

VAISHNAVI KAMATH 3D 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.

```
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);  
}  
}  
}
```

```
C:\Users\Admin\Desktop\1BM21CS235>javac Newdemo.java
```

```
C:\Users\Admin\Desktop\1BM21CS235>java Newdemo
```

```
Enter father age
```

```
-20
```

```
Father age wrongEntered Wrong age is [-20]
```

```
Enter father age
```

```
25
```

```
Enter son age
```

```
30
```

```
Father age positive
```

```
Son age positive
```

```
Son age wrongEntered Wrong age is [30]
```

```
C:\Users\Admin\Desktop\1BM21CS235>java Newdemo
```

```
Enter father age
```

```
40
```

```
Father age positive
```

```
Enter father age
```

```
45
```

```
Enter son age
```

```
30
```

```
Father age positive
```

```
Son age positive
```

```
Father-Son age correct
```

```
C:\Users\Admin\Desktop\1BM21CS235>java Newdemo
```

```
Enter father age
```

```
12
```

```
Father age positive
```

```
Enter father age
```

```
12
```

```
Enter son age
```

```
12
```

```
Father age positive
```

```
Son age positive
```

```
Son age wrongEntered Wrong age is [12]
```

```
C:\Users\Admin\Desktop\1BM21CS235>java Newdemo
```

```
Enter father age
```

```
-12
```

```
Father age wrongEntered Wrong age is [-12]
```

```
Enter father age
```

```
-89
```

```
Enter son age
```

```
-56
```

```
Son age wrongEntered Wrong age is [-89]
```

```
C:\Users\Admin\Desktop\1BM21CS235>
```

