8. Write a program that demonstrates handling of exceptions in inheritance tree. Create a base called father and derived class called 'Son' which extends the base class. In father class, implement a constructor which takes the age and throw 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 Exception extends Exception
{
    String msg = new String();
    WrongAge Exception (String x) {
      msg = x;
    }
public String to String()
{
    return msg
}
}

class father {
int f_age; father() throws WrongAgeException{
Scanner s = new Scanner (System.in);
System.out.println(" Enter father's age: ");
  f_age = s.nextInt();
if (f_age <0){
  throw new WrongAge Exception ("father age < 0");
}
```

```
Void display(){
  System.out.println("father age: "+f_age);
 }
}
class Son extends father {
int s_age;
 Son() throws Wrong Age Exception {
  Scanner s = new Scanner(System.in);
  System.out.println("Enter Son's age: ");
   s_age = s.nextInt();
  if (s_age < 0) {
   throw new Wrong Age Exception("Son age < 0");
  }
  else if (s_age > f_age)
  {
    throw new Wrong Age Exception("Son age is >
                                   that father's age!");
  }
 }

Void display()
{
  System.out.println("father age: "+f_age);
  System.out.println("Son age: "+s_age);
 }
}
class excep {
public static void main(String[] args){
 try
 {
```

```
        father f = new father();
        f.display();
        Son s = new Son();
        s.display();
    }
    catch (WrongAge Exception wae)
    {
        System.out.println(wae);;
    }
}
}
```

Output

Enter father's age : 45

Enter son's age : 67

Son age > that father's age !

~~Enter father age : 45~~

~~Enter son's age : 67~~

Enter father's age : 45

Enter son's age : 47

Sons age cannot be greater than fathers age!

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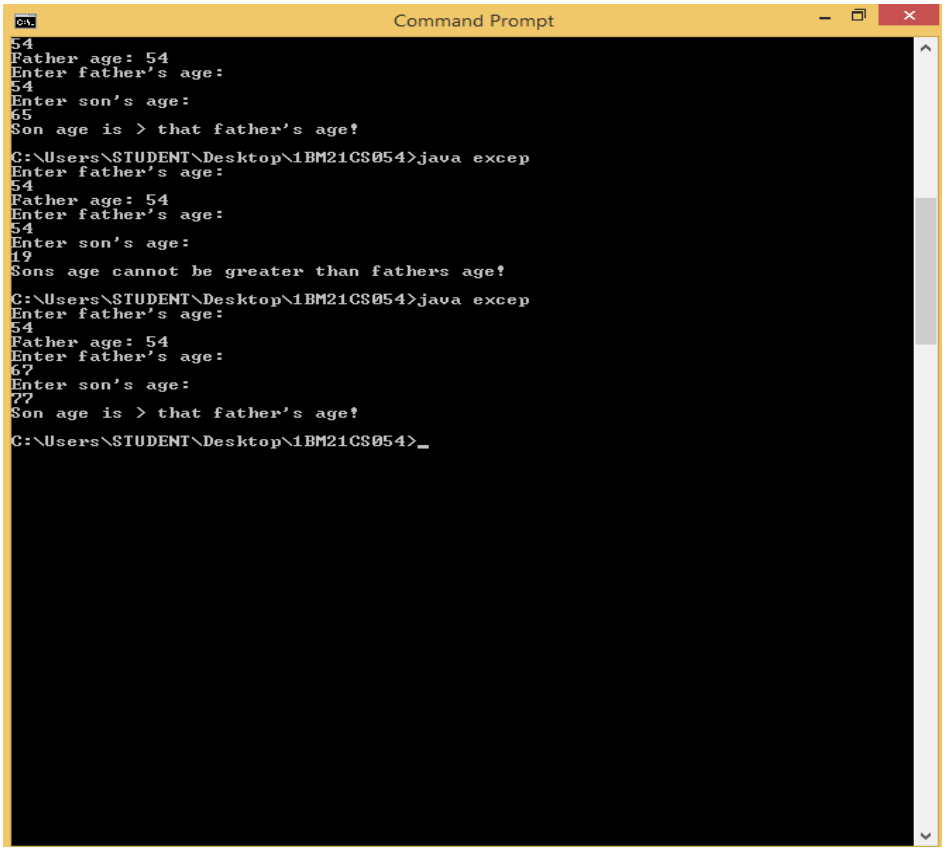
Output:


Command Prompt
54
Father age: 54
Enter father's age:
54
Enter son's age:
65
Son age is > that father's age!
C:\Users\STUDENT\Desktop\1BM21CS054>java excep
Enter father's age:
54
Father age: 54
Enter father's age:
54
Enter son's age:
19
Sons age cannot be greater than fathers age!
C:\Users\STUDENT\Desktop\1BM21CS054>java excep
Enter father's age:
54
Father age: 54
Enter father's age:
67
Enter son's age:
77
Son age is > that father's age!
C:\Users\STUDENT\Desktop\1BM21CS054>