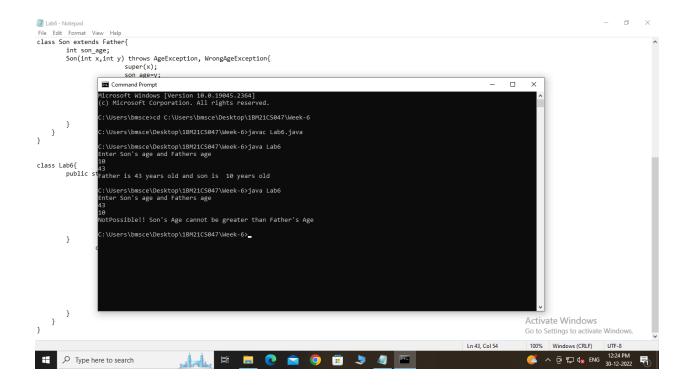
Lab 6:

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.

Program:

```
import java.util.Scanner;
class WrongAgeException extends Exception{
       public String toString(){
              return ("WrongAge!!! Age cannot be negetive");
       }
}
class AgeException extends Exception{
       public String toString(){
              return("NotPossible!! Son's Age cannot be greater than Father's Age");
       }
}
class Father{
       int father_age;
       Father(int x) throws WrongAgeException{
       father_age=x;
              if(father_age<0){
                     throw new WrongAgeException();
       }
  }
}
class Son extends Father{
       int son age;
       Son(int x,int y) throws AgeException, WrongAgeException{
              super(x);
              son_age=y;
              if(son_age<0){
                     throw new WrongAgeException();
              if(son_age>=father_age){
                     throw new AgeException();
    }
  }
```

```
}
class Lab6{
       public static void main(String xx[]) {
               try {
                      Scanner s=new Scanner(System.in);
                      System.out.println("Enter Son's age and Fathers age ");
               int y=s.nextInt();
                      int x=s.nextInt();
                      Son so=new Son(x,y);
                      System.out.println("Father is " + so.father_age + " years old and son is
"+so.son_age + " years old");
               catch (WrongAgeException wa) {
                      System.out.println(wa);
               catch (AgeException a){
                      System.out.println(a);
               catch (Exception e){
                      System.out.println("Age is Interger value");
  }
```



```
6. Write a program that demonstrates handling of exceptions in inhesitance tree Greate a base class "Father" and derived
     class' son " which entends have class. imprint constructor
    which the age in Pater clas: through enception wrong Agel) when input age co. In son class, constructor
    nonich todays both ages & through encytion if son's age is
   import. java. util. Scarrer;
   Class Wrong Aget entends Encephon ( ) 100 mostly
         public string to String() to be map
            return (" wronging e!!! Age cannot be nagetive");
                     2 System europeralen (coa) 1
   class Age Exception entends Enception ( was specified )
         public String tosting () ( my ses makes)
               return ("No+Postible ". Son's Age Counnet be greater
class Fatherd
         int father_age;
          Father (int 1) throws wrong Age {
                                                           tugtoo
                  father - age = x;
                  12 ( feether - age 20) 2
                   throw new wrong Ageli;
     I dolo serve old and son in lowers told. [
class son extends Fatherd entire land spe 2 mg rather
son ( but n, but y) throws Age Exception, wrong Age { & 1
       int son-age;
              Motoster : Sens 1930 comos po discolors
             Son_aye=y;
             14 (son_age20) {
             throw new Wrong Agels;
           ++ (son_age >= joshr_age) {

Herow wew age Enception (1);
        4
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```

public state usid main (string xx17){ Class Lobb (Scenero & new Schwar (System. in);
Scenero & new Schwar Sonis age & Fatheris age, int we senentiate; int ye senentiates; son so a new Sonfrig); Son so new privates (" Father is " + So father age, yers and and son is "+ so son ose + " yours on catch (wronginge was)

3 system our println (was); 5 Contach (sign Exception a) 1 System out pristin (at ; 3. Carch (Exception e) " and for ") - mare I System and printer to Age is Integer value"); Output: Enter son's age and fathers age 843 Father is 43 years old and son in 10 years old. Ender son's age and fathers age. 43 NOTPOSSIBLE! Son's Page council be ogreater than fathers by