

Lab program 7.

- Write a program to demonstrate 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 for which takes the age and throws the exception wrongAge() when the input age < 0. In son class implement a constructor that calls both father's 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 s) {  
        super(s);  
    }  
}
```

```
}
```

```
class InputScanner extends {
```

```
    Scanner sc;
```

```
    public InputScanner() {
```

```
        sc = new Scanner(System.in);
```

```
    }
```

```
}
```

```
class Father extends InputScanner {
```

```
    private int fAge;
```

```
    public Father() throws Exception {
```

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

```
        this.fAge = sc.nextInt();
```



```
if (this.FAge < 0) {
```

```
    throw new WrongAge("Age cannot be -ve");
```

```
}
```

```
public void display() {
```

```
    System.out.println("Father Age: " + this.FAge);
```

```
}
```

```
}
```

```
class Son extends Father
```

```
{
```

```
    private int sAge;
```

```
    public Son() throws Exception {
```

```
        System.out.println("Enter son age: ");
```

```
        this.sAge = sc.nextInt();
```

```
        if (this.sAge < 0)
```

```
            throw new Exception WrongAge("Age cannot  
be -ve");
```

```
        if (this.sAge >= super.FAge)
```

```
            throw new WrongAge("Son age  
cannot be greater than father");
```

```
    }  
    public void display() {
```

```
        super.display();
```

```
        System.out.println("Son age: " + this.sAge);
```

```
    }
```

```
}
```



```

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

```

Output:-

Enter Father Age: -5
Age cannot be ~~negativ~~ -ve

Enter Father Age: 40
Enter Son Age: -5
Age cannot be -ve

Enter Father Age: 40
Enter Son Age: 45
~~Son age cannot be greater than Father~~

Enter Father Age: 40
Enter Son Age: 12

⊗ Father Age: 40
Son Age: 12

W
20-1-24