import java.util.\*;

import java.io.\*;

class Person{

private String name;

private String emailID;

private String password;

private String country;

private String city;

public Person(String name,String emailID,String password,String country,String city){

this.name=name;

this.emailID=emailID;

this.password=password;

this.country=country;

this.city=city;

}

public String getName() {

return this.name;

}

public String getEmailID() {

return this.emailID;

}

public String getCountry() {

return this.country;

}

public String getCity() {

return this.city;

}

class Service{

protected String[] studentName;

// protected ArrayList<String> upcomingEvents=new ArrayList<>();

// protected String importantLinks;

// protected String notices;

BufferedReader brup, brimp,brnot;

public void displayUpcomingEvents() throws IOException {

brup=new BufferedReader(new FileReader("upcomingEvents.txt"));

String s;

while((s=brup.readLine())!=null) System.***out***.println(s+"\n");

}

public void displayImportantLinks() throws IOException{

brimp = new BufferedReader(new FileReader("importantLinks.txt"));

String s1;

while((s1=brimp.readLine())!=null) System.***out***.println(s1+"\n");

}

public void viewNotice() throws IOException {

brnot = new BufferedReader(new FileReader("Notices.txt"));

String s1;

while((s1=brnot.readLine())!=null) System.***out***.println(s1+"\n");

}

public void displayStudentsList() throws IOException {

BufferedReader brsl=new BufferedReader(new FileReader("studentDetails.txt"));

String s2;

String[] studentDetails2 = new String[7];

while((s2=brsl.readLine())!=null) {

studentDetails2 = s2.split(";");

System.***out***.println(studentDetails2[2]+" "+studentDetails2[5]);;

}

brsl.close();

}

}

}

class Student extends Person{

private String studentID;

private String courseEnrolled;

private int marks;

public Student(String emailID,String password,String name,String country,String city,String studentID,String courseEnrolled, String marks){

super(name,emailID,password,country,city);

this.studentID=studentID;

this.courseEnrolled=courseEnrolled;

this.marks=Integer.*parseInt*(marks);

}

public String getStudentID() {

return this.studentID;

}

class StudentService extends Person.Service{

public void displayCourseEnrolled() {

System.***out***.println(courseEnrolled);

}

public void displayMarks() {

System.***out***.println(marks);

}

}

}

class Admin extends Person{

private String facultyID;

private String courseTeaching;

public Admin(String emailID,String password,String name,String country,String city,String facultyID,String courseTeaching){

super(name,emailID,password,country,city);

this.facultyID=facultyID;

this.courseTeaching=courseTeaching;

}

public String getFacultyID() {

return this.facultyID;

}

class AdminService extends Person.Service{

public void displayCourseTeaching() {

System.***out***.println(courseTeaching);

}

public void displayMarksList() throws IOException {

BufferedReader brml=new BufferedReader(new FileReader("studentDetails.txt"));

String s1;

String[] studentDetails = new String[7];

while((s1=brml.readLine())!=null) {

studentDetails = s1.split(";");

System.***out***.println(studentDetails[2]+" "+studentDetails[5]+" "+studentDetails[6]);;

}

brml.close();

}

public void setUpcomingEvents(ArrayList<String> s) {

try {

FileWriter fwup=new FileWriter("upcomingEvents.txt",true);

for(String up:s) fwup.write(up+"\n");

fwup.close();

}catch(Exception e) {

return;

}

}

public void setImportantLinks(ArrayList<String> s) {

try {

FileWriter fwimp=new FileWriter("importantLinks.txt",true);

for(String imp:s) fwimp.write(imp+"\n");

fwimp.close();

}catch(Exception e) {

return;

}

}

public void setNotice(ArrayList<String> s) {

try {

FileWriter fwnot=new FileWriter("notices.txt",true);

for(String not:s) fwnot.write(not+"\n");

fwnot.close();

}catch(Exception e) {

return;

}

}

}

}

class Test{

Scanner sc=new Scanner(System.***in***);

BufferedReader br=new BufferedReader(new FileReader("Questions.txt"));

public Test(String[] studentDetails) throws NumberFormatException, IOException {

String s1;

int marks=Integer.*parseInt*(studentDetails[6]);

String[] questions = new String[6];

while((s1=br.readLine())!=null) {

questions = s1.split(";");

System.***out***.println(questions[0]);

System.***out***.println(questions[1]);

System.***out***.println(questions[2]);

System.***out***.println(questions[3]);

System.***out***.println(questions[4]);

System.***out***.println("\nPlease enter the correction option('a','b','c','d')");

String option=sc.nextLine();

if(answerChecking(questions[5],option)) marks+=1;

}

updateMarks(studentDetails,marks);

}

public boolean answerChecking(String answer,String option) {

if(answer.equals(option)) return true;

else return false;

}

public void updateMarks(String[] studentDetails,int marks) throws NumberFormatException, IOException {

BufferedReader buf = null;

try {

buf = new BufferedReader(new FileReader("studentDetails.txt"));

} catch (FileNotFoundException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

String s1;

String newLine="";

String oldContent="";

String oldLine="";

while((s1=buf.readLine())!=null) {

String[] details=s1.split(";");

oldContent = oldContent + s1 + System.*lineSeparator*();

if(details[0].equals(studentDetails[0])) {

int previousMarks=Integer.*parseInt*(details[6]);

previousMarks+=marks;

System.***out***.println("\n Thank you for taking the test. Total marks stored in this test:"+previousMarks);

oldLine=s1;

newLine=details[0]+";"+details[1]+";"+details[2]+";"+details[3]+";"+details[4]+";"+details[5]+";"+previousMarks;

}

}

String newContent = oldContent.replaceAll(oldLine, newLine);

FileWriter fw = null;

try {

fw=new FileWriter("studentDetails.txt",false);

} catch (IOException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

fw.write(newContent);

fw.close();

buf.close();

}

}

public class CourseManagement {

public static void studentFunction(String[] studentDetails) throws IOException{

Student s = new Student(studentDetails[0], studentDetails[1], studentDetails[2], studentDetails[3], studentDetails[4], studentDetails[5], "CS F213", studentDetails[6]);

Student.StudentService ss = s.new StudentService();

Scanner sc=new Scanner(System.***in***);

System.***out***.println("\nEnter 1 to see your Personal Details");

System.***out***.println("Enter 2 to view Enrolled Courses");

System.***out***.println("Enter 3 to view Marks");

System.***out***.println("Enter 4 to take Active Tests");

System.***out***.println("Enter 5 to view upcoming events");

System.***out***.println("Enter 6 to view important links");

System.***out***.println("Enter 7 to view notices");

System.***out***.println("Enter 8 to view the student list");

System.***out***.println("Enter 9 to log out");

int a=sc.nextInt();

while(a!=1 && a!=2 && a!=3 && a!=4 && a!=5 && a!=6 && a!=7 && a!=8 && a!=9){

System.***out***.println("Invalid input, Please select a valid option");

a=sc.nextInt();

}

switch(a){

case 1:

System.***out***.println("\nName:"+s.getName()+"\nEmailId:"+s.getEmailID() +"\nStudentId:"+s.getStudentID()+"\nCity:"+s.getCity()+"\nCountry:"+s.getCountry());

*studentFunction*(studentDetails);

break;

case 2:

ss.displayCourseEnrolled();

*studentFunction*(studentDetails);

break;

case 3:

ss.displayMarks();

*studentFunction*(studentDetails);

break;

case 4:

//display active tests

Test t=new Test(studentDetails);

BufferedReader br1=new BufferedReader(new FileReader("studentDetails.txt"));

String s1;

String[] details=new String[7];

while((s1=br1.readLine())!=null) {

details=s1.split(";");

if(studentDetails[0].equals(details[0])) studentDetails[6]=details[6];

}

*studentFunction*(studentDetails);

break;

case 5:

ss.displayUpcomingEvents();

*studentFunction*(studentDetails);

break;

case 6:

ss.displayImportantLinks();

*studentFunction*(studentDetails);

break;

case 7:

ss.viewNotice();

*studentFunction*(studentDetails);

break;

case 8:

//view student list

ss.displayStudentsList();

*studentFunction*(studentDetails);

break;

case 9:

System.***out***.println("\n\t\tThank you for using the portal");

System.*exit*(0);

break;

}

}

public static void adminFunction() throws IOException{

Admin ad = new Admin("amit.dua@gmail.com", "amit.dua","Amit Dua","India","Pilani","2012A7PS0001P", "CS F213");

Admin.AdminService as = ad.new AdminService();

Scanner sc=new Scanner(System.***in***);

System.***out***.println("\nEnter 1 to see your Personal Details");

System.***out***.println("Enter 2 to view Course Teaching");

System.***out***.println("Enter 3 to view Student MarksList");

System.***out***.println("Enter 4 to make Tests");

System.***out***.println("Enter 5 to set upcoming events");

System.***out***.println("Enter 6 to set important links");

System.***out***.println("Enter 7 to give notices");

System.***out***.println("Enter 8 to view the student list");

System.***out***.println("Enter 9 to log out");

int a=sc.nextInt();

while(a!=1 && a!=2 && a!=3 && a!=4 && a!=5 && a!=6 && a!=7 && a!=8 && a!=9){

System.***out***.println("Invalid input, Please select a valid option");

a=sc.nextInt();

}

switch(a){

case 1:

System.***out***.println("\nName:"+ad.getName()+"\nEmailId:"+ad.getEmailID() +"\nStudentId:"+ad.getFacultyID()+"\nCity:"+ad.getCity()+"\nCountry:"+ad.getCountry());

*adminFunction*();

break;

case 2:

as.displayCourseTeaching();

*adminFunction*();

break;

case 3:

//view marks list

as.displayMarksList();

*adminFunction*();

break;

case 4:

//make tests

System.***out***.println("A test has been created.");

*adminFunction*();

break;

case 5:

//input upcoming Events

System.***out***.println("How many upcoming events, do you want to add");

int n=sc.nextInt();

ArrayList<String> upEv=new ArrayList<>();

System.***out***.println("Enter the events");

for(int i=0;i<=n;i++) {

upEv.add(sc.nextLine());

}

as.setUpcomingEvents(upEv);

*adminFunction*();

break;

case 6:

//input important links

System.***out***.println("How many important links, do you want to add");

int n1=sc.nextInt();

ArrayList<String> imLi=new ArrayList<>();

System.***out***.println("Enter the links");

for(int i=0;i<=n1;i++) {

imLi.add(sc.nextLine());

}

as.setImportantLinks(imLi);

*adminFunction*();

break;

case 7:

//input notices

System.***out***.println("How many notices, do you want to add");

int n2=sc.nextInt();

ArrayList<String> not=new ArrayList<>();

System.***out***.println("Enter the links");

for(int i=0;i<=n2;i++) {

not.add(sc.nextLine());

}

as.setNotice(not);

*adminFunction*();

break;

case 8:

//view student list

as.displayStudentsList();

*adminFunction*();

break;

case 9:

System.***out***.println("\n Thank you for using the portal");

System.*exit*(0);

break;

}

}

public static void login() {

Scanner sc=new Scanner(System.***in***);

FileWriter fw1;

BufferedReader bw1;

try {

fw1 = new FileWriter("studentDetails.txt",true);

bw1 = new BufferedReader(new FileReader("studentDetails.txt"));

System.***out***.println("Press 1 for Student or 2 for Admin");

int a=sc.nextInt();

sc.nextLine();

while(a!=1 && a!=2) {

System.***out***.println("\nInvalid input, kindly press again");

a=sc.nextInt();

sc.nextLine();

}

if(a==1) {

System.***out***.println("\nPress 1 to signIn or 2 to signUp");

int b=sc.nextInt();

sc.nextLine();

while(b!=1 && b!=2) {

System.***out***.println("\nInvalid input, kindly press again");

b=sc.nextInt();

sc.nextLine();

}

if(b==1) {

System.***out***.println("\nEnter emailID");

String emailID=sc.next();

System.***out***.println("\nEnter password");

String password=sc.next();

String s1;

String[] studentDetails = new String[7];

// String s2 = null;

while((s1=bw1.readLine())!=null) {

studentDetails = s1.split(";");

if(studentDetails[0].equals(emailID) && studentDetails[1].equals(password)) break;

}

if(s1==null) {

System.***out***.println("\nInvalid email address or password \n");

*login*();

}else{

//call student wala function.

*studentFunction*(studentDetails);

}

}else {

System.***out***.println("Enter emailID");

String details= sc.nextLine();

System.***out***.println("Enter password");

details = details + ";" + sc.nextLine();

System.***out***.println("Enter Name");

details = details + ";" + sc.nextLine();

System.***out***.println("Enter Country");

details = details + ";" + sc.nextLine();

System.***out***.println("Enter City");

details = details + ";" + sc.nextLine();

System.***out***.println("Enter StudentId");

details = details + ";" + sc.nextLine()+";0";

//Code to input the emailID and password to a file

fw1.write(details+"\n");

fw1.close();

// fw2.close();

System.***out***.println("\n You can successfully signed Up, please sign In to use the portal. \n");

*login*();

}

}else {

*adminFunction*();

}

} catch (IOException e) {

// **TODO** Auto-generated catch block

e.printStackTrace();

}

}

public static void main(String[] args) {

// **TODO** Auto-generated method stub

System.***out***.println("\t\t Welcome to the Course Management Portal\n");

*login*();

}

}