

7. Write a program that demonstrates handling of exceptions 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 uses both father and son's age throws an exception if son's age is > father's age.

```

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

```

```

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

```

```

class Father {
    protected int age;
    public Father(int age) throws WrongAgeException {
        if (age < 0)
            throw new WrongAgeException("Father's age cannot be negative!");
    }
}

```



```

    this.age = age;
    System.out.println("Father Created with age: "
        + this.age);
}
}

class Son extends Father
{
    private int sonAge;

    public Son(int fatherAge, int sonAge) throws
        WrongAgeException, InvalidAgeRelationshipException
    {
        super(fatherAge);
        if (sonAge < 0)
        {
            throw new WrongAgeException("son's age
                cannot be negative!");
        }
        if (sonAge >= fatherAge)
        {
            throw new InvalidAgeRelationshipException
                ("son's age cannot be greater than
                    or equal to Father's age!");
        }
        this.sonAge = sonAge;
        System.out.println("son created with age: "
            + this.sonAge);
    }
}

```


Class ExceptionDemo

{

public static void main(String args[])

{

try

{

Father father = new Father(40);

Son son = new Son(40, 20);

}

catch (WrongAgeException | InvalidRelationException e)

{

System.out.println("Exception!" + e.getMessage());

}

}

}

O/P

Enter Father's age: 16

Enter Son's age: 18

Error!: Son's age >= Father's age

Enter Father's age: 24

Enter Son's age: 29

Enter Son's age: 18

Enter Father's age: 29

Son's age: 18