**Week 6**

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**Q7.** 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 :**

