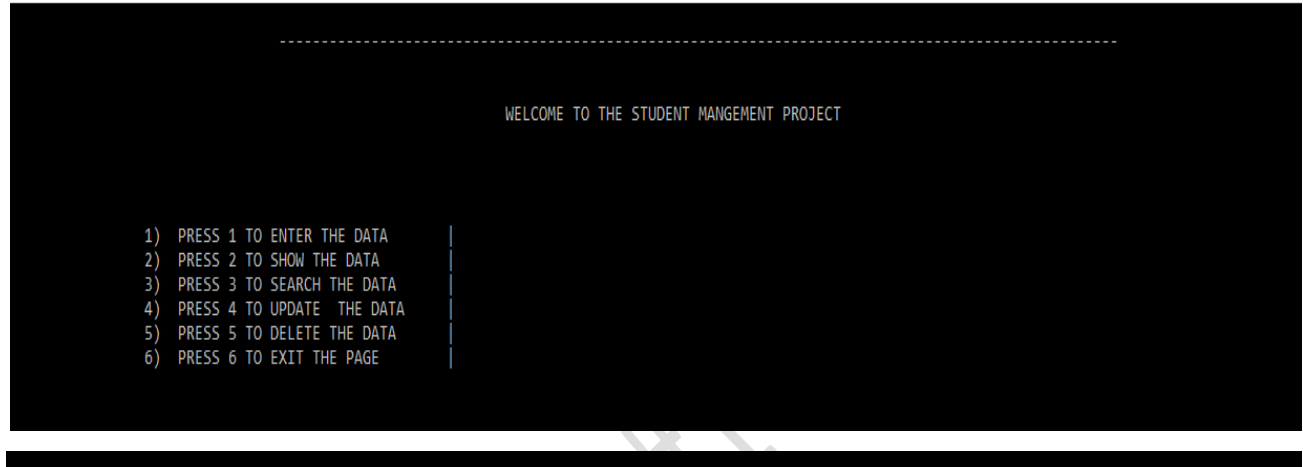
```
}
```

**OUTPUT:**

# 1

- The first step of output shows the functions we have to work on:

E:\project\student management project\STUDENTMANAGEMENTPROJECT.exe



## 2

- The second step of the output show the entered data of the student which user entered after pressing one because the function of key 1 is to enter the data and then the user tell that of how many student he/she want to entered. T Then user entered the data of student like(name,course,contact etc).the output is given below :

```
1) PRESS 1 TO ENTER THE DATA      |
2) PRESS 2 TO SHOW THE DATA        |
3) PRESS 3 TO SEARCH THE DATA      |
4) PRESS 4 TO UPDATE THE DATA      |
5) PRESS 5 TO DELETE THE DATA      |
6) PRESS 6 TO EXIT THE PAGE         |

<<          ENTER YOUR CHOICE FROM 1 TO 5      | = 1
TELL  HOW MANY STUDENT YOU WANT TO ENTER | = 3

          ENTER STUDENTS DATA      | = 1
          NAME OF THE STUDENT      | = AAFREEN
<<          ROLL NUMBER OF THE STUDENT | = 37
          COURSE OF THE STUDENT    | = COMPUTER
<<          CLASS OF THE STUDENT     | = BSCS
<<          CONTACT OF THE STUDENT   | = 887665
<<          ADDRESS OF THE STUDENT   | = H#3,Strt#4

          ENTER STUDENTS DATA      | = 2
          NAME OF THE STUDENT      | = ANUM
<<          ROLL NUMBER OF THE STUDENT | = 40
          COURSE OF THE STUDENT    | = BUISNESS
<<          CLASS OF THE STUDENT     | = BBA
<<          CONTACT OF THE STUDENT   | = 78875
<<          ADDRESS OF THE STUDENT   | = PHASE#8
```

## 2 CONT:

```
ENTER STUDENTS DATA      | = 2
NAME OF THE STUDENT      | = ANUM
ROLL NUMBER OF THE STUDENT | = 40
COURSE OF THE STUDENT    | = BUISNESS
CLASS OF THE STUDENT     | = BBA
CONTACT OF THE STUDENT   | = 78875
ADDRESS OF THE STUDENT   | = PHASE#8

ENTER STUDENTS DATA      | = 3
NAME OF THE STUDENT      | = AREEBA
ROLL NUMBER OF THE STUDENT | = 90
COURSE OF THE STUDENT    | = ENGLISH
CLASS OF THE STUDENT     | = BS.ENG
CONTACT OF THE STUDENT   | = 78865
ADDRESS OF THE STUDENT   | = KARACHI
```

### 3

- The third step of output shows the data of students which user entered. The show function executed after user press key 2. the function of key 2 is to show the data .

```
1) PRESS 1 TO ENTER THE DATA |
2) PRESS 2 TO SHOW THE DATA |
3) PRESS 3 TO SEARCH THE DATA |
4) PRESS 4 TO UPDATE THE DATA |
5) PRESS 5 TO DELETE THE DATA |
6) PRESS 6 TO EXIT THE PAGE |

<< ENTER YOUR CHOICE FROM 1 TO 5 | = 2

DATA OF THE STUDENT |1
NAME OF THE STUDENT | = AAFREEN
ROLL NUMBER OF THE STUDENT | = 37
COURSE OF THE STUDENT | = COMPUTER
CLASS OF THE STUDENT | = BSCS
CONTACT OF THE STUDENT | = 887665
ADDRESS OF THE STUDENT | = H#3,Strt#4

DATA OF THE STUDENT |2
NAME OF THE STUDENT | = ANUM
ROLL NUMBER OF THE STUDENT | = 40
COURSE OF THE STUDENT | = BUISNESS
CLASS OF THE STUDENT | = BBA
CONTACT OF THE STUDENT | = 78875
ADDRESS OF THE STUDENT | = PHASE#8

DATA OF THE STUDENT |3
NAME OF THE STUDENT | = AREEBA
ROLL NUMBER OF THE STUDENT | = 90
COURSE OF THE STUDENT | = ENGLISH
CLASS OF THE STUDENT | = BS.ENG
CONTACT OF THE STUDENT | = 78865
ADDRESS OF THE STUDENT | = KARACHI

DATA OF THE STUDENT |4
NAME OF THE STUDENT | =
ROLL NUMBER OF THE STUDENT | =
COURSE OF THE STUDENT | =
CLASS OF THE STUDENT | =
CONTACT OF THE STUDENT | =
ADDRESS OF THE STUDENT | =
```



## 4

- The fourth step of output show the function to search the data of the individual student which user entered. The search function executed after user press key 3.the function of key 3 is to search the data.

```
1) PRESS 1 TO ENTER THE DATA |
2) PRESS 2 TO SHOW THE DATA |
3) PRESS 3 TO SEARCH THE DATA |
4) PRESS 4 TO UPDATE THE DATA |
5) PRESS 5 TO DELETE THE DATA |
6) PRESS 6 TO EXIT THE PAGE |

<< ENTER YOUR CHOICE FROM 1 TO 5 | = 3

WRITE THE NAME OF THE STUDENT YOU WANT TO SEARCH | = ANUM

DATA OF THE STUDENT |2
NAME OF THE STUDENT | = ANUM
ROLL NUMBER OF THE STUDENT | = 40
COURSE OF THE STUDENT | = BUISNESS
CLASS OF THE STUDENT | = BBA
CONTACT OF THE STUDENT | = 78875
ADDRESS OF THE STUDENT | = PHASE#8
```

# 5

- The fifth step of output show the function to update the data of the student which user entered. The update function executed after user press key 4. the function of key 4 is to update the data of a student.

```
1) PRESS 1 TO ENTER THE DATA |
2) PRESS 2 TO SHOW THE DATA |
3) PRESS 3 TO SEARCH THE DATA |
4) PRESS 4 TO UPDATE THE DATA |
5) PRESS 5 TO DELETE THE DATA |
6) PRESS 6 TO EXIT THE PAGE |

<< ENTER YOUR CHOICE FROM 1 TO 5 | = 4

WRITE THE NAME OF THE STUDENT YOU WANT TO UPDATE | = AREEBA

PREVIOUS DATA !!|
DATA OF THE STUDENT |3
NAME OF THE STUDENT | = AREEBA
ROLL NUMBER OF THE STUDENT | = 90
COURSE OF THE STUDENT | = ENGLISH
CLASS OF THE STUDENT | = BS.ENG
CONTACT OF THE STUDENT | = 78865
ADDRESS OF THE STUDENT | = KARACHI

-----

||| ENTER NEW DATA |||

NAME OF THE STUDENT | = AREEBA.Q
ROLL NUMBER OF THE STUDENT | = 90
COURSE OF THE STUDENT | = COMPUTER
CLASS OF THE STUDENT | = BSCS
CONTACT OF THE STUDENT | = 78865
ADDRESS OF THE STUDENT | = KARACHI
```

# 6

- In sixth step user again press key 2 to show the updated data of the student which user entered. The search function executed after user press key 2. The function of key 2 is to search the data of a student.

```
1) PRESS 1 TO ENTER THE DATA |
2) PRESS 2 TO SHOW THE DATA |
3) PRESS 3 TO SEARCH THE DATA |
4) PRESS 4 TO UPDATE THE DATA |
5) PRESS 5 TO DELETE THE DATA |
6) PRESS 6 TO EXIT THE PAGE |

<< ENTER YOUR CHOICE FROM 1 TO 5 | = 2

DATA OF THE STUDENT |1
NAME OF THE STUDENT | = AAFREEN
ROLL NUMBER OF THE STUDENT | = 37
COURSE OF THE STUDENT | = COMPUTER
CLASS OF THE STUDENT | = BSCS
CONTACT OF THE STUDENT | = 887665
ADDRESS OF THE STUDENT | = H#3,Strt#4

DATA OF THE STUDENT |2
NAME OF THE STUDENT | = ANUM
ROLL NUMBER OF THE STUDENT | = 40
COURSE OF THE STUDENT | = BUISNESS
CLASS OF THE STUDENT | = BBA
CONTACT OF THE STUDENT | = 78875
ADDRESS OF THE STUDENT | = PHASE#8

DATA OF THE STUDENT |3
NAME OF THE STUDENT | = AREEBA.Q
ROLL NUMBER OF THE STUDENT | = 90
COURSE OF THE STUDENT | = COMPUTER
CLASS OF THE STUDENT | = BSCS
CONTACT OF THE STUDENT | = 78865
ADDRESS OF THE STUDENT | = KARACHI

DATA OF THE STUDENT |4
NAME OF THE STUDENT | =
ROLL NUMBER OF THE STUDENT | =
COURSE OF THE STUDENT | =
CLASS OF THE STUDENT | =
CONTACT OF THE STUDENT | =
ADDRESS OF THE STUDENT | =
```

- The seventh step of the output show the function of delete .if the user wanted to delete the data of one student the reason can be anything. The delete function is executed after pressing key 5.the function of key 5 is to delete the data. In the deleted option we have 2 options:
  1. To delete all the record (for this we have to press key 1)
  2. To delete the record of an individual student (for this we have to press key 2)then user will tell the compiler the name of the student of whom user wanted to delete the data

```
1) PRESS 1 TO ENTER THE DATA |  
2) PRESS 2 TO SHOW THE DATA |  
3) PRESS 3 TO SEARCH THE DATA |  
4) PRESS 4 TO UPDATE THE DATA |  
5) PRESS 5 TO DELETE THE DATA |  
6) PRESS 6 TO EXIT THE PAGE |
```

```
<<          ENTER YOUR CHOICE FROM 1 TO 5      | = 5  
PRESS 1 TO DELETE YOUR FULL RECORD    | =  
PRESS 2 TO DELETE SPECIFIC DATA     | =  
ENTER YOUR CHOICE                     | = 2  
        ENTER THE STUDENT NAME WHOSE RECORD YOU WANTED TO DELTED   | = ANUM  
YOUR REQUESTED RECORD IS DELETED.....!!!!!!
```

# 8

- In eighth step user again press key 2 to show the data of the student after delete the record of one individual student. The search function executed after user press key 2. The function of key 2 is to search the data of a student.

```
1) PRESS 1 TO ENTER THE DATA      |
2) PRESS 2 TO SHOW THE DATA        |
3) PRESS 3 TO SEARCH THE DATA      |
4) PRESS 4 TO UPDATE THE DATA      |
5) PRESS 5 TO DELETE THE DATA      |
6) PRESS 6 TO EXIT THE PAGE         |

<< ENTER YOUR CHOICE FROM 1 TO 5    | = 2

DATA OF THE STUDENT |1
NAME OF THE STUDENT | = AAFREEN
ROLL NUMBER OF THE STUDENT | = 37
COURSE OF THE STUDENT | = COMPUTER
CLASS OF THE STUDENT | = BSCS
CONTACT OF THE STUDENT | = 887665
ADDRESS OF THE STUDENT | = H#3,Strt#4

DATA OF THE STUDENT |2
NAME OF THE STUDENT | = AREEBA.Q
ROLL NUMBER OF THE STUDENT | = 90
COURSE OF THE STUDENT | = COMPUTER
CLASS OF THE STUDENT | = BSCS
CONTACT OF THE STUDENT | = 78865
ADDRESS OF THE STUDENT | = KARACHI

DATA OF THE STUDENT |3
NAME OF THE STUDENT | =
ROLL NUMBER OF THE STUDENT | =
COURSE OF THE STUDENT | =
CLASS OF THE STUDENT | =
CONTACT OF THE STUDENT | =
ADDRESS OF THE STUDENT | =

DATA OF THE STUDENT |4
NAME OF THE STUDENT | =
ROLL NUMBER OF THE STUDENT | =
COURSE OF THE STUDENT | =
CLASS OF THE STUDENT | =
CONTACT OF THE STUDENT | =
ADDRESS OF THE STUDENT | =
```

## 9

- The ninth or the last step of the program execution is to exit the program. The program execution ends when the user press key 6. The key 6 is to end/exits the program.

```
1) PRESS 1 TO ENTER THE DATA
2) PRESS 2 TO SHOW THE DATA
3) PRESS 3 TO SEARCH THE DATA
4) PRESS 4 TO UPDATE THE DATA
5) PRESS 5 TO DELETE THE DATA
6) PRESS 6 TO EXIT THE PAGE

<< ENTER YOUR CHOICE FROM 1 TO 5 | = 6

-----
Process exited after 714.1 seconds with return value 0
Press any key to continue . . .
```

**SUBMITTED TO:**

*MA'AM NAZIA*

**SUBMITTED DATE:**

*23-01-2023*

**SUBMITTED DAY:**

*MONDAY*