File 1:-

```
package dsa;

public interface Calc {
    void Addition(int num1,int num2);
    void Subtraction(int num1,int num2);
    void Multiplication(int num1,int num2);
    void Division(int num1,int num2);
}
```

File 2:-

```
package DSA1;
import dsa.*;
import java.util.*;
class CalcOperation1  implements Calc{
     public void Addition(int num1,int num2)
     {
       int add=num1+num2;
       System.out.println("addition is =" +add);

     }

     public void Subtraction(int num1,int num2)
     {
       int sub=num1-num2;
       System.out.println("sub is =" +sub);
```

```
    }
    public void Multiplication(int num1,int num2)
    {
      int mul=num1*num2;
      System.out.println("mul is =" +mul);

    }

    public void Division(int num1,int num2)
          throws ArithmeticException
    {
       if(num2!=0)
       {

      int div=num1/num2;
      System.out.println("div is =" +div);

    }
       else
       {
          throw new ArithmeticException();
       }

  }


}
```

```
public class CalcOperation {
    public static void main(String[] args)
    {
        Scanner scanner=new Scanner(System.in);
        CalcOperation  d=new CalcOperation();
        while(true)
        {
            System.out.println("menu");
             System.out.println("1.addition ");
              System.out.println("2.subtraction ");
               System.out.println("3.multiplication ");
                System.out.println("4.divison ");
                 System.out.println("exit");
                  System.out.println("enter value of num1");
                  int num1=scanner.nextInt();
                   System.out.println("enter value of num2");
                  int num2=scanner.nextInt();
               System.out.println("enter your choice =");
                   int ch=scanner.nextInt();
                   switch(ch)
                   {
                      case 1:
                         d.Addition(num1, num2);
                         break;
                      case 2 :
                         d.Subtraction(num1, num2);
                         break;
```

```
                    case 3:
                       d.Multiplication(num1, num2);
                       break;
                    case 4:
                      try
                        {
                         d.Division(num1, num2);
                        }
                    catch(ArithmeticException e)
                    {
                       System.out.println("divide method has throw exveption " +e);
                    }
                    finally
                        {
                         System.out.println("finally block executed");
                        }
                      Break;
                    default:
                       System.out.println("enter correct choice:");
                       break;

                }

        }
    }

}
```

OUTPUT:-

```
menu
1.addition
2.subtraction
3.multiplication
4.divison
exit
enter value of num1
10
enter value of num2
20
enter your choice =
1
addition is =30
menu
1.addition
2.subtraction
3.multiplication
4.divison
exit
enter value of num1
20
enter value of num2
20
enter your choice =
4
div is =1
finally block executed
menu
1.addition
2.subtraction
3.multiplication
4.divison
exit
enter value of num1
100
enter value of num2
20
enter your choice =
4
div is =5
finally block executed
menu
1.addition
2.subtraction
3.multiplication
4.divison
exit
enter value of num1
```

```
10
enter value of num2
0
enter your choice =
4
divide method has throw exveption java.lang.ArithmeticException
finally block executed
menu
1.addition
2.subtraction
3.multiplication
4.divison
exit
enter value of num1
100
enter value of num2
50
enter your choice =
4
div is =2
finally block executed
menu
1.addition
2.subtraction
3.multiplication
4.divison
exit
```