

1-24

Lab Prgm - 8.

Write a prgm that demonstrate handling of exceptions in inheritance tree. Create a base class called "Father" and derived class called "son" which extends base class. In Father class, implement a constructor which takes the age and throws the exception WrongAge() when input age is less than 0. In son class implement a constructor that takes both father and son's age and throws an exception if son's age is \geq 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 negative");
```

```
        }
    }
```


Date _____
Page _____

```
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  
        negative");  
    }
```

```
}
```

```
}
```



```

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

public class Main
{
    public static void main (String[] args)
    {
        try {
            sons = new Son();
            s.display();
        }
        catch (WrongAge e)
        {
            System.out.println(e.getMessage());
        }
    }
}

```

O/P: Enter Father's age : 40
 Enter son's age : 18
 Father's age is : 40
 Son's age is : 18

Enter Father's age : 30
 Enter son's age : 30
 Son's age cannot be equal to Father's age.

Enter Father's age : -20
 Age cannot be negative