Assignment :- 7

1. WAP to create a class called employee with name, job and salary as variables. create 2 methods that calculate and update the salary according to the numbers of working days.

2. WAP to create a class called student with name, rollno and course as attribute. create one method that provide options for courses and another method that display the name, rollno, courses selected.

3. WAP to create a static and non static method where the static method calculates area of rectangle and non static method calculates are of square.

4. WAP to ~~create~~ a method that calculates the simple interest according to time and principal amount provided with default rate and according to the rate and time provided with default principal amount. $\left(\dfrac{P \times T \times R}{100}\right)$

5. WAP to create a class called library that has methods to add and remove books from the library.

   bookno, bookname, bookauthor.

System.out.print("The number of days you

```java
1  import java.lang.*;
   import java.util.*;
   public class Employee {
           Scanner sc = new Scanner(System.in);
           String name, job;
           int salary, workedDays;

           public void calculate() {
                   System.out.print("Enter the number of
                       days you have worked in this month:-");
                   workedDays = sc.nextInt();
                   update((salary/30) * workedDays);
           }

           public void update(int sal) {
                   salary = sal;
           }

           public static void main(String args[]) {
                   Employee emp = new Employee();
                   System.out.print("Enter your name:-");
                   emp.name = emp.sc.nextLine();
```

```java
System.out.print ("Enter your job :- ");
emp.job = emp.sc.nextLine();
System.out.print ("Enter your monthly salary:-");
emp.salary = emp.sc.nextInt();
emp.calculate();
System.out.println ("\nName :- " + emp.name);
System.out.println ("Job :- " + emp.job);
System.out.println ("Your this month salary for"
        + emp.workedDays + " days is :-" + emp.salary);
emp.sc.close();
    }
}
```

output :-
Enter your name :- Rajesh Rana
Enter your job :- Manager
Enter your monthly salary:- 60000
Enter the number of days you have worked in this month :- 20

Name :- Rajesh Rana
job :- Manager
Your this month salary for 20 days is :- 40000

```java
2  import java.lang.*;
   import java.util.*;

   public class Student {
       Scanner sc = new Scanner (System.in);
       String name, rollno, course;

       public void courses() {
           System.out.println("Available courses :-");
           System.out.println("1. B.Tech");
           System.out.println("2. B.SC");
           System.out.println("3. B.com");
           System.out.println("4. BBA");
           System.out.println("5. MBA");
           System.out.print("Enter your course index:-");
           int choice = sc.nextInt();
           switch(choice) {
               case 1:
                   course = "B.Tech";
                   break;
               case 2:
                   course = "B.SC";
                   break;
               case 3:
                   course = "B.com";
                   break;
               case 4:
                   course = "BBA";
                   break;
               case 5:
                   course = "MBA";
                   break;
```

```java
            default :
                    System.out.println("Enter a valid course
                                    index.");
                    courses();
            }
        }

        public void StudentDetails() {
                System.out.println("Name:- " + name);
                System.out.println("Roll No:- " + rollno);
                System.out.println("Course Selected:- " + course);
        }
        public static void main (String args[]) {
                Student std = new Student();
                System.out.print ("Enter your name :- ");
                std.name = std.sc.nextLine();
                System.out.print ("Enter your roll number :- ");
                std.rollno = std.sc.nextLine();
                std.courses();
                std.StudentDetails();
                std.sc.close();
        }
    }
}
```

output:-
Enter your name:- Rajesh Rana
Enter your roll number:- 24CSEAIML015
Available Courses:-
1. B.Tech
2. B.Sc
3. B.Com
4. BBA
5. MBA

Enter your course index:- 1
Name:- Rajesh Rana
Roll No :-24CSEAIML015
Course selected :- B.Tech

3
```java
import java.lang.*;
import java.util.*;
public class Area {
    public static void areaOfRectangle (Scanner sc) {
        System.out.print ("Enter length of rectangle:-");
        int length = sc.nextInt();
        System.out.print ("Enter breadth of rectangle:-");
        int breadth = sc.nextInt();
        System.out.println ("Area of rectangle = " +
                    (length * breadth));
    }
    public void areaOfSquare (Scanner sc) {
        System.out.print ("\nEnter side of square:-");
        int side = sc.nextInt();
        System.out.println ("Area of square = " +
                    (side * side));
    }
    public static void main (String args[]) {
        Scanner sc = new Scanner (System.in);
        Area area = new Area();
        areaOfRectangle (sc);
        area.areaOfSquare (sc);
        sc.close();
    }
}
```

output :-
Enter length of rectangle :- 2
Enter breadth of rectangle - 3
Area of rectangle = 6

Enter side of square :- 4
Area of square = 16

4 import java.lang.*;
import java.util.*;
public class SimpleInterest {
        float principal, time, rate = 7.5f;
        public void calculateSI() {
                Scanner sc = new Scanner (System.in);
                System.out.print ("Enter Principal Amount :- ");
                principal = sc.nextFloat();
                System.out.print ("Enter Time in years :- ");
                time = sc.nextFloat();
                System.out.println ("Simple Interest = " +
                        ((principal *rate *time)/100));
                sc.close();
        }
        public static void main (String args[]) {
                SimpleInterest si = new SimpleInterest();
                si.calculateSI();
        }
}
output :-
Enter Principal amount :- 1500
Enter Time in years :- 1
Simple Interest = 112.5

~~Use of constructor :-~~
~~class student {~~
~~int roll~~

Assignment :- 7   Question 5 Solution
Import java. lang *,
import Java. util-*;
Public class Library{
    String books[][];
    int idx=0, total Books;

    Public void addBook() {
        for (int j=0; j< ~~totalBooks~~ ; i++) {
            Scanner sc = new Scanner (System.in);
            System.out.print ("Enter book number :-");
            int bookNumber= sc. nextInt();
            System.out.print ("Enter book name:- ");
            ~~String bookName = sc.next();~~
            sc. nextLine();
            String bookName = sc. nextLine();
            System.out.print("Enter book author:-");
            String bookAuthor = sc. nextLine();
            books [idx][0] = bookNumber+" ";
            books [idx] [1] = book Name;
            books [idx] [2] = book Author;
                idx++
            System.out. println ("Book details added
                                    successfully");
            System.out. println();
        }
    }
}

```java
public void removeBook(){
    Scanner sc = new Scanner (System.in);
    System.out.print ("Enter book number to be deleted:-");
    int bookNumber = sc.nextInt();
    boolean found = false;
    for (int i=0; i<idx; i++){
        if (bookNumber == Integer.ParseInt(books[i][0])){
            for (int j=i ; j<idx-1; j++){
                books[j][0] = books[j+1][0];
                books[j][1] = books[j+1][1];
                books[j][2] = books[j+1][2];
            }
            books[idx-1][0] = null;
            books[idx-1][1] = null;
            books[idx-1][2] = null;
            idx--;
            found = true;
            System.out.println("Book removed successfully");

        }
    }
    if (!found){System.out.println("Book not found");
        removeBook();}
}

public void printing(){
    System.out.println ("Books in library:-");
    System.out.println (" Book Number \t Book Name \t
                        Author Name");
    for (int i=0; i<idx; i++){
        System.out.println (books[i][0] + "\t\t" +
                        books[i][1] + "\t\t" + books[i][2]);
    }
}
```

```java
public static void main (String args[]){
    Scanner SC = new Scanner (System.in);
    Library lib = new Library();
    System.out.println("Enter the total number
        of books data to be stored :- ");
    lib.totalBooks = SC.nextInt();
    lib.books = new String[lib.totalBooks][3];
    System.out.println("Enter the books details:-");
    lib.addBook();
    lib.printing();
    lib.removeBook();
    lib.printing();
    SC.close();
}
}
```

output:-

Enter the total number of books data to be stored:-2
Enter the books details:-
Enter book Number:-100
Enter book Name:- David copperfiled
Enter Author Name:- Charles Dickens
Book details added successfully.

Enter book Number:- 101
Enter book Name:- The Guide
Enter Author Name:- R.K. Narayan
Book details added successfully.

Books in Library:-

Book Number	Book Name	Author Name
100	David copperfiled	Charles Dickens
101	The Guide	R.K. Narayan

```
Enter book Number to remove :- 100
Book removed successfully.
Books in Library:
Book Number    Book Name    Author Name
   101         The Guide     R.K. Narayan
```