**ASSIGNMENT :- 1**

**Experiment :- 1**

Write a Java program to print your name.

**Code :-**

class Name

{

public static void main(String[] args)

{

System.out.println();

System.out.println("Abhinav Sarkar");

}

}

**Output :-**

**Experiment :- 2**

Write a Java program to add two numbers.

**Code :-**

class Add

{

int a,b;

}

class Addition

{

public static void main(String[] args)

{

Add x = new Add();

x.a = 2;

x.b = 4;

int s = x.a + x.b;

System.out.println("");

System.out.println(" The sum of the 2 numbers " + x.a + " and " + x.b + " is: " + s + ".");

}

}

**Output :-**

**Experiment :- 3**

Write a Java program to change temperature from Celsius to Fahrenheit.

**Code :-**

class Temperature

{

double c,f;

void cToF()

{

f = 9.0 / 5.0 \* c + 32.0;

}

}

class Convert

{

public static void main(String[] args)

{

Temperature x = new Temperature();

x.c = 100;

x.cToF();

System.out.println("");

System.out.println(" " + x.c + " \*C in Fahrenheit: " + x.f + " \*F.");

}

}

**Output :-**

**Experiment :- 4**

Write a Java program to change temperature from Fahrenheit to Celsius.

**Code :-**

class Temperature1

{

double c,f;

void fToC()

{

c = 5.0 / 9.0 \* (f - 32.0);

}

}

class Convert1

{

public static void main(String[] args)

{

Temperature1 x = new Temperature1();

System.out.println("");

x.f = 100;

x.fToC();

System.out.println("");

System.out.println(" " + x.f + " \*F in Celsius: " + x.c + " \*C.");

}

}

**Output :-**

**Experiment :- 5**

Write a Java program to find area and perimeter of a rectangle.

**Code :-**

class Shape

{

double l,b,a,p;

void calculateAreaAndPerimeter()

{

a = l \* b;

p = 2.0 \* (l + b);

}

}

class AreaPerimeter

{

public static void main(String[] args)

{

Shape rectangle = new Shape();

rectangle.l = 2;

rectangle.b = 5;

rectangle.calculateAreaAndPerimeter();

System.out.println("");

System.out.println(" The perimeter of the rectangle of length " + rectangle.l + " and breadth " + rectangle.b + " is: " + rectangle.p + ".");

System.out.println("");

System.out.println(" The area of the rectangle of length " + rectangle.l + " and breadth " + rectangle.b + " is: " + rectangle.a + ".");

}

}

**Output :-**

**Experiment :- 6**

Write a Java program to find area and perimeter of a circle.

**Code :-**

class Shape1

{

double r,a,p;

void calculateAreaAndPerimeter()

{

a = 22.0 / 7.0 \* r \* r;

p = 2.0 \* 22.0 / 7.0 \* r;

}

}

class AreaPerimeter1

{

public static void main(String[] args)

{

Shape1 circle = new Shape1();

circle.r = 7;

circle.calculateAreaAndPerimeter();

System.out.println("");

System.out.println(" The perimeter of the circle of radius " + circle.r + " is: " + circle.p + ".");

System.out.println("");

System.out.println(" The area of the circle of radius " + circle.r + " is: " + circle.a + ".");

}

}

**Output :-**

**Experiment :- 7**

Write a Java Program to display whether a number is odd or even.

**Code :-**

class Number

{

int x;

int oddEven()

{

if ( x % 2 == 0 )

return 1;

else

return 0;

}

}

class OddEven

{

public static void main(String[] args)

{

Number f = new Number();

f.x = 6;

int a = f.oddEven();

System.out.println();

if ( a == 1 )

System.out.println(" The number " + f.x + " is even.");

else

System.out.println(" The number " + f.x + " is odd.");

}

}

**Output :-**

**Experiment :- 8**

Write a Java Program to check if a number is Positive or Negative.

**Code :-**

class Number1

{

int x;

int positiveNegative()

{

if ( x > 0 )

return 1;

else

return 0;

}

}

class PositiveNegative

{

public static void main(String[] args)

{

Number1 f = new Number1();

f.x = 6;

int a = f.positiveNegative();

System.out.println();

if ( a == 1 )

System.out.println(" The number " + f.x + " is positive.");

else

System.out.println(" The number " + f.x + " is negative.");

}

}

**Output :-**

**Experiment :- 9**

Write a Java program to find maximum of three numbers.

**Code :-**

class Set

{

int a,b,c;

int maximum()

{

if ( a > b || a == b)

if ( a > c || a == c)

return a;

else

return c;

else

if ( b > c || b == c)

return b;

else

return c;

}

}

class Compare

{

public static void main(String[] args)

{

Set x = new Set();

x.a = 95;

x.b = 62;

x.c = 60;

int max = x.maximum();

System.out.println();

System.out.println(" The maximum of the 3 numbers " + x.a + ", " + x.b + " and " + x.c + " is: " + max + ".");

}

}

**Output :-**

**Experiment :- 10**

Write a Java program to swap two numbers.

**Code :-**

class Swap

{

int a,b;

void swap()

{

a = a + b;

b = a - b;

a = a - b;

}

}

class Swapping

{

public static void main(String[] args)

{

Swap x = new Swap();

x.a = 4;

x.b = 3;

System.out.println("");

System.out.println(" Before swapping: a = " + x.a + ", b = " + x.b + ".");

x.swap();

System.out.println("");

System.out.println(" After swapping: a = " + x.a + ", b = " + x.b + ".");

}

}

**Output :-**

**Experiment :- 11**

Write a Java program to convert miles to kilometers.

**Code :-**

class Distance

{

double dist;

void MilesToKilometers()

{

dist = dist \* 1.60934;

}

}

class Distance2

{

public static void main(String[] args)

{

Distance c = new Distance();

c.dist = 100;

double x = c.dist;

c.MilesToKilometers();

System.out.println();

System.out.println(" Distance (in miles): " + x + " = Distance (in kilometers): " + c.dist);

}

}

**Output :-**

**Experiment :- 12**

Write a Java program to check whether a year is leap year or not.

**Code :-**

class Year

{

int y;

int leapYear()

{

if ( y % 4 == 0 )

if ( y % 100 == 0 )

if ( y % 400 == 0 )

return 1;

else

return 0;

else

return 1;

else

return 0;

}

}

class CheckYear

{

public static void main(String[] args)

{

Year A = new Year();

A.y = 1998;

int r = A.leapYear();

System.out.println();

if ( r == 1 )

System.out.println(" The year " + A.y + " is a leap year.");

else

System.out.println(" The year " + A.y + " is not a leap year.");

}

}

**Output :-**

**Experiment :- 13**

Write a Java program for following grading system.

Note: Percentage>=90% : Grade A

Percentage>=80% : Grade B

Percentage>=70% : Grade C

Percentage>=60% : Grade D

Percentage>=40% : Grade E

Percentage<40% : Grade F

**Code :-**

class Marks

{

double percentage;

char grade;

void calculateGrade()

{

if ( percentage > 90 || percentage == 90)

grade = 'A';

else if ( percentage > 80 || percentage == 80)

grade = 'B';

else if ( percentage > 70 || percentage == 70)

grade = 'C';

else if ( percentage > 60 || percentage == 60)

grade = 'D';

else if ( percentage > 40 || percentage == 40)

grade = 'E';

else

grade = 'F';

}

}

class GradingSystem

{

public static void main(String[] args)

{

Marks w = new Marks();

w.percentage = 65.54;

w.calculateGrade();

System.out.println();

System.out.println(" The grade for " + w.percentage + " % marks is: " + w.grade + ".");

}

}

**Output :-**

**Experiment :- 14**

Write a Java program to check whether a number is divisible by 5 or not.

**Code :-**

class Divisibility

{

int c;

int divisibleBy5()

{

if ( c % 5 == 0 )

return 1;

else

return 0;

}

}

class DivisibleBy5

{

public static void main(String[] args)

{

Divisibility u = new Divisibility();

u.c = 35;

int y = u.divisibleBy5();

System.out.println();

if ( y == 1 )

System.out.println(" The number " + u.c + " is divisible by 5.");

else

System.out.println(" The number " + u.c + " is not divisible by 5.");

}

}

**Output :-**