

PROGRAM 7

```
import java.lang.*;

import java.util.Scanner;

class WrongAge extends Exception
{
    private String detail;

    WrongAge(String a)
    {
        detail=a;
    }

    public String toString()
    {
        return("WrongAge Exception ["+detail+ "]");
    }
}

class Father {
    int f_age;

    Father(int a) throws Exception
    {
        f_age=a;
        if(f_age<0)
        {
            throw new WrongAge("Father's age is negative");
        }
    }
}
```

```
void display()
{
    System.out.println("Father's age: "+f_age);
}
}
```

```
class Son extends Father
{
    int s_age;
    Son(int ag,int f) throws Exception
    {
        super(f);
        s_age=ag;
        if(s_age<0)
        {
            throw new WrongAge("Son's age is negative");
        }
        if(s_age>=f_age)
        {
            throw new WrongAge("Son's age greater than father's age");
        }
    }
    void display()
    {
        System.out.println("Son's age: "+s_age+" Father's age: "+f_age);
    }
}
```

```
class Main
```

```

{
public static void main(String args[]) throws Exception
{
int ch,f,s;
Scanner sc= new Scanner(System.in);
try
{
while(true){
System.out.println("1.Check Father\n2.Check Son and Father's age\n3.Exit\nEnter your choice");
ch=sc.nextInt();
switch(ch)
{
case 1:
System.out.println("Enter father's age");
f=sc.nextInt();
Father f1=new Father(f);
f1.display();
break;
case 2:
System.out.println("Enter son and father's age");
s=sc.nextInt();
f=sc.nextInt();
Son s1=new Son(s,f);
s1.display();
break;
case 3:
System.exit(0);
default:
System.out.println("Invalid choice");

```

```
}  
}  
}  
catch(WrongAge e)  
{  
    System.out.println("Exception: "+e);  
}  
}  
}
```

OUTPUT

```
1.Check Father  
2.Check Son and Father's age  
3.Exit  
Enter your choice  
1  
Enter father's age  
-3  
Exception: WrongAge Exception [Father's age is negative]
```

```
1.Check Father  
2.Check Son and Father's age  
3.Exit  
Enter your choice  
2  
Enter son and father's age  
7  
6  
Exception: WrongAge Exception [Son's age greater than father's age]
```