LAB Program : 7

Code

```java
import java.util.Scanner;

class list<G,K>
{
    private G ele1;
    private K ele2;
    private int n;
    Scanner get = new Scanner(System.in);
    list(G ele1,K ele2)
    {
        this.ele1=ele1;
        this.ele2=ele2;
    }

    void putData()
    {
        System.out.printf("\n The first Element is Of %s Type, And it is  : \n ",(ele1.getClass().getName()).substring(10));
        System.out.println(ele1);
        System.out.printf("\n The Second Element is Of %s Type, And it is  : \n ",(ele2.getClass().getName()).substring(10));
        System.out.println(ele2);
    }
}

class listMain
{
    public static void main(String[] args)
    {
        list<Integer,Double> a1=new list<Integer,Double>(10,34.55);
        list<Double,String> a2=new list<Double,String>(99.90, "Best Of Luck");
        list<String,Integer> a3=new list<String,Integer>("Good Luck",10);
        System.out.println("\n <----Object 1--->");
        a1.putData();
        System.out.println("\n <----Object 2--->");
        a2.putData();
        System.out.println("\n <----Object 3--->");
        a3.putData();
    }
}
```

Output

```
<----Object 1--->

The first Element is Of Integer Type, And it is  :
10

The Second Element is Of Double Type, And it is  :
34.55

<----Object 2--->

The first Element is Of Double Type, And it is  :
99.9

The Second Element is Of String Type, And it is  :
Best Of Luck

<----Object 3--->

The first Element is Of String Type, And it is  :
Good Luck

The Second Element is Of Integer Type, And it is  :
10
```

LAB Program : 8

Code

```java
import java.util.Scanner;

class wrongAge extends Exception
{
    private int fAge,sAge;
    wrongAge(int f,int s)
    {
        fAge=f;
        sAge=s;
    }

    public String toString()
    {
        return "Wrong Age (Father's age ("+fAge+") <= Son's Age("+ sAge+") : this can't be True! ";
    }
}
class negativeAge extends Exception
{
    private int Age;
    negativeAge(int f)
    {
        Age=f;
    }

    public String toString()
    {
        return "NegativeAge : Age  ("+Age+") Can't be negative : Check Again! ";
    }
}


class father
{
    int fathersAge;
    String name;
    Scanner get = new Scanner(System.in);
    father() throws negativeAge
    {
        System.out.printf("\n <--Enter the Details--> ");
        System.out.printf("\n Name: "); name=get.next();
        System.out.printf(" Fathers age: "); fathersAge=get.nextInt();
        if(fathersAge<=0)
            throw new negativeAge(fathersAge);
```

```java
            throw new negativeAge(fathersAge);

    }

}

class son extends father
{
    int classNo,sonsAge;
    son() throws wrongAge,negativeAge
    {
        super();
        System.out.printf(" Age: "); sonsAge=get.nextInt();
            if(fathersAge<sonsAge)
                throw new wrongAge(fathersAge,sonsAge);
            else
                if(sonsAge<0)
                    throw new negativeAge(sonsAge);
        System.out.printf(" Class: ");
        classNo=get.nextInt();
        System.out.printf("\n The Son age is : %d , and Father's is :%d",sonsAge,fathersAge);
    }

}

class sonMain
{
    public static void main(String[] args)
    {
        try
        {
            son s1=new son();
        }
        catch(wrongAge w1)
        {
            System.out.println(" Caught an Exception : "+w1);
        }
        catch(negativeAge w2)
        {
            System.out.println(" Caught an Exception : "+w2);
        }
    }
}
```

Output

```
<--Enter the Details-->
Name: john
Fathers age: 20
Age: 10
Class: 5

The Son age is : 10 , and Father's is :20
G:\NoTePadPP\MyJava\OOJ_LAB\LAB7_8_week10>java sonMain

<--Enter the Details-->
Name: john
Fathers age: -9
Caught an Exception : NegativeAge : Age  (-9) Can't be negative : Check Again!

G:\NoTePadPP\MyJava\OOJ_LAB\LAB7_8_week10>java sonMain

<--Enter the Details-->
Name: john
Fathers age: 20
Age: 40
Caught an Exception : Wrong Age (Father's age (20) <= Son's Age(40) : this can't be True!

G:\NoTePadPP\MyJava\OOJ_LAB\LAB7_8_week10>java sonMain

<--Enter the Details-->
Name: john
Fathers age: 20
Age: -12
Caught an Exception : NegativeAge : Age  (-12) Can't be negative : Check Again!
```