① Write a program in Java to calculate sum of two numbers and display the result.

→
```
import java.io.*;
class Add
{
    int x, y, sum = 0;
    public
        void getdata ()
        { x = 10;
          y = 20;
        }
        void calculate ()
        {
            sum = x + y;
            System.out.println (" Sum is : "+ sum);
        }
    }
    public class Main
    { public static void main (String args [])
        {
            Add a1 = new Add ();
            a1. getdata ();
            a1. calculate ();
        }
    }
```

Output :-

```
Sum is : 30
```

1) Write a Java program to find factorial of a number.

→
```
import java.io.*;
class fact
{
 int j, f = 1;
 public
 void calculate()
 {
  for (i=1; i<=5; i++)
   f = f * i;
  System.out.println ("Factorial is: "+f);
 }
}
public class Main
{
 public static void main (String args[])
  {
   fact f = new fact();
   f.calculate();
  }
}
```

Output :-

```
Factorial is : 120
```

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WAP in Java to print "Hello Brainware University".

```
import java.io.*;
class prtnme
{
 public
  void print()
   {
    System.out.println("Hello Brainware University");
 }}
 class Main
 {
  public static void main(String args[])
   {
    prtnme p = new prtnme();
     p.print();
   }
  }
```

Output:

```
Hello Brainware University
```

OAP in Java to perform Basic Arithmetic Operations.

```
import java.io.*;
import java.util.Scanner;
class maths
{
public
int a, b, s=0, d=0, p=1, q=1;
void getdata()
{
Scanner sc = new Scanner(System.in);
System.out.println("Enter the values of a and b: ");
a = sc.nextInt();
b = sc.nextInt();
}
void calc()
{
        s = a+b;
        d = a-b;
        p = a*b;
        q = a/b;
        System.out.println("1) Sum = "+s+"\n2) Difference="
                + d + "\n3) Product = "+p +
                "\n Quotient =" + q );
}
}
class Main
{ public static void main (String args[])
{
maths m = new maths();
m.getdata();
m.calc();
}
}
```

Output:

```
Enter the values of a and b:
3   4
1) Sum = 7
2) Difference = -1
3) Product = 12
4) Quotient = 0
```

WAP in Java to calculate the area of a given radius

```
import java.io.*;
import java.util.Scanner;
class circle
{ public
  int r;
  double pi=3.14, a;
  void calcarea()
  { Scanner sc = new Scanner(System.in);
    System.out.println("Enter the radius: ");
    r = sc.nextInt();
    a = pi*r*r;
    System.out.println("Area = "+a);
  }
}
  class Main
  { public static void main(String args[])
    { circle c = new circle();
      c.calcarea();
    }
  }
```

Output:

```
Enter the radius:
7
Area = 153.86
```

WAP in Java to convert temperature from celcius to Fahrenheit, taking user input.

```
import java.io.*;
import java.util.Scanner;
class temp
{ public
  double c, f=0;
  void convert()
  { Scanner sc = new Scanner(System.in);
    System.out.println("Enter temp in celcius:");
      c= sc.nextDouble();
      f= c*9/5+32;
      System.out.println("Temp in fahrenheit:"+f);
  }}
  class Main
  { public static void main(String args[])
    { temp t= new temp();
      t.convert();
    }}
```

Output:

```
Enter temp in celcius:
100
Temp in fahrenheit: 212.0
```

WAP in Java to Swap two numbers.

```
import java.io.*;
import java.util.Scanner;
class sp
{ public
  int a,b;
  void swap()
  { Scanner sc = new Scanner(System.in);
    System.out.println("Enter values of a and b:");
    a = sc.nextInt();
    b = sc.nextInt();
    System.out.println("Nos. before swapping:"+a+"and"+b);
      a = (a+b)-(b=a);
    System.out.println("Nos. after swapping:"+a+"and"
                                                +b);
  }
}
  class Main()
  { public static void main(String args[])
    { sp s = new sp();
      s.swap();
    }
  }
```

Output:

```
Enter values of a and b:
23    56
Nos. before swapping: 23 and 56
Nos. after swapping: 56 and 23
```

(6) WAP in Java to check whether a number is Prime or not.

```
import java.io.*;
import java.util.Scanner;
class prime
{ public
  int n;
  void check()
  { Scanner sc = new Scanner(System.in);
    System.out.println("Enter number: ");
    n = sc.nextInt();
    int i, c = 0;
    if (n == 0 || n == 1)
        System.out.println(n + " is not a prime number");
    else
    { for (i = 2; i <= n/2; i++)
      { if (n % i == 0)
        { System.out.println(n + " is not a prime number");
          c = 1;
          break;
        }
        if (c == 0)
          system.out.println(n + " is a prime number");
      }
    }
  }
class Main
{ public static void main(String args[])
  { prime p = new prime();
    p.check();
  }
}
```

Output :-

```
Enter number:
13
13 is a prime number
```

9. WAP in Java to access Private members (fields/methods).

```
import java.io.*;
class Add
{ int x, y, sum = 0;
  public
      void getdata()
      { x = 10;
        y = 20;
        calculate();
      }
  private
      void calculate()
      { sum = x + y;
        System.out.println("Sum is = " + sum);
      }
}
  class Main
  { public static void main (String args[])
    { Add a = new Add();
      a.getdata();
    }
  }
```

Output :-

```
Sum is = 30
```

Q. WAP in Java to demonstrate method overloading.

```
import java.io.*;
class Add
{ int x, y, s = 0;
  public
    void getdata (int a, int b)
    { x = a;
      y = b;
    }
    void getdata (int a)
    { x = y = a;
    }
    void getdata ()
    { x = 10;
      y = 20;
    }
    void calculate ()
    { sum = x + y;
      System.out.println ("Sum = " + s);
    }
}
class Main
{ public static void main (String args[])
  { Add a1 = new Add();
    Add a2 = new Add();
    Add a3 = new Add();
    a1.getdata ();
    a2.getdata (5, 7);
    a3.getdata (13);
    a1.calculate ();
    a2.calculate ();
    a3.calculate ();
  }
}
```

Output :-

```
Sum = 30
Sum = 12
Sum = 26
```

BS
20/2/24

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Sl. No	Topic Name	Date of Experiment	Signature with Date	Remarks
1.	WAP in Java to calculate sum of two numbers	13.02.2024	13/2/24	
2.	WAP in Java to find factorial of a number	13.02.2024		
3.	WAP in Java to print Hello Brainware University	20.2.24.	20/2/24	
4.	WAP in Java to perform basic arithmetic operations			
5.	WAP in Java to area of circle with given radius			
6.	WAP to convert temp. from °C to °F.			
7.	WAP to swap two nos.			
8.	WAP to check Prime no.			
9.	WAP to access private member in Java			
10.	WAP to demonstrate method overloading			
11.	WAP to demonstrate constructor overloading			