

Week 7: Java Lab

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Code

```
import java.util.Scanner;

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

class Father {
    int age;

    public Father(int age) throws WrongAge {
        if (age < 0) {
            throw new WrongAge("Age Cannot be Negative");
        }
        this.age = age;
        System.out.println("Father's Age: " + this.age);
    }
}

class Son extends Father {
    int sonAge;

    public Son(int fatherAge, int sonAge) throws WrongAge {
        super(fatherAge);
        if (sonAge < 0) {
            throw new WrongAge("Son's Age Cannot be Negative");
        }
    }
}
```

```
    }  
    if (sonAge >= fatherAge) {  
        throw new WrongAge("Son's Age Cannot be Greater than or Equal to Father's  
Age");  
    }  
    this.sonAge = sonAge;  
    System.out.println("Son's Age: " + this.sonAge);  
}  
}
```

```
public class FatherSon {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
  
        System.out.print("Enter Father's Age: ");  
        int fatherAge = scanner.nextInt();  
  
        System.out.print("Enter Son's Age: ");  
        int sonAge = scanner.nextInt();  
  
        try {  
            Son son = new Son(fatherAge, sonAge);  
        } catch (WrongAge e){  
            System.out.println("Exception: " + e.getMessage());  
        }  
  
        scanner.close();  
    }  
}
```

Output

```
D:\IBM23CS006>javac FatherSon.java
```

```
D:\IBM23CS006>java FatherSon
```

```
Enter Father's Age: -1
```

```
Enter Son's Age: 10
```

```
Exception: Age Cannot be Negative
```

```
D:\IBM23CS006>java FatherSon
```

```
Enter Father's Age: 25
```

```
Enter Son's Age: -3
```

```
Father's Age: 25
```

```
Exception: Son's Age Cannot be Negative
```

```
D:\IBM23CS006>java FatherSon
```

```
Enter Father's Age: 25
```

```
Enter Son's Age: 30
```

```
Father's Age: 25
```

```
Exception: Son's Age Cannot be Greater than or Equal to Father's Age
```

```
D:\IBM23CS006>java FatherSon
```

```
Enter Father's Age: 29
```

```
Enter Son's Age: 9
```

```
Father's Age: 29
```

```
Son's Age: 9
```

```
D:\IBM23CS006>|
```