

24/01/24

## LAB-7

### Exception Handling

Write a Program that demonstrates handling of exceptions in inheritance tree. Create a base class Father, derive class Son. In Father class implement a constructor which throws WrongAge when age  $< 0$ . In Son class implement a constructor which throws WrongAge() when age  $> \text{Father age}$ .

```
import java.util.Scanner;
```

```
class WrongAge extends Exception{
    public WrongAge(String s){
        super(s);
    }
}
```

```
class Input{
    Scanner sc = new Scanner(System.in);
}
```

```
class Father extends Input{
    int fatherAge;
    Father(){
        fatherAge = sc.nextInt();
        try{
            check();
        } catch (WrongAge e){
            System.out.println(e);
        }

        void check() throws WrongAge{
            if (fatherAge < 0)
                throw new WrongAge("cannot be negative");
        }
    }
}
```



```
void display() {  
    System.out.println("Father Age: " + fatherAge);  
}
```

```
class Son extends Father {  
    int sonAge;  
    Son() {  
        super();  
        try {  
            check();  
        }  
        catch (WrongAge e) {  
            System.out.println(e);  
        }  
    }
```

```
void check() throws WrongAge {  
    if (sonAge < 0)  
        throw new WrongAge("cannot be negative");  
    else if (sonAge > fatherAge)  
        throw new WrongAge("Son Age can't  
        be greater than father's age");  
    else if (sonAge == fatherAge)  
        throw new WrongAge("Son Age can't be  
        equal to father's age");  
}
```

```
void display() {  
    System.out.println(e);  
}
```



```
class Main {  
    public static void main (String args[])  
    {  
        Son s = new Son();  
        s.display();  
    }  
}
```

OUTPUT:

50

30

Father Age : 50

Son Age : 30

-12

Age cannot be negative

20

40

~~Son's Age cannot be greater than Father's Age~~

12/12/2024

Shamanth K Murthy IBM22CS251