

20/11/24

WEEK → 7

Write a program that demonstrates handling of exceptions in inheritance string. Create a base class called as "Father" and derived class called as "Son" which extends the base class.

In father's class implement a constructor which takes the age and throws the exception "wrong age" when the input age is less than zero. In son's class implement a constructor that uses both father's and son's age and throws an exception if son's age \geq father's age.

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

```
class wrong age exception (string) {
    super (message);
}
```

```
class son age exception extends exception {
    public son age exception (string) {
        super ();
    }
}
```

```
class Father {
```

```
    private int age;
```

```
    public Father (int age) throws exception {
```

```
        if (age < 0) {
```

```
            throw new wrong age exception ("wrong age");
```

```
        }
```

```
        this.age = age;
```

```
    }
```

```
    public int get age () {
```

```
        return age; } }
```


class Son extends Father {

~~private~~

private int sonAge;

public Son (int father age, int sonage) throws wrongage exception,

sonageexception {

super (father age);

if (age >= father age) {

throw new sonAgeexception ("Son's age cannot be greater than or equal to father's age");

}

this.sonage = sonage;

}

public int getSonage () {

return sonage;

}

}

public static void main (String [] args) {

while (true) {

Scanner sc = new Scanner (System.in ~~"Enter father's age"~~);

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

int fatherage = sc.nextInt();

System.out.println ("Enter son's age");

int sonage = sc.nextInt();

try {

Son son = new Son (father age, sonage);

System.out.println ("Accepted successfully");

}


```

catch (wrong age exception e) {
    System.out.println(e.getMessage());
}
catch (sonage exception e) {
    System.out.println(e.getMessage());
}
System.out.println("would you like to re-do details (Y/n)");
String input = sc.next();
if (input.equalsIgnoreCase("n")) {
    break;
}
}
}
}
}

```

Output:

Enter father's age : 50

Enter son's age : 20

Accepted successfully

Would you like to re-enter details (Y/n)?

Y

Enter father's age : 35

Enter son's age : 35

Son's age cannot be greater than or equal to father's age.

would you like to re-enter details (Y/n)?

n

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