Program 7

```java
import java.util.Scanner;

class WrongAgeException extends Exception {
    public WrongAgeException(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's age is: " + this.age);
    }
}

class Son extends Father {
    private int sonAge;
```

```java
    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's age is: " + this.sonAge);
    }
}


class ExceptionDemo {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        boolean validInput = false;


        while (!validInput) {
            try {
                System.out.print("Enter Father's age: ");
                int fatherAge = scanner.nextInt();


                System.out.print("Enter Son's age: ");
                int sonAge = scanner.nextInt();


                Father father = new Father(fatherAge);
                Son son = new Son(fatherAge, sonAge);
```

```
            validInput = true; // Break the loop if no exceptions are thrown

        } catch (WrongAgeException | InvalidAgeRelationshipException e) {

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

            System.out.println("Please enter valid ages.");

        }

    }


        scanner.close();

    }

}
```

Output

```
PS C:\Users\User\Desktop\New folder> java ExceptionDemo
Enter Father's age: 23
Enter Son's age: 33
Father's age is: 23
Father's age is: 23
Exception: Son's age cannot be greater than or equal to Father's age!
Please enter valid ages.
Enter Father's age: 45
Enter Son's age: 4
Father's age is: 45
Father's age is: 45
Son's age is: 4
```