

A Simple Java Example

In this simple information system, the user inputs a student's information to the program in different steps. After the information is complete, the system will display this information all together.

1) We need a class to store the student's information; so we define a new class in our project and write the following fields into it.

```
public class Student {  
    private String givenName;  
    private String familyName;  
    private long studentNo;  
    private long birthyear;  
  
    public Student(String first, String family, long ID, long birthyear) {  
        givenName=first;  
        familyName=family;  
        studentNo=ID;           // The first constructor  
        this.birthyear=birthyear;  
    }  
  
    public Student()  
    {                           // The second constructor  
    }  
  
    public long calculate_age(int current_year){  
        return (current_year-birthyear);  
    }  
  
    public String make_description()  
    {  
        return ("Given name: " + givenName + "\n" + "Family name: "  
        + familyName + "\n" + "ID number:" + studentNo + "\n" +  
        "Year of birth: " + birthyear + "\n" );  
    }  
}
```

2) Also we need a class for displaying the student information. So we create another class in the project and write the followings:

```
import javax.swing.JOptionPane;
```

```
public class DisplayInfo {  
    public static int myear=2007;  
    public static void main(String[] args) {  
        String name,lname;  
        long stdno,stdbirthyear;
```

```
        name =JOptionPane.showInputDialog( "Enter the student  
            first name" );  
        lname =JOptionPane.showInputDialog( "Enter the  
            student last name" );    // Input the information  
        String stdnotemp=JOptionPane.showInputDialog( "Enter  
            the student number" );  
        String stdbirthyeartemp=JOptionPane.showInputDialog(  
            "Enter the student birth year" );
```

```
        stdno=Integer.parseInt(stdnotemp);  
        stdbirthyear=Integer.parseInt(stdbirthyeartemp);
```

```
        Student s;  
        s=new Student(name,lname,stdno,stdbirthyear);
```

```
        JOptionPane.showMessageDialog( null, "The student  
        information is"+ "\n" s.make_description()+  
        "age="+s.calculate_age(myear),"", // Output the information  
        JOptionPane.PLAIN_MESSAGE );
```

```
    }  
}
```

1) Create the workspace and project

- a) File -> New -> Project -> Java Project
- b) Specify the Project Name
- c) Press finish

2) Add a Class to the project

- a) Press right click on the project name
- b) New -> Class
- c) Specify the class name

3) Run the program

- a) Run -> Run as -> SWT Application

4) Debug a program

- a) Run-> Debug
- b) Set Breakpoint(s): Right Click on the left side of the desired line(s).
- c) Use **Step Info** and **Step Over** for controlling the running sequence
- d) Use **Terminate** button for finishing the debug mode