

Assignment ~ 3

- i) Create a class named "Student" with string variable name and integer variable "roll-no". Assign the value of roll-no as '2' and that of name "John" by creating an object of the class.

class student

2

String name;

```
int roll-no;
```

student(string a, int b)

31

name = a;

roll no = b;

3

void display()

f

```
System.out.println("Student Info");
```

```
System.out.println("Name : " + name);
```

```
System.out.println("Roll-no." + roll-no);
```

3

3

class Main

1

```
2 public static void main(String args[])
{
```

6

student s1: new student ("John", 2);

51. display());

2

3

Output:-

Javac Main.java
Java Main

student Info
Name : John
Roll-no : 2

- 2) Assign and print the roll-no, phone-no and address of two students using having names "Sam" and "John" respectively by creating two objects of class.

```
class Student
{
    int roll-no;
    long ph-no;
    String address, name;
```

```
student()
{
    roll-no = 1;
    ph-no = 7875023938;
    address = "Baskeshwar Nagar";
    name = "Sam";
}
```

```
Student (int a, long b, string c, string d)
roll-no = a;
ph-no = b;
address = c;
name = d;
```

```
void display()
{
    System.out.println("Student Information");
    System.out.println("Roll-no = " + roll-no);
    " " . " " ("ph-no = " + phone-no\n);
    " " " " ("Address = " + address\n);
    " " " " ("Name = " + name);
}

public static void main(String args[])
{
    student s1 = new student();
    s1.display();

    student s2 = new student(2, 9284649370,
                           "latur", "John");
    s2.display();
}
```

Output :- Javac student.java
Java student

student information	student information
Roll-No :- 1	Roll-No :- 2
ph-no :- 7875028938	ph-No: 9284649370
Address :- "Baskweshwar N"	Address :- latur
Name :- "Sam"	Name :- John.

3] Write a program to calculate area & perimeter of triangle having sides of 3, 4 and 5 by creating class named Triangle without any parameter in it's constructor

→

```
class Triangle
```

```
{  
    int len, bre, hei;
```

```
    Triangle()  
{
```

```
        len = 8;  
        bre = 4;  
        hei = 5;  
    }
```

```
    void compute()  
{
```

```
        int area, perimeter;  
        area = 1/2 * bre * hei;  
        System.out.println("perimeter of triangle :"  
                           + perimeter);  
    }
```

```
class Main
```

```
{  
    public static void main(String args[])
```

```
        Triangle T1 = new Triangle();
```

```
        T1.compute();
```

```
}
```

```
}
```

Output

Java Triangle.java
Java Triangle

Area of Triangle = 5
Perimeter of Triangle = 12

- 4] W.a.p to find area & perimeter of triangle with sides 3, 4 and 5. In the constructor the sides are as parameter.

class Triangle

{

int len, bre, hei;

triangle(int a, int b, int c);

{

len = a;

bre = b;

hei = c;

}

void compute()

{

int area, perimeter;

area = 1/2 * bre * hei;

System.out.println("Perimeter of Triangle" + Perimeter);

{

}

class Main

```
{  
public static void main(string args[]){  
}  
triangle t1 = new triangle(3,4,5);  
t1.compute();  
}  
}
```

Output :-

Java Triangle.java
Java Triangle
Area of Triangle = 6
Perimeter of Triangle = 12

Q) W.a.p. to print area of two rectangles having sides (4,5) and (5,8) respectively by creating a class 'Rectangle' with a method name 'Area' which return the area and len and bre passed as parameter to it's constructor.

```
class Rectangle{
```

```
int len,bre;
```

```
Rectangle(int a, int b){
```

```
len = a;
```

```
bre = b;
```

```
}
```

```
void Area()
```

```

int area ;
area = len * bre ;
System.out.println("Area of rectangle=" + area);
}
}

class Main
{
public static void main(String args[])
{
    Rectangle R1 = new Rectangle(4,5);
    R1.Area()
    Rectangle R2 = new Rectangle(5,8);
    R2.Area()
}
}

```

Output :- Java Rectangle.java

Java Rectangle

Area of Rectangle 1 = 20

Area of Rectangle 2 = 40.

- Q) W.A.P. to print area of rectangle by creating a class named 'Area' having two methods first method named as 'setDim' takes the length and breadth of rectangle as parameters and the second method named 'getArea' returns the area of the rectangle. length and breadth of rectangle are entered through keyboard.

```

class Rectangle
{
    int len,bre;
}

```

```

void setDim(int a, int b);
{
    len = a;
    bre = b;
}
void getArea()
{
    int area;
    area = len * bre;
    System.out.println("Area of rectangle = " + area);
}
public static void main(String args[])
{
    int n1 = Integer.parseInt(args[0]);
    int n2 = Integer.parseInt(args[1]);
}

Rectangle R1 = new Rectangle();
R1.setDim(n1, n2);
R1.getArea();
}

```

Output :- Java Area.java
 Java area(10,12)

Area of Rectangle = 120

- Q] W.o.p. to print area of rectangle by creating a class named 'Area' having the value of len and bre as parameter of its constructor and having a method named returnArea which returns the area of rectangle len and bre of rectangle are entered through keyboard.

→ class Area

{

int len, bre ;
Area(int a, int b)
{

len = a ;
bre = b ;

void returnArea();

{

int area ;

area = len * bre ;

System.out.println("Area of rectangle = " + area);

}

public static void main(String args[])

{

int num1 = Integer.parseInt(args[0]);

int num2 = Integer.parseInt(args[1]);

Area A1 = new Area(num1, num2);

A1.returnArea();

}

}

Output: Javac Area.java

Java Area(10, 15).

Area of rectangle = 150.

- 8) Print the average of three numbers entered by user by creating a class named 'Averoge', having a method to calculate and print the Average.

```
class Average
{
    int num1, num2, num3;
    void setData(int a, int b, int c)
    {
        num1 = a;
        num2 = b;
        num3 = c;
    }
```

```
void getAverage()
{
    int result;
    result = num1 + num2 + num3 / 3;
    System.out.println("Average of three
numbers = " + result);
}
```

```
class Main
{
    public static void main(String args[])
    {
        int n1 = Integer.parseInt(args[0]);
        int n2 = Integer.parseInt(args[1]);
        int n3 = Integer.parseInt(args[2]);
    }
}
```

```
Average A1 = new Average();
A1.setData(n1, n2, n3);
A1.getAverage();
}
```

Output :- Javac Average.java

Java Average (10, 20, 30)

Average of three numbers = 20.

Q) W.A.P. that would print the information (name, year of joining, salary, address) of three employees by creating a class named 'Employee'.

```
class Employee
```

```
{  
    String name;  
    int year-of-joining;  
    int salary;  
    String address;
```

```
Employee(string name, int salary, int year-  
of-joining, string address)
```

```
    this.name = name;
```

```
    this.salary = salary;
```

```
    this.year-of-joining = year-of-joining;
```

```
    this.address = address;
```

```
}
```

```
void GetData()
```

```
{
```

```
    console.WriteLine("Enter name : ");
```

```
    name = Convert.ToString(console.ReadLine());
```

```
    console.WriteLine("Enter salary : ");
```

```
    salary = Convert.ToInt32(console.ReadLine());
```

```
    console.WriteLine("Enter year of joining : ");
```

```
    year-of-joining = Convert.ToInt32(console.  
        ReadLine());
```

```
    console.WriteLine("Enter Address : ");
```

```
    address = Convert.ToString(console.ReadLine  
        ());
```

```
}
```

```

void display()
{
    System.out.println ("name = " + name)
    " salary = " + salary
    " year-of-joining = "
    + year-of-joining
    " address = " + address);
}

class Main
{
    public static void main(String args[])
    {
        Employee[] e = new Employee[3];
        for (int i = 0; i < 3; i++)
        {
            System.out.println ("Enter data of employee")
            e[i].Display();
        }
    }
}

```

- 10) Add two distance in inch-feet by creating a named 'ADDdistance'.

```

class ADDdistance
{
    int feet;
    int inches;

    void getDistance()
    {

```

```
Scanner sc = new Scanner(system.in);
system.out.print("Enter inch: ");
inches = sc.nextInt();
```

{

```
void show()
```

{

```
System.out.println("Feet : " + feet + "\n"
    "Inches : " + inches);
```

{

```
void addDistance(Distance D1, Distance
```

```
D2)
```

{

```
inches = D1.inches + D2.inches;
```

```
feet = D1.feet + D2.feet + (inches / 12);
```

```
inches = inches % 12;
```

{

{

```
class Main
```

{

```
public static void main(string args[])
```

{

```
try {
```

```
Distance D1 = new Distance();
```

```
Distance D2 = new Distance();
```

```
Distance D3 = new Distance();
```

```
system.out.println("Enter second distance");
D2.getDistance();
```

```
D3.addDistance(D1, D2);
```

```
system.out.println("Total distance is : ");
D3.show();
```

{

```
{ catch (Exception e)  
{  
    System.out.println("Exception occurred : "  
        + e.toString());  
}
```

Output :-

```
Enter first distance:  
Enter feet : 20  
Enter inches : 10  
Enter second distance:  
Enter feet : 20  
Enter inches : 10  
Total distance is :  
feet : 40                  Inches : 8
```

Q) W.A.P by creating an 'Employee' class having the following methods and print the final salary.

1 → 'getInfo()' which takes the salary, no. of hours of work per day of employee as parameter.

2 → 'AddSal()' which add \$ 100 salary of the employee if it is less than \$ 300.

3 → 'AddWork()' which add \$ 100 salary of the employee if the no. of hours of work per day is more than 6 hours.

class Employee

{

int salary;

int no-q-hours;

void getInfo(int a, int b)

{
salary = a;{
no.q-hours = b;

}

{

void addSalary()

{

if (salary < \$500)

{

salary = salary + 10;

{

}

void ADDWork()

{

if (no-q-hours > 6)

{

salary = salary + 10;

{

}

void ADDWork()

{

if (no-q-hours > 6)

{

salary = salary + 5;

{

}

void display()

{

```
System.out.println("salary of Employee");  
System.out.println("salary : " + salary);  
}
```

{

```
class Main
```

{

```
public static void main(String args[]){
```

{

```
Employee e = new Employee();
```

```
e.getInfo($ 200,11);
```

```
e.addSalary();
```

```
e.ADDWork();
```

```
e.display();
```

{

{