



COMSATS UNIVERSITY

ISLAMABAD

Programming Fundamentals

Final LAB Project

Project Title: School Management System

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Introduction:

Our project is about School Management System. Basically our program works in Command line interface. First of all program checks that the user is teacher or a student, because both users have different level of access to program features. Then the authentication of user is checked through password. If the user of program is student than he/she only check their personal or academic record, attendance and the courses offered to his/her class. If the user of the software is a teacher then they have huge level of access like The teachers can see their personal details, they can also see the students details they can add a new student , delete the student , see as well as mark the attendance , and enter the academic record of student (like subject marks etc.)

Task Distribution:

The following tasks are completed by Hammad Shafqat (SP22-BSE-015) :

- Add New Student
- Delete Previous Student
- Mark and show attendance
- Enter Academic details of Students
- Check and modify the courses

The following tasks are completed by Amina Khan (SP22-BSE-005) :

- Checks that the user is Student or Teacher
- Checks Authentication of user.
- Check Record of students.
- Checks the record of Teachers.
- Delete Previous Student

Features of program :

- Different level of access for Teachers and Students.
- Password protected program unauthorized user can access it.
- Add Student .
- Delete Student.
- Mark Attendance of Students.
- Show Previous Marked Attendance.
- Check and modify the courses offered in different classes.
- Check Teacher's Details.
- Check Students Details.
- Enter Academic details of students.
- Use of comments makes program easily understandable.
- Modules makes the program shorter and efficient.
- Arrays are used which are helpful for searching of students.
- Data stored in files so, it is permanently stored and also used in feature.
- Use of exceptional handling to avoid from program crash and maintain its normal flow.

Modules used in Program :

Our program use different modules each has its own functionality. These modules are as follows:

Module-1:

The very first main method only display welcome message and then authentication method is called.

Module-2:

Authentication module basically checks the user authentication through password. First of all it checks the user that he/she is a teacher or student and then it gets user name and password for calling main menu. As both the teacher and student have different level of access so there are different menus call for them.

Module-3:

main_menuS module is called when the user is student . The student can go to check his or her academic or personal record, attendance and course offered through this module.

Module-4:

Main_menu is a module which is called for teachers. It provide many features like check teachers record , check students record, enter students academic record , add new student, delete previous student, mark and check attendance, check and modify courses .

Module-5:

Teachers_Record method is used to create teacher files enter data and also it ask user that which teachers record they want to see and call the required method to see the teacher record by calling their method.

Module-6:

Different methods like Sir_Shah, Sir_Zulfi, Mam_Sadia etc are the methods that are used to read the files of specific teacher and display there record.

Module-7:

Students Records is a method which is called to check students details. It first ask user to select class and call the specific class method. Then each class method ask user to enter the roll no of student and then display their record by calling the method which read their file.

Module-8:

Enter result method call different class method and then these class methods get roll no of student and then a the method for a specific student call which get the academic details from teacher (like marks in different subjects) and store them in that student file and also display it on screen.

Module-9:

Attendance module is used to either check the attendance of student or mark the attendance of specific class by calling different methods and store their attendance for future use in files. Or if the user is student then he/she can only see their attendance not modify it.

Module-10:

New Admission module is used to add new student it can also provide facility to check previous student record. It get all the required info about student like Name, F/Name etc etc and save it on file for future use and student record is entered in School system.

Module-11:

Delete student method is used to delete the student record from their system. First of all it get input from user to select class then call the specified class method then it get input for roll number of student then it delete that specific student by deleting his/her record.

Module-12:

Course module is used to check that which courses are taught in which class. The program also gave the authority to teachers to modify the courses in different classes. If the user is student then he/she can only check their course they do not have access to modify it.

Code :

```
import java.util.*;
import java.io.*;
public class School {
//static object can be used in all methods
static Scanner input=new Scanner(System.in);
static String password;
//Main method display welcome message and call authentication method
public static void main(String[] args){
    System.out.println("\n*** WELCOME TO SCHOOL MANAGEMENT SYSTEM ***");
    authentication();
}
//checks that u r a teacher or student and then get user name and password for authentication and call main menu
public static void authentication(){
System.out.println("\nEnter 1 if you are Student :");
System.out.println("Enter 2 if you are Teacher :");
String select1=input.nextLine();
if(select1.equals("1")){
System.out.print("Please Enter User_Name : ");
while(true){
String user_name=input.nextLine();
if(user_name.matches("[a-zA-z ]+")){
```



```

System.out.println("\n*** Main Menu ***\n ");
System.out.println("Hello! Please select option : ");
    System.out.println("To check your detail press 1.");
    System.out.println("To check your attendance press 2.");
System.out.println("To check your cources press 3.");
String select=input.nextLine();
    if(select.equals("1"))
        Students_Records();
    else if(select.equals("2"))
        AttendanceS();
    else if(select.equals("3"))
        Cources();
    else{
        System.out.println("\nInvalid Choice!!! ");
        System.out.println("Please Enter Valid Input : \n");
        main_menu();
    }
}

//Main menu method gets input from user and called the different methods to perform different funcationalities
public static void main_menu(){
System.out.println("\n*** Main Menu ***\n ");
    System.out.println("To check Teachers Record press 1.");
    System.out.println("To check Students detail press 2.");
    System.out.println("To mark Students attendance press 3.");
    System.out.println("To enter Student Result press 4.");
    System.out.println("For new admission press 5.");
    System.out.println("For delete Student Record press 6.");
System.out.println("To check/modify cources press 7.");
String select=input.nextLine();
    if(select.equals("1"))
        Teachers_Record();
    else if(select.equals("2"))
        Students_Records();
    else if(select.equals("3"))
        Attendance();
    else if(select.equals("4"))
        Enter_Result();
    else if(select.equals("5"))
        New_Admission();
    else if(select.equals("6"))
        Delete_Student();
    else if(select.equals("7"))
        CourcesT();
    else{
        System.out.println("");
        System.out.println("Invalid Choice!!! ");
        System.out.println("Please Enter Valid Input : ");

```

```

System.out.println("");
main_menu();
}
}
//In Teacher record method teachers file are created and data written in files also it gets input from user to call different methods
//to display teachers details
public static void Teachers_Record(){
    System.out.println("\n\nTo check Sir Shahzad's Record (Press 1): ");
    System.out.println("To check Sir Zulfiqar's Record (Press 2): ");
    System.out.println("To check MAM Sadia's Record (Press 3): ");
    System.out.println("To check MAM Rabia's Record (Press 4): ");
    System.out.println("To check MAM Sania's Record (Press 5): ");
    System.out.println("Press 0 for return main menu :");
    File Shahzad_Sir=new File("Shahzad_Sir.txt");
    File Zulfiqar_Sir=new File("Zulfiqar_Sir.txt");
    File Sadia_MAM=new File("Sadia_MAM.txt");
    File Rabia_MAM=new File("Rabia_MAM.txt");
    File Sania_MAM=new File("Sania_MAM.txt");
    // below here Sir Shahzad file is created and date wrote in file
    try{
        Shahzad_Sir.createNewFile();
        FileWriter Sir_Shahzad=new FileWriter("Shahzad_Sir.txt");
        Sir_Shahzad.write("Name : Shahzad Akram \nF\\Name : Akram Ali\nEmail : shahzad123@gmail.com\nContact # : 0300-0000000\nSalary : 120,000pkr\nAddress : Rawalpindi Pakistan ");
        Sir_Shahzad.close();
    }
    catch(Exception e){
        System.out.print(e.getMessage());
    }
    try{
String sel_teac=input.nextLine();
        if(sel_teac.equals("0"))
            main_menu();
        else if(sel_teac.equals("1"))
            Sir_Shah();
        else if(sel_teac.equals("2"))
            Sir_Zulfi();
        else if(sel_teac.equals("3"))
            MAM_Sadia();
        else if(sel_teac.equals("4"))
            MAM_Rabia();
        else if(sel_teac.equals("5"))
            MAM_Sania();
        else{
            System.out.println("\nInvalid Input !!!! \n");
            System.out.println("Please enter Valid Input \n");
            Teachers_Record();
        }
    }
}

```



```

    }catch(Exception e){
System.out.print(e.getMessage());
}
} //Below method is display the sir shahzad record by reading his file
public static void Sir_Shah(){
    try{
        FileReader data_read1= new FileReader("Shahzad_Sir.txt");
        try{
            int i;
            while((i=data_read1.read())!=-1){
                System.out.print((char)i);
            }
        }
        finally{
            data_read1.close();
        }
    }
    catch(Exception ex){
        System.out.println(ex.getMessage());
    }

    System.out.println("\n\nPress 1 for main menu \nPress 2 for return Teachers Records\nPress any other key for terminate
program : ");
    String repeat=input.nextLine();
    if(repeat.equals("1"))
        main_menu();
else if(repeat.equals("2"))
Teachers_Record();
}

public static void Students_Records(){
    System.out.println("Please select the class :\n");
    System.out.println("Enter 0 for for Class Nursery :");
    System.out.println("Enter 1 for for First Class :");
    System.out.println("Enter 2 for for Secound Class :");
    System.out.println("Enter 3 for for Third Class :");
    System.out.println("Enter 4 for for Fourth Class :");
    System.out.println("Enter 5 for for Fiveth Class :");
String select_class=input.nextLine();
    if(select_class.equals("0"))
        Class_Nur();
    else if(select_class.equals("1"))
        Class_One();
    else if(select_class.equals("2"))
        Class_Two();
    else if(select_class.equals("3"))
        Class_Three();
    else if(select_class.equals("4"))
        Class_Four();

```

```

else if(select_class.equals("5"))
    Class_Five();
else{
    System.out.println("Invalid choice !\nPlease Enter a valid choice to continue :\n");
    Students_Records();
}
}

//in below method we select the nursery student by roll no and call his method
public static void Class_Nur(){
    System.out.println("\n*** Class Nursery ***\n");
    String[] roll_no={"1","2","3","4","5"};
    System.out.println("Enter Roll Number of a student : ");
    String roll=input.nextLine();
    if(roll.equals(roll_no[0]))
        COR1();
    else if(roll.equals(roll_no[1]))
        COR2();
    else if(roll.equals(roll_no[2]))
        COR3();
    else if(roll.equals(roll_no[3]))
        COR4();
    else if(roll.equals(roll_no[4]))
        COR5();
    else {
        System.out.println("\nInvalid choice !\nPlease enter roll no from 1-5 \n\n");
        Class_Nur();
    }
}

//below method is used to display roll no 1 student of nursery class's data by reading his file
public static void COR1(){
    System.out.println("\nPersonal Details : \n");
    try{
        FileReader data_readNur1= new FileReader("Nur_Student1.txt");
        try{
            int i;
            while((i=data_readNur1.read())!=-1){
                System.out.print((char)i);
            }
        }
        finally{
            data_readNur1.close();
        }
    }
    catch(Exception ex){
        System.out.println(ex.getMessage());
    }
}

System.out.println("\n\nPress enter your password to return to main menu\nOR\nPress 1 for return to Student Records\nOR\nAnd
any other number for terminate program : ");
String select2=input.nextLine();

```

```

if(select2.equals("12345"))
    main_menu();
else if(select2.equals("0000"))
    main_menuS();
else if(select2.equals("1"))
    Students_Records();
else
    System.out.println("\nProgram Terminated");
}

public static void Enter_Result(){//This method is used to enter academic details of students also display their record
    System.out.println("Please select the class :\n");
    System.out.println("Enter 0 for for Class Nursery :");
    System.out.println("Enter 1 for for First Class :");
    System.out.println("Enter 2 for for Secound Class :");
    System.out.println("Enter 3 for for Third Class :");
    System.out.println("Enter 4 for for Fourth Class :");
    System.out.println("Enter 5 for for Fiveth Class :");
    String s_class=input.nextLine();
    if(s_class.equals("0")){
        System.out.println("Enter student roll number: ");
        String rollNumber = input.nextLine();
        System.out.println("");
        if(rollNumber.equals("1")){
            String academic="\n*** Academic Details ***\n";
            try{
                System.out.println("Please enter Urdu Marks out of 100 ");
                double marks1=input.nextDouble();
                if(marks1>100 || marks1<0){
                    System.out.println("Wrong Input\nMarks must be greater then 0 and less then 100\n ");
                    Enter_Result();
                }
                System.out.println("Please enter English Marks out of 100 ");
                double marks2=input.nextDouble();
                if(marks2>100 || marks2<0){
                    System.out.println("Wrong Input\nMarks must be greater then 0 and less then 100\n ");
                    Enter_Result();
                }
                System.out.println("Please enter Picture Story Marks out of 100 ");
                double marks3=input.nextDouble();
                if(marks3>100 || marks3<0){
                    System.out.println("Wrong Input\nMarks must be greater then 0 and less then 100\n ");
                    Enter_Result();
                }
                double totalMarks=marks1+marks2+marks3;
                double percentage=(totalMarks*100)/300;
                try (
                    BufferedWriter Class0 = new BufferedWriter(new FileWriter("Nur_Student1.txt",true))) {

```

```

Class0.write("\n" + academic+"\n\n");
Class0.write("Name : Saim Ali\n ");
Class0.write("Roll Number: " + rollNumber+"\n");
Class0.write("Class : Nursery ");
Class0.write("Marks in Urdu : " + marks1+"\n");
Class0.write("Marks in English : " + marks2+"\n");
Class0.write("Marks in Picture Story : " + marks3+"\n");
Class0.write("Total marks: " + totalMarks+"\n");
Class0.write("Percentage: " + percentage+"\n");
} catch (Exception e) {
e.printStackTrace();
}
COR1();
}catch(Exception e){
System.out.print("\nWrong Input  Please Enter Integer Input for marks\n ");
Enter_Result();
}
}

public static void CourcesT(){///This method is used to select the class to show or odify their courses
System.out.println("Please select the class :\n");
    System.out.println("Enter 0 for Class Nursery :");
    System.out.println("Enter 1 for First Class :");
    System.out.println("Enter 2 for Secound Class :");
    System.out.println("Enter 3 for Third Class :");
    System.out.println("Enter 4 for Fourth Class :");
    System.out.println("Enter 5 for Fiveth Class :");
System.out.println("Enter 00 for Main Memu :");
String sel_class=input.nextLine();
if(sel_class.equals("0"))
Mo_Course_Nur();
if(sel_class.equals("00"))
main_menu();
else if(sel_class.equals("1"))
Mo_Course_One();
else if(sel_class.equals("2"))
Mo_Course_Two();
else if(sel_class.equals("3"))
Mo_Course_Three();
else if(sel_class.equals("4"))
Mo_Course_Four();
else if(sel_class.equals("5"))
Mo_Course_Five();
else{
System.out.println("\nInvalid Input : Please Enter valid Input to continue :-");
CourcesT();
}
}

```

```

public static void Mo_Course_Nur(){//This method is used to show the courses of nursery also the user can modify them
String course1,course2,course3;
System.out.println("\n*** Class Nursery ***\n");
System.out.println("Press 0 to show course of Class : ");
System.out.println("Press 1 to modify course : ");
String checks=input.nextLine();
if(checks.equals("0"))
Course_Nur();
else if(checks.equals("1")){
try{
File co_nur=new File("Course_Nur.txt");
FileWriter mo_nur=new FileWriter(co_nur);
mo_nur.write("\n*** Class Nursery Course ***\n\n");
System.out.println("\nNursery class can maximum three courses : ");
System.out.println("Enter your first course : ");
while(true){
course1=input.nextLine();
if(course1.matches("[a-zA-z ]+")){
if(course1.length()>3&&course1.length()<15)
break;
else
System.out.println("Wrong input : Book name must be greater than 3 and less than 15 characters :-) ");
}
else
System.out.println("Wrong input : Please enter correct book name :-) ");
}
System.out.println("Enter your secound course : ");
while(true){
course2=input.nextLine();
if(course2.matches("[a-zA-z ]+")){
if(course2.length()>3&&course2.length()<15)
break;
else
System.out.println("Wrong input : Book name must be greater than 3 and less than 15 characters :-) ");
}
else
System.out.println("Wrong input : Please enter correct book name :-) ");
}
System.out.println("Enter your third course : ");
while(true){
course3=input.nextLine();
if(course3.matches("[a-zA-z ]+")){
if(course3.length()>3&&course3.length()<15)
break;
else
System.out.println("Wrong input : Book name must be greater than 3 and less than 15 characters :-) ");
}
}
}
}

```

```

else
System.out.println("Wrong input : Please enter correct book name :- ");
}
mo_nur.write("1- "+course1+"\n");
mo_nur.write("2- "+course2+"\n");
mo_nur.write("3- "+course3+"\n");
mo_nur.close();
}catch(Exception e){
e.printStackTrace();
}
Course_Nur();
}else{
System.out.println("Invalid Input : Please Enter correct input \n");
Mo_Course_Nur();
}
}

public static void Courses(){
System.out.println("Please select the class :\n");
    System.out.println("Enter 0 for Class Nursery :");
    System.out.println("Enter 1 for First Class :");
    System.out.println("Enter 2 for Secound Class :");
    System.out.println("Enter 3 for Third Class :");
    System.out.println("Enter 4 for Fourth Class :");
    System.out.println("Enter 5 for Fiveth Class :");
String sel_class=input.nextLine();
if(sel_class.equals("0"))
Course_Nur();
else if(sel_class.equals("1"))
Course_One();
else if(sel_class.equals("2"))
Course_Two();
else if(sel_class.equals("3"))
Course_Three();
else if(sel_class.equals("4"))
Course_Four();
else if(sel_class.equals("5"))
Course_Five();
else{
System.out.println("\nInvalid Input : Please Enter valid Input to continue :-");
Courses();
}
}

public static void Course_Nur(){
    try{
        FileReader course= new FileReader("Course_Nur.txt");
        try{
            int i;

```

```

        while((i=course.read())!=-1){
            System.out.print((char)i);
        }
    }
    finally{
        course.close();
    }
}
catch(Exception ex){
    System.out.println(ex.getMessage());
}

System.out.println("\n\nPress enter your password to return to main menu\nOR\nPress any other number for terminate program :
");
String select2=input.nextLine();
if(select2.equals("12345"))
    main_menu();
else if(select2.equals("0000"))
    main_menuS();
else
    System.out.println("\nProgram Terminated");
}

public static void Attendance(){
    System.out.println("Please select the class :\n");
    System.out.println("Enter 0 for for Class Nursery :");
    System.out.println("Enter 1 for for First Class :");
    System.out.println("Enter 2 for for Secound Class :");
    System.out.println("Enter 3 for for Third Class :");
    System.out.println("Enter 4 for for Fourth Class :");
    System.out.println("Enter 5 for for Fiveth Class :");
    System.out.println("Press 00 for main menu :");
    String sel_class=input.nextLine();
    if(sel_class.equals("0"))
        Atten_Nur();
    else if(sel_class.equals("00"))
        main_menu();
    else if(sel_class.equals("1"))
        First_Atten();
    else if(sel_class.equals("2"))
        Seco_Atten();
    else if(sel_class.equals("3"))
        Third_Atten();
    else if(sel_class.equals("4"))
        Four_Atten();
    else if(sel_class.equals("5"))
        Five_Atten();
    else{
        System.out.println("\nInvalid Input : Please Enter valid Input to continue :-");
    }
}

```

```

Attendance();
}
}

public static void Atten_Nur(){
System.out.println("\n*** Class Nursery ***\n");
System.out.println("Press 0 previous Attendance of Class : ");
System.out.println("Press 1 to mark Attendance : ");
String checks=input.nextLine();
if(checks.equals("0"))
Nursery_AttenFile();
else if(checks.equals("1")){
String[] nur_std={"Saim Ali", "Saad Raza", "Sara Khan", "Zoya Ali", "Bilawal Ajaib"};
int[] rol_nur={1,2,3,4,5};
String[] atten_nur=new String[5];
String First_Line="Roll No. Name\t\tAttendance";
String className="*** Class Nursery ***";
System.out.println(className);
int i=0;
while(i<rol_nur.length){
System.out.print(rol_nur[i]+" "+nur_std[i]+" press 1 for present and 0 for absent : ");
String mark_att=input.next();
if(mark_att.equals("1"))
atten_nur[i]="Present";
else if(mark_att.equals("0"))
atten_nur[i]="Absent";
else{
System.out.println("Wrong Input : Please only select 0 and 1 ");
continue;
}
i++;
}
try{
File nurr=new File("Nur_Att.txt");
nurr.createNewFile();
PrintWriter nur_Atten=new PrintWriter(nurr);
nur_Atten.println("");
nur_Atten.println(className+"\n");
nur_Atten.println(First_Line);
for(int k=0;k<rol_nur.length;k++)
nur_Atten.write(rol_nur[k]+" \t "+nur_std[k]+" \t "+atten_nur[k]+" \n");
nur_Atten.close();
}catch(Exception e){
e.printStackTrace();
}
Nursery_AttenFile();
}else{
System.out.println("Invalid Input : Please Enter correct input \n");
}
}

```



```

Atten_Nur();
}
}
public static void Nursery_AttenFile(){
    try{
        FileReader data_readA= new FileReader("Nur_Att.txt");
        try{
            int i;
            while((i=data_readA.read())!=-1){
                System.out.print((char)i);
            }
        }
        finally{
            data_readA.close();
        }
    }
    catch(Exception ex){
        System.out.println("No Attendance Found ");
    }
    System.out.println("\n\nPress enter your password to return to main menu\nOR\nPress any other key for terminate program :
");
    String select2=input.nextLine();
    if(select2.equals("12345"))
        main_menu();
    else if(select2.equals("0000"))
        main_menuS();
    else
        System.out.println("\nProgram Terminated");
    }
    public static void New_Admission() {
        String name, fatherName, className, rollNo, gender, regNo, contactNumber, address;
        System.out.println("Press 1 to show previously add student : ");
        System.out.println("Press 2 to add new student : ");
        String sel_opt=input.nextLine();
        if(sel_opt.equals("1"))
            Show_New_Std();
        else if(sel_opt.equals("2")){
            System.out.print("Enter Student Name: ");
            while(true){
                name = input.nextLine();
                if(name.matches("[a-zA-z ]+"))
                    break;
                else
                    System.out.println("Wrong input : Please enter correct name :- ");
            }
            System.out.print("Enter Father's Name: ");
            while(true){

```

```

fatherName = input.nextLine();
if(fatherName.matches("[a-zA-z ]+"))
break;
else
System.out.println("Wrong input : Please enter correct name :- ");
}

    System.out.print("Enter Class: ");
while(true){
className = input.next();
if(className.equals("Nursery") || className.equals("Prep") || className.equals("One") || className.equals("Two") || className.equals("Three") || className.equals("Four") || className.equals("Five"))
break;
else
System.out.println("Wrong input : Only ( Nursery,Prep,One,Two,Three,Four and Five ) are valid classes :- ");
}

    System.out.print("Enter roll number: ");
while(true){
rollNo = input.next();
if(rollNo.matches("[0-9]+"))
break;
else
System.out.println("Wrong input : Please enter Roll Number from 0-10 :- ");
}

    System.out.print("Enter registration number: ");
    regNo = input.next();
System.out.print("Enter Gender : ");
while(true){
gender = input.next();
if(gender.equals("Male") || gender.equals("Female") || gender.equals("Custom"))
break;
else
System.out.println("Wrong input : Only ( Male, Female & Custom ) are valid genders :- ");
}

    System.out.print("Enter contact number: ");
while(true){
contactNumber = input.nextLine();
if(contactNumber.matches("[0-9 ]+")){
if(contactNumber.length() < 12)
break;
else
System.out.println("Wrong input : Please enter correct name :- ");
}
else
System.out.println("Wrong input : Please enter correct name :- ");
}

    System.out.print("Enter address: ");
    address = input.nextLine();

```

```

try {
    File file = new File("New_students.txt");
    FileWriter fw = new FileWriter(file, true);
    BufferedWriter bw = new BufferedWriter(fw);
    bw.write("*** Personal Details ***\n\n");
    bw.write("Name : "+name+"\n");
    bw.write("Father Name : "+fatherName+"\n");
    bw.write("Class : "+className+"\n");
    bw.write("Roll No. : "+rollNo+"\n");
    bw.write("Registration Number : "+regNo+"\n");
    bw.write("Gender : "+gender+"\n");
    bw.write("Contact Number : "+contactNumber+"\n");
    bw.write("Address : "+address+"\n");
    bw.close();
    System.out.println("Student added to file successfully!");
} catch (IOException e) {
    e.printStackTrace();
}
Show_New_Std();
}
else{
    System.out.println("\nInvalid Input : Please enter valid Input to continue.\n");
    New_Admission();
}
}

public static void Show_New_Std(){
    try{
        FileReader data_readNS= new FileReader("New_students.txt");
        try{
            int i;
            while((i=data_readNS.read())!=-1){
                System.out.print((char)i);
            }
        }
        finally{
            data_readNS.close();
        }
    }
    catch(Exception ex){
        System.out.println(ex.getMessage());
    }
    System.out.println("\n\nPress 1 for main menu \nPress 2 for return Add New Student\nPress any other key for terminate
program : ");
    String repeat=input.nextLine();
    if(repeat.equals("1"))
        main_menu();
    else if(repeat.equals("2"))

```

```

New_Admission();
}
public static void Delete_Student(){
    System.out.println("Please select the class :\n");
    System.out.println("Enter 0 for for Class Nursery :");
    System.out.println("Enter 1 for for First Class :");
    System.out.println("Enter 2 for for Secound Class :");
    System.out.println("Enter 3 for for Third Class :");
    System.out.println("Enter 4 for for Fourth Class :");
    System.out.println("Enter 5 for for Fiveth Class :");
    String select_class=input.nextLine();
    if(select_class.equals("0"))
        Class_NurDel();
    else if(select_class.equals("1"))
        Class_OneDel();
    else if(select_class.equals("2"))
        Class_TwoDel();
    else if(select_class.equals("3"))
        Class_ThreeDel();
    else if(select_class.equals("4"))
        Class_FourDel();
    else if(select_class.equals("5"))
        Class_FiveDel();
    else{
        System.out.println("Invalid choice !\nPlease Enter a valid choice to continue :");
        Delete_Student();
    }
}

public static void Class_NurDel(){
    System.out.println("\n*** Class Nursery ***\n");
    String[] roll_no={"1","2","3","4","5"};
    System.out.println("Enter Roll Number of a student : ");
    String roll=input.nextLine();
    if(roll.equals(roll_no[0])){
    try{
    File ns1d=new File("Nur_Student1.txt");
    if (ns1d.delete()) {
    System.out.println("Deleted the file: " + ns1d.getName());
    } else {
    System.out.println("Failed to delete the file.");
    }
    }catch(Exception e){
    e.printStackTrace();
    }
    }

    System.out.println("Student Record Deleted Successfully \nPress 1 for return to main menu and any other number for terminate
    program :");
}

```

```

String repeat=input.nextLine();
if(repeat.equals("1"))
    main_menu();
}

```

Output :

Welcome message and check user category (like teacher or student) and authentication :

```

C:\Users\hammad\java> java School2

*** WELCOME TO SCHOOL MANAGEMENT SYSTEM ***

Enter 1 if you are Student :
Enter 2 if you are Teacher :
1
Please Enter User_Name : Hammad Shafqat
Please Enter password to continue : 0000

```

Main menu for students

```

*** Main Menu ***

Hello! Please select option :
To check your detail press 1.
To check your attendance press 2.
To check your courses press 3.

```

If user press 1 then the program display a menu to select class

```

Please select the class :

Enter 0 for for Class Nursery :
Enter 1 for for First Class :
Enter 2 for for Secound Class :
Enter 3 for for Third Class :
Enter 4 for for Fourth Class :
Enter 5 for for Fiveth Class :

```

Let if a user enter 3 for class three and then the program ask user to enter roll number of student and then the user enter roll number 4 then the program display the roll number 4 record and then ask user to enter password to go to main menu or press 1 to return to class method or press any other key to continue :

```
3

*** Class Three ***

Enter Roll Number of a student : 
4

Personal Details :

*** Personal Details ***

Name : Shameem Noor
F\Name : Noor Muhmmad Khan
Roll Number : 04
Reg # : D0004
Class : Three
Gender : Female
Contact Number : 0300-1465897
Address : H8-Islamabad Pakistan

*** Academic Details ***

Name : Shameem Noor
Roll Number: 4
Class : Three
Marks in Urdu : 99.0
Marks in English : 67.0
Marks in Mathematics : 56.0
Marks in Tameer-A-Seerat : 45.0
Marks in Social Study : 45.0
Marks in Islamiat : 56.0
Total marks: 368.0
Percentage: 61.333333333333336

Press enter your password to return to main menu
OR
Press 1 for return to Student Records
OR
And any other number for terminate program :
```

If user enter 2 to check attendance then program ask user to select class by showing a menu then let user enter 4 for class 4 then the program display the previous attendance record then ask user to enter password to go to main menu or press any other key to continue :

```
*** Main Menu ***  
  
Hello! Please select option :  
To check your detail press 1.  
To check your attendance press 2.  
To check your courses press 3.  
2  
Please select the class :  
  
Enter 0 for for Class Nursery :  
Enter 1 for for First Class :  
Enter 2 for for Secound Class :  
Enter 3 for for Third Class :  
Enter 4 for for Fourth Class :  
Enter 5 for for Fiveth Class :  
Press 00 for main menu :  
4  
  
*** Class Four ***  
  
Roll No.   Name           Attendance  
1          Shahid Iqbal    Present  
2          Shan Khan      Absent  
3          Asad Ali       Present  
4          Sadia Noor     Present  
5          Samia Sadaf    Present  
  
Press enter your password to return to main menu  
OR  
Press any other key for terminate program :
```

If user enter 3 to check courses offer in his/her class then program ask user to select class by showing a menu. let user enter 5 for class 5 then the program display the courses offer in class five and then ask user to enter password to go to main menu or press any other key to continue :

```
*** Main Menu ***

Hello! Please select option :
To check your detail press 1.
To check your attendance press 2.
To check your courses press 3.
3
Please select the class :

Enter 0 for Class Nursery :
Enter 1 for First Class :
Enter 2 for Secound Class :
Enter 3 for Third Class :
Enter 4 for Fourth Class :
Enter 5 for Fiveth Class :
5

*** Class Five Course ***

1- Urdu
2- English
3- Mathematics
4- Science
5- Social Study
6- Islamiat

Press enter your password to return to main menu
OR
Press any other number for terminate program :
```

Main menu for teacher

```
*** Main Menu ***

To check Teachers Record press 1.
To check Students detail press 2.
To mark Students attendance press 3.
To enter Student Result press 4.
For new admission press 5.
For delete Student Record press 6.
To check/modify courses press 7.
```


If teacher press 1 to check his/her record then the following menu open. Let user enter 2 for display Sir Zulfiqar record then the program show Sir Zulfiqar record by reading his file and then ask user to press 1 for going to main menu or 2 to return to teachers record or press any other key to terminate the program.

```
*** Main Menu ***

To check Teachers Record press 1.
To check Students detail press 2.
To mark Students attendance press 3.
To enter Student Result press 4.
For new admission press 5.
For delete Student Record press 6.
To check/modify courses press 7.
1

To check Sir Shahzad's Record (Press 1):
To check Sir Zulfiqar's Record (Press 2):
To check MAM Sadia's Record (Press 3):
To check MAM Rabia's Record (Press 4):
To check MAM Sania's Record (Press 5):
Press 0 for return main menu :
2
Name : Zulfiqar Jamal
F\Name : Shah Nawaz
Email : zulfiqar3232@gmail.com
Contact # : 0311-1111111
Salary : 120,000pkr
Address : Lahore Pakistan

Press 1 for main menu
Press 2 for return Teachers Records
Press any other key for terminate program :
```

If a teacher press 3 in main menu to mark students attendance then the program display class menu to select class let teacher select class Nursery by input 0 then the program getting inputs from user to mark attendance of students and store in file and also show the attendance then ask user to press 1 to return main menu or press any other key to terminate the program.

```

Enter 0 for for Class Nursery :
Enter 1 for for First Class :
Enter 2 for for Secound Class :
Enter 3 for for Third Class :
Enter 4 for for Fourth Class :
Enter 5 for for Fiveth Class :
Press 00 for main menu :
0

*** Class Nursery ***

Press 0 previous Attendance of Class :
Press 1 to mark Attendance :
1
*** Class Nursery ***
1 Saim Ali press 1 for present and 0 for absent : 1
2 Saad Raza press 1 for present and 0 for absent : 0
3 Sara Khan press 1 for present and 0 for absent : 1
4 Zoya Ali press 1 for present and 0 for absent : 0
5 Bilawal Ajaib press 1 for present and 0 for absent : 1

*** Class Nursery ***

Roll No. Name Attendance
1 Saim Ali Present
2 Saad Raza Absent
3 Sara Khan Present
4 Zoya Ali Absent
5 Bilawal Ajaib Present

Press enter your password to return to main menu
OR
Press any other key for terminate program :

```

If teacher enter 4 from main menu for enter result of student then first of all program display a class menu let teacher select class 2 and then program ask user to enter roll no. Of a student let user select roll number 4 then program get different subjects marks and calculate total marks and percentage and all data store in files and display record at last program again ask user to enter password to return to main menu or press any other key to terminate program.

```
Please select the class :  
  
Enter 0 for for Class Nursery :  
Enter 1 for for First Class :  
Enter 2 for for Secound Class :  
Enter 3 for for Third Class :  
Enter 4 for for Fourth Class :  
Enter 5 for for Fiveth Class :  
2  
Enter student roll number:  
4  
  
Please enter Urdu Marks out of 100  
80  
Please enter English Marks out of 100  
89  
Please enter Mathematics Marks out of 100  
70  
Please enter Drawing Marks out of 100  
78  
Please enter Social Study Marks out of 100  
67  
Please enter Islamiat Marks out of 100  
99
```

Personal Details :

*** Personal Details ***

Name : Shamila Parveen
F\Name : Muhammad Muzzaffar
Roll Number : 04
Reg # : C0004
Class : Two
Gender : Female
Contact Number : 0300-1465400
Address : H8-Islamabad Pakistan

*** Academic Details ***

Name : Shamila Parveen
Roll Number: 4
Class : Two
Marks in Urdu : 80.0
Marks in English : 89.0
Marks in Mathematics : 70.0
Marks in Drawing : 78.0
Marks in Social Study : 67.0
Marks in Islamiat : 99.0
Total marks: 483.0
Percentage: 80.5

Press enter your password to return to main menu
OR
Press 1 for return to Student Records
OR
And any other number for terminate program :

If a teacher press 5 from main menu to add a new student then the program gets info about student from user to add that student in record also user can see the old students records and then ask user to press 1 to go to main menu 2 to return to add new student and press any other key to terminate program.

```
To check Teachers Record press 1.
To check Students detail press 2.
To mark Students attendance press 3.
To enter Student Result press 4.
For new admission press 5.
For delete Student Record press 6.
To check/modify courses press 7.
5
Press 1 to show previously add student :
Press 2 to add new student :
2
Enter Student Name: Hamza Ali
Enter Father's Name: Fiaz Ali
Enter Class: Four
Enter roll number: 4
Enter registration number: BA77
Enter Gender : Male
Enter contact number: 03006783528
Enter address: Bagh Azad Jammu & Kashmir
Student added to file successfully!
*** Personal Details ***

Name : Hamza Ali
Father Name : Fiaz Ali
Class : Four
Roll No. : 4
Registration Number : BA77
Gender : Male
Contact Number : 03006783528
Address : Bagh Azad Jammu & Kashmir

Press 1 for main menu
Press 2 for return Add New Student
Press any other key for terminate program :
```

If a teacher press 6 in main menu to select student delete option then the program first display a menu for him to select class Let a teacher select class 3 and then it get roll number from student let user enter roll no 3 then it delete the class 3 roll e student file so next time when we try to search him we found a message that this student is not exist in our system.

```
*** Main Menu ***

To check Teachers Record press 1.
To check Students detail press 2.
To mark Students attendance press 3.
To enter Student Result press 4.
For new admission press 5.
For delete Student Record press 6.
To check/modify cources press 7.
6
Please select the class :

Enter 0 for for Class Nursery :
Enter 1 for for First Class :
Enter 2 for for Secound Class :
Enter 3 for for Third Class :
Enter 4 for for Fourth Class :
Enter 5 for for Fiveth Class :
3

*** Class Three ***

Enter Roll Number of a student :
3
Deleted the file: Three_Student3.txt
Student Record Deleted Successfully
Press 1 for return to main menu and any other number for terminate program :
1
```

```
Please select the class :

Enter 0 for for Class Nursery :
Enter 1 for for First Class :
Enter 2 for for Secound Class :
Enter 3 for for Third Class :
Enter 4 for for Fourth Class :
Enter 5 for for Fiveth Class :
3

*** Class Three ***

Enter Roll Number of a student :
3

Personal Details :

Three_Student3.txt (The system cannot find the file specified)

Press enter your password to return to main menu
OR
Press 1 for return to Student Records
OR
And any other number for terminate program :
```

If a teacher select course option from main menu then then program ask teacher to either he/she want to only see that what subjects are offered in which class or they want to modify the course in specific class if teacher select modify option then the program allow him to enter new courses and save them in files .

```
*** Class Four ***  
  
Press 0 to show course of Class :  
Press 1 to modify course :  
1  
  
Class Two can maximum six courses :  
Enter your first course :  
Urdu  
Enter your second course :  
English  
Enter your third course :  
Mathematics  
Enter your fourth course :  
Tameer-A-Seerat  
Wrong input : Please enter correct book name :-)  
Tameer A Seerat  
Enter your fifth course :  
Pak Study  
Enter your sixth course :  
Islamiat  
  
*** Class Four Course ***  
  
1- Urdu  
2- English  
3- Mathematics  
4- Tameer A Seerat  
5- Pak Study  
6- Islamiat  
  
Press enter your password to return to main menu  
OR  
Press any other number for terminate program :
```