

Lab - 8

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

```
class AgeException extends Exception {
    int age_difference;
```

```
    AgeException(int father's age, int son's age) {
        age_difference = father's age - son's age;
```

```
    }
```

```
    public String toString() {
```

```
        return "The age diff' is +age_difference  
+ "The ages are appropriate";
```

```
    }
```

```
}
```

```
class WrongAgeException extends Exception {
    int entered_age;
```

```
    WrongAgeException(int given_age) {
        entered_age = given_age;
```

```
    }
```

```
    public String toString() {
```

```
        return "Ages cannot be negative";
```

```
    }
```

```
}
```

```
class Father {
```

```
    int age_fath;
```

```
    Father(int father's age) throws WrongAgeException {
```

```

    }
    age_fath = father's_age;
    if (age_fath < 0) {
        throw new WrongAgeException (age_fath);
    }
}
}

```

```

class Son extends Father {
    int age_son;

    Son (int father's_age, int sons_age) throws
        WrongAgeException, AgeException {
        super (father's_age);
        age_son = sons_age;
        if (age_son < 0) {
            throw new WrongAgeException (age_son);
        }
        if (age_son >= age_fath) {
            throw new AgeException (age_fath,
                age_son);
        }
    }
}

```

```

class FatherSon {
    public static void main (String[] args) {

```

```

int father's age, son's age;
Scanner gd = new Scanner (gd.next Int());
try {
    Father fatherObj = new Father (father's age);
}
catch (WrongAgeException e) {
    System.out.println("Age exception
    raised! " + e);
}
System.out.println ("Enter the son's age
: ");
son's age = gd.nextInt();
try {
    Son sonObj = new Son (father's age,
    son's age);
    System.out.println ("The entered
    ages are appropriate");
}
catch (WrongAgeException t) {
    System.out.println (t);
}
catch (AgeException a) {
    System.out.println (a);
}
}
}
}

```

```
pranavsastry@Pranavs-iMac:~/Documents/00J-Lab/Lab 8$ compj FatherSon
pranavsastry@Pranavs-iMac:~/Documents/00J-Lab/Lab 8$ runj FatherSon
Enter the Father's age:
45
Enter the Son's age:
10
The entered ages are appropriate!
pranavsastry@Pranavs-iMac:~/Documents/00J-Lab/Lab 8$ runj FatherSon
Enter the Father's age:
1
Enter the Son's age:
20
Age of the Son is greater than the Father.The age difference between the father and son is -19. The ages a
ren't appropriate
pranavsastry@Pranavs-iMac:~/Documents/00J-Lab/Lab 8$ runj FatherSon
Enter the Father's age:
-3
Age exception raised! The entered age -3 is less than 0. Age cannot be negative!
Enter the Son's age:
-5
Age exception raised! The entered age -3 is less than 0. Age cannot be negative!
pranavsastry@Pranavs-iMac:~/Documents/00J-Lab/Lab 8$
```