

PART B – Micro-project Report

Title of Micro-Project

Attendance Management System

1.0 Rationale:

This project will help you in creating an simple Attendance Management System using java language. In this program a class student is used which has name, rollno and percentage as data members.

Inside it there are several methods which work as getting user input and displaying the output. Scanner class is used as well. This project is an implementation of array of objects

An attendance management system is a platform where all work-related as well as important of an student. By using this system, you can manage attendance of student easier and quicker way.

It helps to achieve attendance of student and get information about regular and irregular student.

2.0 Aims/benefits of the micro-project :

Aim : : To create a basic Java project on Attendance Management System.

Benefits:

- Define your organization structure & job roles
- Complete complex employment processes in an easy manner
- Get real-time updates on an employee transfer, promotion, confirmation and end of service
- Provide in-context, sensitive information by role and location
- Support multiple assignments, or individual contracts
- View your talent profile in a user-friendly central location and identify best-fit work

3.0 Course outcomes Addressed:

- Develop program using object oriented methodology in java.
- Apply concept of inheritance for code reusability.
- Develop programs using multithreading.
- Implement exception handling.

4.0 Actual Methodology Followed :

First of all we have to select a topic to develop a Java program to perform Attendance Management System.

The teacher will assign one set of Micro Project and ask the student to create a report on given topic. We collected information about the topic using sources such as the internet and books then we asked the subject teacher about Attendance Management System on which we have a micro project and then we type the required Part-A and done proper page set up and submitted to subject teacher. After the setup of part- A, we prepare a report of the given project. After finishing all the typing, we arrange all the data in proper arrangement. We selected proper margin font, lay out, 4A size etc. at last we got the printouts of the micro- project and submitted to subject

5.0 Literature Review :

In this project where it is named as “Attendance Management System”. We are developed a Java program on the given topic using array concept . Here we have described all concepts of JAVA like first of all we have displayed brief information step by step about our topic. It also helps to understand all information or code of given topic.

Book Name	Author Name	Publication Name
Java programming	Pankaj B.Brahmankar	Tata mc graw hill publishing PVT.LTD.
Programming with Java	Balagurusamy E.	Mcgraw Hill Education(India) Priavte Limited,New Delhi
Java Programming	Dr.RajendraKawale	Devraj Publication

6.0 Actual Resources Used :

Sr.no.	Name of Resource	Specification	Qty.	Remarks
1	Jdk	Version 1.8	-	
2	Notepad++	-	-	
3	MS Word	2010	-	
4	Windows	10	-	

7.0 Skill developed / learning outcome of this micro-project :

Concept of truly Object oriented programming JAVA specific management needs at the individual team level. Practical application of project management to formulated strategies allowing organization to achieve strategic goals. Team –building skills required to support successful performance skill to manage creative teams and project processes effectively and efficiently

8.0 Applications of this Micro-Project:

- It helps to achieve attendance of student and get information about regular and irregular student.
- It's used in organization.
- It's used in school and colleges, universities etc.

Attendance Management System

Introduction:

This Attendance Management System Project application stores a class student is used which has name, rollno and percentage as data members.

It is an easy to use this system and has a user-friendly interface. It is totally built at the administrative end which means that only the admin has access rights to change or modify any records. So this makes it safe and reliable application to use. The main aim of developing this project was to reduce the errors that occur in the manual system. One can search the details easily by just entering rollno. In earlier systems, there was not such a facility to do so.. It is easy to use for getting regular and irregular student details. All the student records are integrated and so this makes it user-friendly and easy to use this system. This is simple attendance management system project in java for academic project work.

Attendance Management System is designed to manage the student of any organization. Where it helps to achieve attendance of student and get information about regular and irregular student.

Employee Management System Modules:

- **Add module:** This module is used for the add student details.
- **Search module:** This module is an added feature in this system which enables to search student records easily using rollno.
- **Manage employee module:** This module enables admin to add and edit student records. It is also for viewing the each and every regular and irregular student details
- **Delete module:** This module is created to delete any student details in attendance management system.
- **Display module:** This module is used to display all records of Student.

Source code:

```
import java.io.*;

import java.util.*;

@SuppressWarnings("serial")

class student implements Serializable

{

    int rollno;

    String name;

    float percentage;

    String status;

    long contact_no;

    String email_id;

    public student(int rollno, String name, float percentage,String status, long contact_no, String email_id)

    {

        this.rollno = rollno;

        this.name = name;

        this.percentage = percentage;

        this.status=status;

        this.contact_no = contact_no;

        this.email_id = email_id;

    }

    public String toString()

    {

        return "\nstudent Details : " + "\nrollno: " + this.rollno + "\nName: " + this.name + "\npercentage:" + this.percentage + "\nstatus:" +this.status + "\nContact No: " + this.contact_no + "\nEmail-id: " +this.email_id;

    }

}

public class Main{
```

```

static void display(ArrayList<student> al)

{

    System.out.println("\n----- student List ----- \n");

    System.out.println("*****--NOTE THAT--
*****\n");

    System.out.println("***If the attendance is BELOW 75%, it would be considered as student is
IRREGULAR**\n");

    System.out.println(String.format("%-15s%-15s%-15s%-15s%-15s%-
15s", "Rollno", "Name", "percentage", "status", "contactno", "Email-Id")); for(student e : al)

    {

        System.out.println(String.format("%-15s%-15s%-15s%-15s%-15s%-
15s", e.rollno, e.name, e.percentage, e.status, e.contact_no, e.email_id));

    }

}

@SuppressWarnings("unchecked")
public static void main(String[] args)

{

    int rollno;

    String name;

    float percentage;

    String status;

    long contact_no;

    String email_id;

    boolean res;

    Scanner sc = new Scanner(System.in);

    ArrayList<student> al = new ArrayList<student>();

    File f = null;

```

```

FileInputStream fis = null;

ObjectInputStream ois = null;

FileOutputStream fos = null;

ObjectOutputStream oos =null;

try{

f = new File("D:/Micro1.txt");

if(f.exists())

{

    fis = new FileInputStream(f);

    ois = new ObjectInputStream(fis);

    al = (ArrayList<student>)ois.readObject();

}

}

catch(Exception exp)

{

    System.out.println(exp);

}

do

{

    System.out.println("\n*****

*\n");

    System.out.println("*****-- Welcome to the Attendance Management System --*****\n");

    System.out.println("*****

*\n");

    System.out.println("1). Add student Details : \n" + "2). Search for student : \n" + "3). Edit student
details : \n" + "4). Delete student Details : \n" + "5). Display all Details of Each student : \n" + "6). EXIT
: \n");

    System.out.println("*****

*");

    System.out.println("Please Enter your choice : ");

```

```

int ch = sc.nextInt();

System.out.println("*****
*\n");

switch(ch)
{
case 1: System.out.println("You choose to ADD DETAILS :");
System.out.println("Enter the following details to ADD list:\n");
System.out.println("Enter Rollno :");
rollno = sc.nextInt();
System.out.println("Enter Name :");
name = sc.next();
System.out.println("Enter Attendance in percentage :");
percentage = sc.nextFloat();
System.out.println("Enter status of student(Reg/Irreg) :");
status = sc.next();
System.out.println("Enter Contact No :");
contact_no = sc.nextLong();
System.out.println("Enter Email-ID :");
email_id = sc.next();

al.add(new student(rollno, name, percentage,status, contact_no, email_id));

//display(al);

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

System.out.println("\n\tstudent Details Added successsfully!!!!!!!!!!\n\n");

break;

case 2: System.out.println("You choose to SEARCH DETAILS :");

```



```
System.out.println("Enter the Rollno to search :");

rollno = sc.nextInt();

int i=0;

for(student e: al)

{

    if(rollno == e.rollno)

    {

        System.out.println(e+"\n");

        i++;

    }

}

if(i == 0)

{

    System.out.println("\nstudent Details are not available, Please enter a valid rollno!!\n\n");

}

break;

case 3: System.out.println("You choose to EDIT DETAILS :");

System.out.println("Enter the student Rollno to EDIT the details");

rollno = sc.nextInt();

int j=0;

for(student e: al)

{

    if(rollno == e.rollno)

    {

        j++;

        do

        {

            int ch1 =0;
```

```

System.out.println("*****\n");

System.out.println("\nEDIT student Details :\n" + "1).student Rollno\n" + "2).Name\n"
+ "3).percentage\n" + "4).Status\n" + "5).Contact No.\n" + "6). EmailID\n" + "7). GOBACK\n");

System.out.println("Enter your choice : ");

ch1 = sc.nextInt();

switch(ch1)

{

    case 1: System.out.println("\nEnter new Student Rollno:");

e.rollno =sc.nextInt();

//System.out.println(e+"\n");

System.out.println("\n*****\n");

System.out.println(" \n\tRollno updated successfully\n\n");

break;

    case 2: System.out.println("Enter new student Name:");

e.name =sc.next();

//System.out.println(e+"\n");

System.out.println("\n*****\n");

System.out.println(" \n\tName updated successfully\n\n");

break;

    case 3: System.out.println("Enter new Student Attendance in percentage:");

e.percentage =sc.nextFloat();

//System.out.println(e+"\n");

System.out.println("\n*****\n");

System.out.println(" \n\tAttendance percentage updated successfully\n\n");

break;

    case 4: System.out.println("Enter new student status:");

```

```

e.status =sc.next();

//System.out.println(e+"\n");

System.out.println("\n*****
*\n");

System.out.println(" \n\tstatus updated successfully\n\n");

break;

case 5: System.out.println("Enter new student Contact No. :");

e.contact_no =sc.nextLong();

//System.out.println(e+"\n");

System.out.println("\n*****
*\n");

System.out.println(" \n\tcontact No updated successfully\n\n");

break;

case 6: System.out.println("Enter new student Email-ID :");

e.email_id =sc.next();

//System.out.println(e+"\n");

System.out.println("\n*****
*\n");

System.out.println("\n\t Email ID updated successfully\n\n");

break;

case 7: j++;

break;

default :

System.out.println("*****\n
");

System.out.println("\nEnter a correct choice from above List :");

break;

}

} while(j==1);

```

```

    }

    }

    if(j == 0)

    {

        System.out.println("\nStudent Details are not available, Please enter a valid ID!!\n\n");

    }

    break;

    case 4: System.out.println("You choose to DELETE DETAILS :");

    System.out.println("\nEnter Student Rollno to DELETE from the Databse :");

    rollno = sc.nextInt();

    int k=0;

    try{

        for(student e: al)

        {

            if(rollno == e.rollno)

            {

                al.remove(e);

                //display(al);

                System.out.println("\n*****

                *\n");

                System.out.println("\n\t student Details Deleted successfully!!!!!!!!!!!!\n\n");

                k++;

            }

        }

        if(k == 0)

        {

            System.out.println("\nstudent Details are not available, Please enter a valid Rollno!!\n\n");

        }

    }

    catch(Exception ex){

```

```

    }

    break;

    case 5: try { al = (ArrayList<student>)ois.readObject();

    }

    catch (ClassNotFoundException e2) {

    }

    catch (Exception e2) {

    }

    res=al.isEmpty();

    if(res==true)

    {

    System.out.println("\n*****
    *\n");

    System.out.println("\n\tSorry, student list is already empty\n\n");

    }

    else

    {

        display(al);

    }

    break;

    case 6:

        try {

            fos = new FileOutputStream(f);

            oos = new ObjectOutputStream(fos);

            oos.writeObject(al);

        }

        catch (IOException e1)

        {

```

```
        e1.printStackTrace();
    }
    catch(Exception e2)
    {
        e2.printStackTrace();
    }
    finally{
        try {
            fis.close();

            ois.close();

            fos.close();

            oos.close();
        }
        catch (Exception e1)
        {
            e1.printStackTrace();
        } }

    System.out.println("\nYou have choosen EXIT !! Saving Files and closing the tool.\n");

    System.out.println("\t\tTHANK YOU !!!");

    sc.close();

    System.exit(0);

    break;

    default : System.out.println("\nEnter a correct choice from the List :");

    break;

    } }

    while(true);

}

}
```

Output:

Run:

```
*****
*****-- Welcome to the Attendance Management System --*****
*****
1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
█
```

Main Page:

```
*****
*****-- Welcome to the Attendance Management System --*****
*****
1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
█
```

❖Adding Data :

1. Here, we select option 1 to “Add details of student” & enter the Details :

```
Please Enter your choice :
1
*****

You choose to ADD DETAILS :
Enter the following details to ADD list:

Enter Rollno :
111
Enter Name :
Amruta
Enter Attendance in percentage :
85.50
Enter status of student(Reg/Irreg) :
reg
Enter Contact No :
917555
Enter Email-ID :
amr23@gmail.com
*****
```

2. And after Entering details, we get a message “ Student Details Added successfully ” for confirmation:

```
You choose to ADD DETAILS :
Enter the following details to ADD list:

Enter Rollno :
111
Enter Name :
Amruta
Enter Attendance in percentage :
85.50
Enter status of student(Reg/Irreg) :
reg
Enter Contact No :
917555
Enter Email-ID :
amr23@gmail.com
*****

      student Details Added succsessfully!!!!!!!!!!
```


❖ Search Student:

1.Here, we select option 2 to “Search the Student ” :

```
*****
*****-- Welcome to the Attendance Management System --*****
*****
1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
2
```

2.Here, we have to enter Rollno of an student to search :

```
*****
Please Enter your choice :
2
*****

You choose to SEARCH DETAILS :
Enter the Rollno to search :
111

student Details :
rollno: 111
Name: Amruta
percentage:85.5
status:reg
Contact No: 917555
Email-id: amr23@gmail.com

*****
```

❖ **Edit Student Details :**

1. Now, here we select option 3 to “Edit the Student Details ” :

```
*****-- Welcome to the Attendance Management System --*****
*****
1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
3
*****

You choose to EDIT DETAILS :
Enter the student Rollno to EDIT the details
|
```

2.First, we have to enter rollno of that Student who's data get change &

It shows some options to select one that we have to change .

Now,

We select option 1 to edit rollno and enter the new rollno and then it shows a message for confirmation “rollno edit Successfully ...!!!! ” :

```
EDIT student Details :
```

```
1).student Rollno
```

```
2).Name
```

```
3).percentage
```

```
4).Status
```

```
5).Contact No.
```

```
6). EmailID
```

```
7). GOBACK
```

```
Enter your choice :
```

```
1
```

```
Enter new Student Rollno:
```

```
123
```

```
*****
```

```
Rollno updated successfully
```

3.Now, we select option 2 to edit Name :

```
EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
2
Enter new student Name:
Amru

*****

Name updated successfully
```

3.Now we select option 3 to edit percentage:

```
EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
3
Enter new Student Attendance in percentage:
45.50

*****

Attendance percentage updated successfully

*****
```

4.Now we select option 4 to edit status:

```
EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
4
Enter new student status:
irreg

*****

status updated successfully
```

5.Now we select option 5 to edit contact no:

```
You choose to EDIT DETAILS :
Enter the student Rollno to EDIT the details
111
*****

EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
5
Enter new student Contact No. :
917508
```

```
EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
5
Enter new student Contact No. :
917508

*****

contact No updated successfully
```

6.Now we select option 6 to edit EmailID:

```
EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
6
Enter new student Email-ID :
amru233@gmail.com
```

7. Now we select option 7 to GOBACK:

```
EDIT student Details :
1).student Rollno
2).Name
3).percentage
4).Status
5).Contact No.
6). EmailID
7). GOBACK

Enter your choice :
7

*****
*****-- Welcome to the Attendance Management System --*****
*****
```

❖ Delete an Student Record :

1. Now, we select option 4 to “Delete Student Details ” and enter the RollNo of that Student to delete :

```
*****
*****-- Welcome to the Attendance Management System --*****
*****

1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
4
*****

You choose to DELETE DETAILS :
```

2.And after deleting the record, it shows a message “Student Details Deleted Successfully !!!” for confirmation

```
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
4
*****

You choose to DELETE DETAILS :

Enter Student Rollno to DELETE from the Databse :
123

*****

student Details Deleted succsessfully!!!!!!!!!!!!!!
```

3.And, if we deleted all records of Students:

```
*****-- Welcome to the Attendance Management System --*****

*****

1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
5
*****

*****

Sorry, student list is already empty
```


❖ Display All Student Records :

1. Here, we select option 5 to “Display all Student details ” :

```
*****
*****-- Welcome to the Attendance Management System --*****
*****

1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :

*****
Please Enter your choice :
5
*****
```

```
*****
Please Enter your choice :
5
*****

----- student List -----

*****--NOTE THAT--*****

**If the attendance is BELOW 75%, it would be considered as student is IRREGULAR**

Rollno      Name      percentage      status      contactno      Email-Id
111          amruta    85.5            reg         4567           amr@56
222          rutuja    45.5            irreg       6778           rytu@34
333          aditya    78.67           reg         6788           aditya34@
444          dhanshri  33.3            irreg       5678           dhana@56
555          ankit     78.8            reg         5557           ankit56@

*****
```

❖ Exit Page :

1. Here, we select option 6 to Exit from System :

```
*****
*****-- Welcome to the Attendance Management System --*****
*****
1). Add student Details :
2). Search for student :
3). Edit student details :
4). Delete student Details :
5). Display all Details of Each student :
6). EXIT :
*****
Please Enter your choice :
6
*****
```

```
You have choosen EXIT !! Saving Files and closing the tool.
```

```
THANK YOU !!!
```

```
*****
```