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# Lab-7

Q. Write a program that demonstrate handling of exception 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 takes both father and son's age and throws an exception if son's age is >= father's age.

=>

```
import java.util.Scanner;
class WrongAge extends Exception {
    public WrongAge(String message)
    {
        super(message);
    }
}
class Father
{
    int fatherAge;
    Father() throws WrongAge {
        Scanner S, new Scanner(System.in);
        System.out.println("Enter father's age:");
        fatherAge, S.nextInt();
        if (fatherAge < 0)
        {
            throw new WrongAge("Age cannot be negotiated");
        }
    }
    void display()
    { System.out.println("Father's age is:" fatherAge);
    }
}
```

```
class Son extends father{
  int sonAge;
  Son() throws WrongAge {
    super();
    Scanner s= new Scanner(System.in);
    System.out.println("Enter Son's age:");
    SonAge = s.nextInt();
    if (sonAge > fatherAge)
    {
      throw new WrongAge("Son's age cannot be greater
      than father's age");
    }
  else if(sonAge == fatherAge)
    {
    throw new WrongAge("Son's age cannot be equal to
      father's age");
    }
    else if(sonAge <0)
    {
    throw new wrongAge("Age cannot be negotiated")
    }
}

void display()
  {
    super.display();
    System.out.println("Son's age is:" +sonAge);
  }
}

public class Main
    {
    public static void main(String[] args)
```

```
{
  try
  {
    Son S, new Son();
     S.display();
  }
    catch (WrongAge e)
    {
      System.out.println(e.getMessage());
    }
}
}
```

Output –

Enter Father's Age
22
Enter Son's Age
22
Sons age cannot be same as father's age.

Enter Father's age
30
Enter Son's age
31

Sons age cannot be greater than father's age.

Enter father's age -9
Age can't be negative

Enter father age 34
Enter Son's age 8
Father age is 34
Son's age is 8

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