WEEK-6

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.

Code:

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

}

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 Newdemo{
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"+e);
}
Son sn=new Son();
r=sn;

try{

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

Output:

Command Prompt

```
C:\Users\Admin\Desktop\vaishnavi>set path="C:\Program Files\Java\jdk-19\bin"

C:\Users\Admin\Desktop\vaishnavi>javac Newdemo.java

C:\Users\Admin\Desktop\vaishnavi>java Newdemo
Enter father age
-44
Father age wrongEntered Wrong age is [-44]
Enter father age
40
Enter son age
-12
Father age positive
Son age wrongEntered Wrong age is [40]

C:\Users\Admin\Desktop\vaishnavi>javac Newdemo.java

C:\Users\Admin\Desktop\vaishnavi>java Newdemo
Enter father age
-44
Father age wrongEntered Wrong age is [-44]
Enter father age
40
Enter son age
12
Father age positive
Son age positive
Father-Son age correct

C:\Users\Admin\Desktop\vaishnavi>
```