

30/1/2024

Write a program that demonstrates 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 $>=$ father's age.

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

```
import java.util.Scanner;
class Father
{
    int age;
    Scanner scan = new Scanner(System.in);
    Father() throws WrongAge
    {
        System.out.println("Enter Father's age:");
        age = scan.nextInt();
        if (age < 0)
            throw new WrongAge("Age cannot be negative.");
    }
}
```



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

```
class Son extends Father
```

```
{  
    int sonage;  
    Scanner scan = new Scanner(System.in);
```

```
    Son() throws WrongAge
```

```
{
```

```
    if (sonage > age)
```

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

```
}
```

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

```
        System.out.println("Father's age: " + age);
```

```
        System.out.println("Son's age: " + sonsonage);
```

```
        System.out.println("Sneha N Shastri - 18M22CS288");
```

```
}
```

```
}
```

```
class AgeMain
```

```
{
```

```
    public static void main(String args[]) throws Exception
```

```
{  
        Son s = new Son();
```

```
    check();  
    display();  
}  
}
```

Output :

Enter father's age:

16

Enter son's age:

25

Exception in thread "main" WrongAge: Son's age cannot be greater than father's age.

Enter father's age:

-5

Exception in thread "main" WrongAge: Age cannot be negative.

Enter father's age:

50

Enter son's age:

-2

Exception in thread "main" WrongAge: Age cannot be negative

Enter father's age:

50

Enter son's age:

20

Father's age: 50

Son's age: 20

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