WEEk-06

Write a program that demonstrates handling of exceptions in inheritance tree. Create a base class called “Father” and derived class called “Son” which extends the base class. In Father class, implement a constructor which takes the age and throws the exception WrongAge( ) when the input age<0. In Son class, implement a constructor that cases both father and son’s age and throws an exception if son’s age is >=father’s age.

```
import java.util.*;
class Wrongage extends Exception
{
	int age;
	Wrongage(int a)
	{
		age=a;
	}
	public String toString()
	{
		return "Entered Wrong age is ["+age+"]";
	}

}

class Father
{
	int f;
	Scanner in=new Scanner(System.in);
	Father()
	{

		System.out.println("Enter father age ");
		f=in.nextInt();
	}
	void checkage() throws Wrongage
	{
	if(f<0)
	{
		throw new Wrongage(f);
	}
	System.out.println("Father age positive");
	}
}


class Son extends Father
```

```
{
	int s;
	Scanner in=new Scanner(System.in);
	Son()
	{
	super();
	System.out.println("Enter son age ");
	s=in.nextInt();
	}

	void checkages() throws Wrongage
	{
		super.checkage();
		if(s<0)
		{
			throw new Wrongage(f);
		}
	System.out.println("Son age positive");
}


void checkage() throws Wrongage
{
	if(s>=f)
	{
		throw new Wrongage(s);
	}
	System.out.println("Father-Son age correct");
	}

}


class Age
{
	public static void main(String args[])
	{

		int f,s;

		Father fath=new Father();

		Father r;
		r=fath;
```

```
        try
        {
        r.checkage();
}
catch(Wrongage e)
{
        System.out.println("Father age wrong\n"+e);
}
Son sn=new Son();
r=sn;

try
{

        sn.checkages();
        r.checkage();
}
catch(Wrongage e)
        {
        System.out.println("Son age wrong\n"+e);
        }
}
}
```

OUTPUT

```
Enter father age
-7
Father age wrongEntered Wrong age is [-7]
Enter father age
90
Enter son age
97
Father age positive
Son age positive
Son age wrongEntered Wrong age is [97]
```

```
Enter father age
34
Father age positive
Enter father age
35
Enter son age
22
Father age positive
Son age positive
Father-Son age correct
```

```
Enter father age
45
Father age positive
Enter father age
23
Enter son age
23
Father age positive
Son age positive
Son age wrong
Entered Wrong age is [23]
```