

```

5  import java.util.Scanner;
6  class Father{
7      int fAge;
8      Father(int x){
9          fAge = x;
10     }
11 }
12
13 class Son extends Father{
14     int sAge;
15     Son(int x,int y) throws ArithmeticException{
16         super(x);
17         if(y < 0 || x < 0){
18             throw new ArithmeticException("Age cannot be less than zero!!!");
19         }
20         if(x == y){
21             throw new ArithmeticException("Father and Son have the same age!!!");
22         }
23         if(y > x){
24             throw new ArithmeticException("Son can't be older than father!!!");
25         }
26         if(x-y < 20){
27             throw new ArithmeticException("Age difference is less than 20 years!!!");
28         }
29         sAge = y;
30     }
31
32     void display(){
33         System.out.println("Son's and Father's ages are respectively: "+sAge+" and "+fAge);
34     }
35 }
36
37 class ExceptionDemo{
38     public static void main(String[] args){
39         Scanner sc = new Scanner(System.in);
40         int x,y;
41         System.out.println("Age of Father must be atleast 20 yrs greater than age of Son");
42         System.out.print("Enter Father's age: ");
43         x = sc.nextInt();
44         System.out.print("Enter Son's age: ");
45         y = sc.nextInt();
46         Son s1 = new Son(x,y);
47         s1.display();
48     }

```

Output:

```

Age of Father must be atleast 20 yrs greater than age of Son
Enter Father's age: 46
Enter Son's age: 13
Son's and Father's ages are respectively: 13 and 46

```

```

Age of Father must be atleast 20 yrs greater than age of Son
Enter Father's age: 7
Enter Son's age: 7
Exception in thread "main" java.lang.ArithmeticException: Father and Son have the same age!!!
    at Son.<init>(ExceptionDemo.java:21)
    at ExceptionDemo.main(ExceptionDemo.java:46)

```

```

Age of Father must be atleast 20 yrs greater than age of Son
Enter Father's age: -5
Enter Son's age: 6
Exception in thread "main" java.lang.ArithmeticException: Age cannot be less than zero!!!
    at Son.<init>(ExceptionDemo.java:18)
    at ExceptionDemo.main(ExceptionDemo.java:46)

```