

1

```
package exception;

import java.util.Scanner;

public class exception {

    public static void main(String[] args) {
        int num1, num2, result;
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter the first number");
        num1=sc.nextInt();
        System.out.println("Enter the second number");
        num2=sc.nextInt();
        try {
            result= num1/num2;
            System.out.println("result of operation is: " +result);
        }
        catch(ArithmeticException arithmeticexception){
            System.out.println("Attempt to divide an integer by 0, Invalid
operation");
        }
    }
}
```

```
terminated: exception.java / application.c
Enter the first number
40
Enter the second number
8
result of operation is: 5
```

```
Enter the first number
40
Enter the second number
0
Attempt to divide an integer by 0, Invalid operation
```

2

```
import java.util.Scanner;

public class Throwexception {

    public static void main(String[] args) {
        int num1, num2, result;
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter the first number");
        num1=sc.nextInt();
        System.out.println("Enter the second number");
        num2=sc.nextInt();
        try {
            result= num1/num2;
            System.out.println("result of operation is: " +result);
        }
        catch(Exception e){
            e.printStackTrace();
            throw new UnsupportedOperationException();
        }
        finally {
            System.out.println("Attempt to divide an integer by 0, Invalid
operation");
        }
    }
}
```

```
Enter the first number
40
Enter the second number
0
java.lang.ArithmeticException: / by zero
Attempt to divide an integer by 0, Invalid operation
    at Throwexception.main(Throwexception.java:13)
Exception in thread "main" java.lang.UnsupportedOperationException
    at Throwexception.main(Throwexception.java:18)
```

3a

```
package InsufficientBalanceException;
import java.util.Scanner;

public class insuffbal extends Exception{

    public static void main(String[] args) {
        int balance=0, deposit, widamount;
        Scanner sc= new Scanner(System.in);
        System.out.println("Enter the amount you wish to deposit");
        deposit=sc.nextInt();
        System.out.println("Enter the amount you wish to withdraw?");
        widamount=sc.nextInt();
        balance += deposit;
        balance -= widamount;

        try {
            if(widamount>balance)
            {
                System.out.println("Insufficient amount");
            }
            else
            {
                System.out.println("Thank you for withdrawing, your
balance is " +balance);
            }
        }
        finally {
            System.out.println("Insufficient amount for withdrawing");
        }
    }
}
```

```
Enter the amount you wish to deposit
2000
Enter the amount you wish to withdraw?
200
Thank you for withdrawing, your balance is 1800
Insufficient amount for withdrawing
```

```
Enter the amount you wish to deposit
1500
Enter the amount you wish to withdraw?
15000
Insufficient amount
Insufficient amount for withdrawing
```

3b

```
import java.util.Scanner;

public class IllegalBankTransactionException extends Exception {
    static void amount() throws IllegalBankTransactionException{
        long id;
        double balance=0, deposit, withdrawal;

        Scanner dep= new Scanner(System.in);
        System.out.println("Deposit an amount");
        deposit=dep.nextInt();
        balance += deposit;

        Scanner wid= new Scanner(System.in);
        System.out.println("Withdraw an amount");
        withdrawal=wid.nextInt();
        balance -= withdrawal;

        if(withdrawal<0)
        {
            throw new IllegalBankTransactionException();
        }
        else
            System.out.println(balance);
    }
    public static void main(String[] args) {
        try
        {
            amount();
        }
        catch(IllegalBankTransactionException e)
        {
            System.out.println("IllegalBankTransactionException, Entering
a negative value");
        }
    }
}
```

```
Deposit an amount
5000
Withdraw an amount
300
4700.0
```

```
Deposit an amount
5000
Withdraw an amount
-750
IllegalBankTransactionException, Entering a negative value
```