**Week 7**

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**1BM21CS254**

**Q: 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.Scanner;

class Father{

int Father\_age;

public Father(int Fa){

try{

Father\_age = Fa;

if(Father\_age < 0){

throw new Exception("Error! Age is less than 0");

}

else{

Father\_age = Fa;

}

}

catch(Exception e){

System.out.println("Caught : "+e);

}

}

}

class Son extends Father{

int Son\_age;

public Son(int Fa,int Sa){

super(Fa);

try{

Son\_age = Sa;

if(Son\_age<0){

throw new Exception("Error! Son's age is less than 0");

}

else if(Son\_age >= Father\_age){

throw new Exception("Error! Son's age cannot be more than the Father's age");

}

else{

Son\_age = Sa;

}

}

catch(Exception e){

System.out.println("Caught : "+e);

}

}

void display(){

System.out.println("Father's age = "+Father\_age);

System.out.println("Son's age = "+Son\_age);

}

}

class InheritanceTree extends Exception{

public static void main(String args[]){

Scanner ss = new Scanner(System.in);

int a,b;

System.out.println("Enter the father's age");

a = ss.nextInt();

System.out.println("Enter the son's age");

b = ss.nextInt();

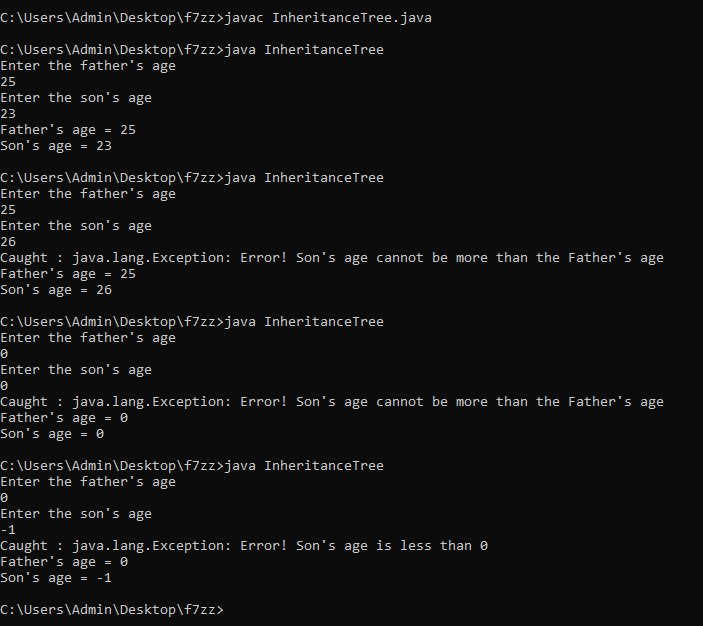
Son ob1 = new Son(a,b);

ob1.display();

}

}

**Output:-**

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