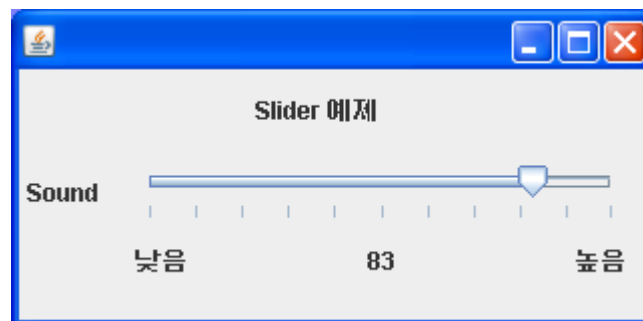




GUI 컨트롤 III





학습 목표

■ 이 강의를 마치면 학생들은

- ❖ TabbedPane 컨트롤 기능에 대하여 설명할 수 있다.
- ❖ Progress Bar 컨트롤 기능에 대하여 설명할 수 있다.
- ❖ Slider 컨트롤에 대하여 설명할 수 있다.

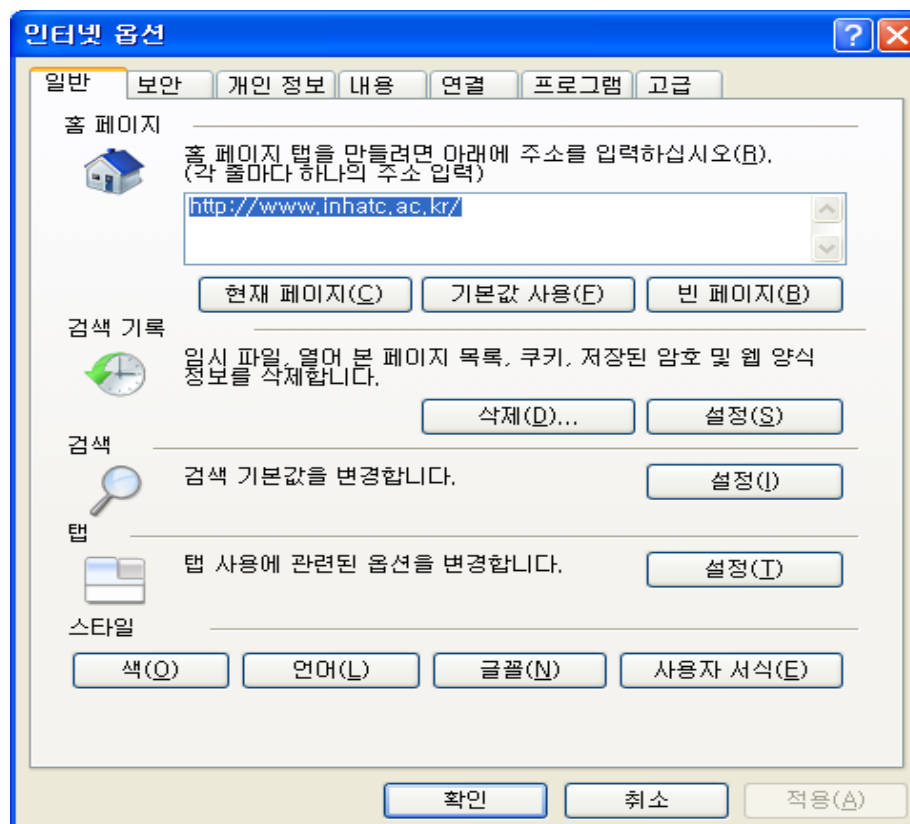




Tab 컨트롤

■ Tab 컨트롤 기능

❖ 한 화면에 다양한 기능 표현



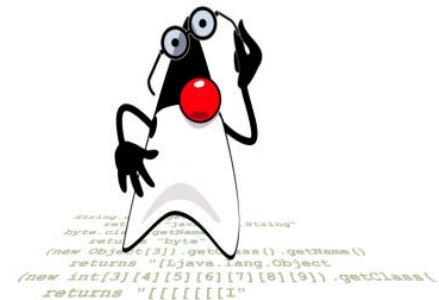
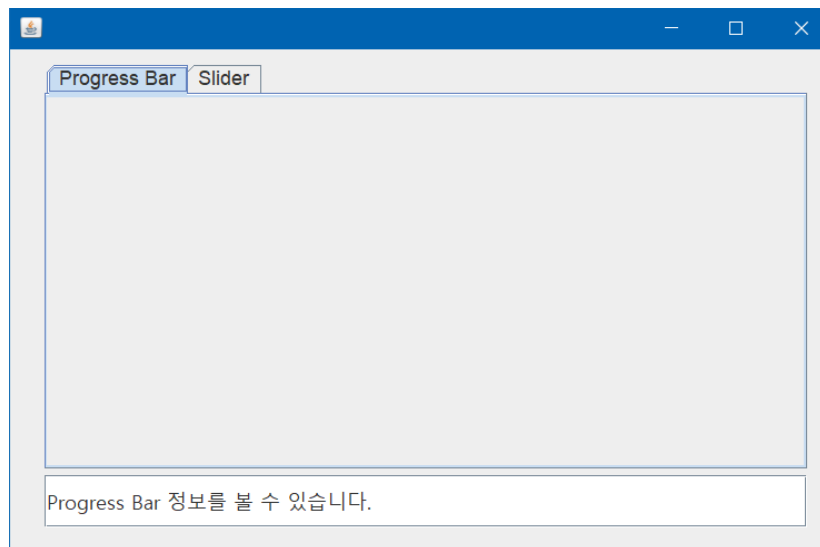


실습: Tab 컨트롤

❖ Project Name: Tab_Source(실습시간 : 20분)

■ TabbedPane 버튼 클릭

- Pane의 Title을 상태 정보 출력 TextField에 출력한다.





실습: Tab 컨트롤 (1)

Application 생성

1. 클릭

2. 클릭

3. 클릭

NetBeans IDE 6.0.1

File Edit View Navigate Source Refactor

New Project... Ctrl+Shift+N

New File... Ctrl+N

Open Project... Ctrl+O

Open Recent Project

Close Project

Open File... Ctrl+F

Open Recent File

Project Group

Set Main Project

Project Properties

Save Ctrl+S

Save As... Ctrl+Shift+S

Save All Ctrl+Shift+A

Page Setup... Ctrl+P

Print... Ctrl+P

Print to HTML... Ctrl+Shift+P

Exit Ctrl+N

New Project

Steps

1. Choose Project
2. ...

Choose Project

Categories:

- Java
- NetBeans Modules
- Samples

Projects:

- Java Application
- Java Desktop Application
- Java Class Library
- Java Project with Existing Sources
- Java Project with Existing Ant Script

Description:

Creates a new Java SE application in a standard IDE project. You can also generate a main class in the project. Standard projects use an IDE-generated Ant build script to build, run, and debug your project.

Back Next > Finish Cancel Help





실습: Tab 컨트롤 (2)

■ Project Name and Location

❖ Project name: Tab_Source

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name: Tab_Source

Project Location: E:\W\LECTURE\Java_프로그래밍\Source Browse...

Project Folder: E:\W\LECTURE\Java_프로그래밍\Source\Tab_Source

☒ Set as Main Project

☐ Create Main Class tab_source,Main

5. 클릭 → ☒ Set as Main Project

4. Project Name 입력 → Project Name: Tab_Source

6. 클릭 → Finish

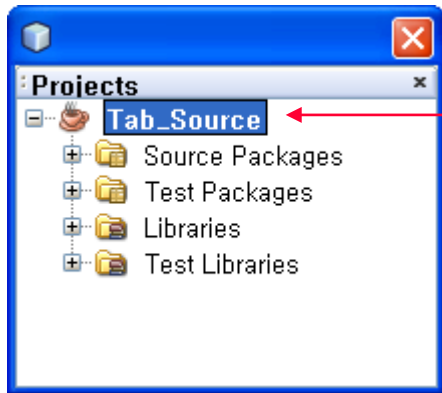
< Back Next > Finish Cancel Help





실습: Tab 컨트롤 (3)

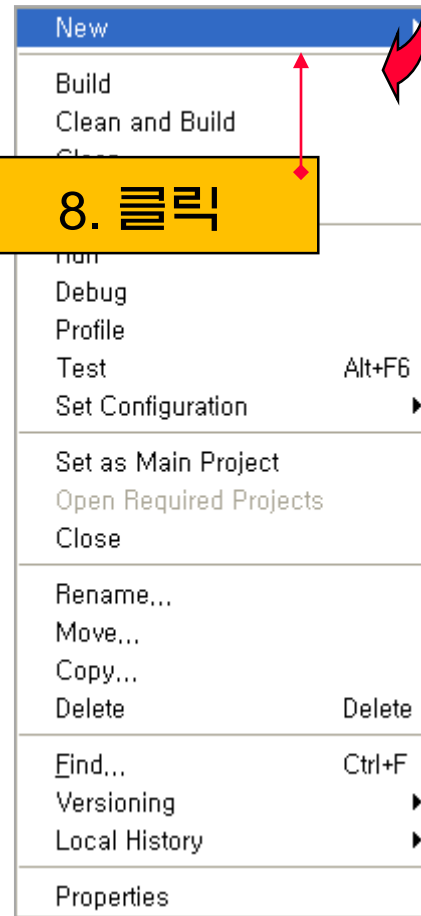
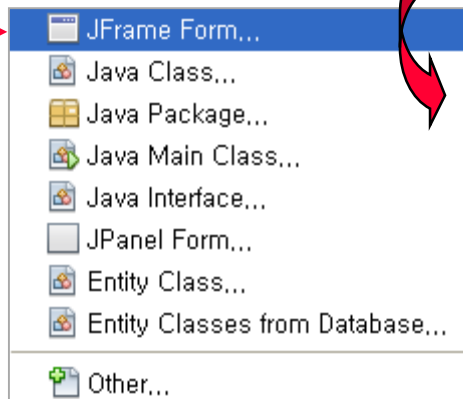
JFrame Form 생성



7. 마우스 오른쪽 버튼 클릭

8. 클릭

9. 클릭

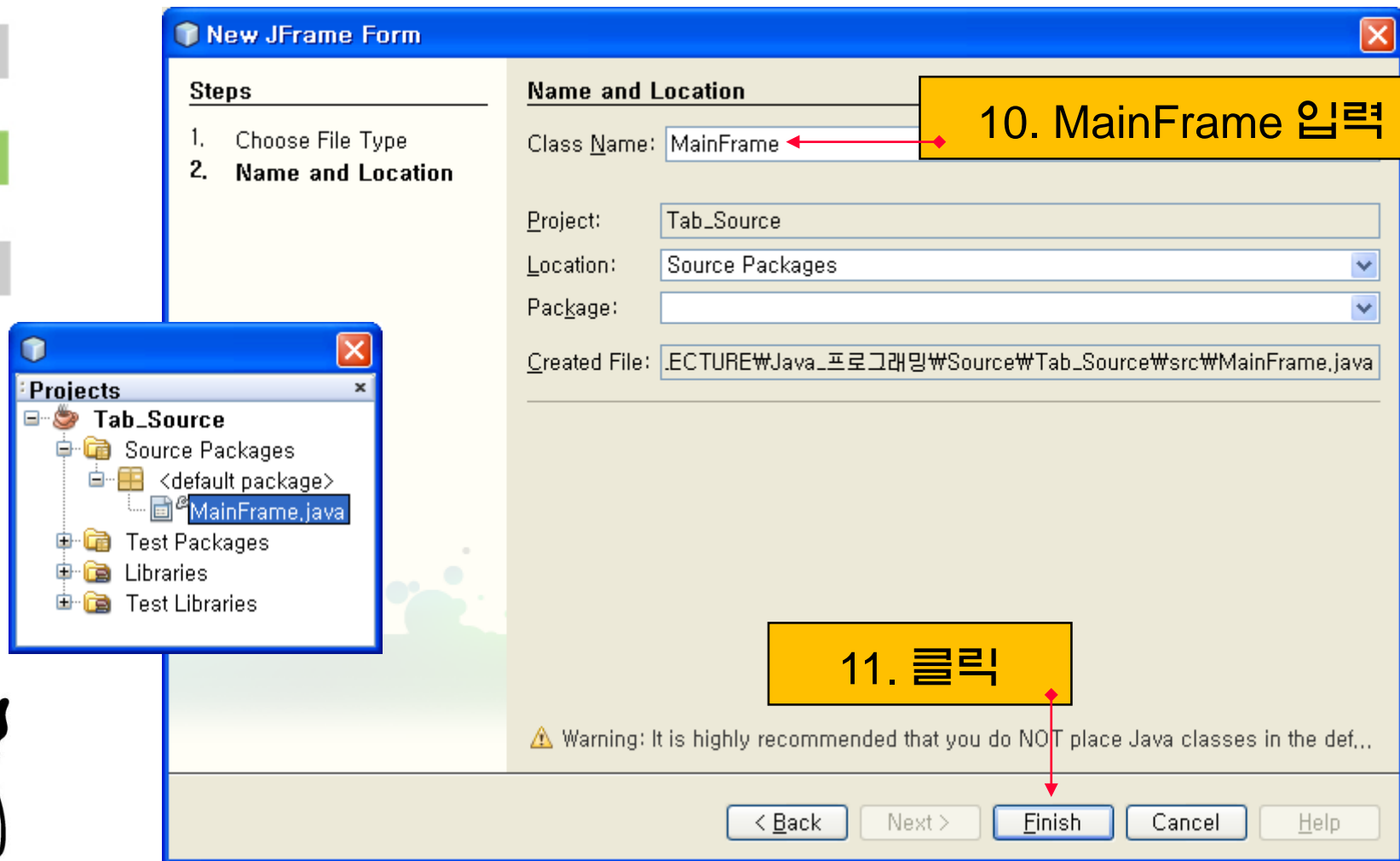




실습: Tab 컨트롤 (4)

■ JFrame Form Name 지정

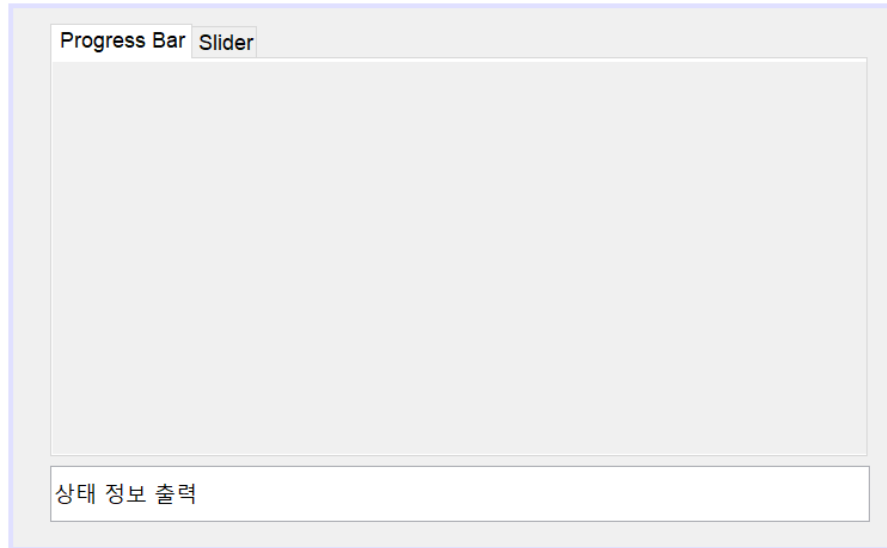
❖ MainFrame.java 생성





실습: Tab 컨트롤 (5)

■ 컨트롤 배치 및 속성 지정



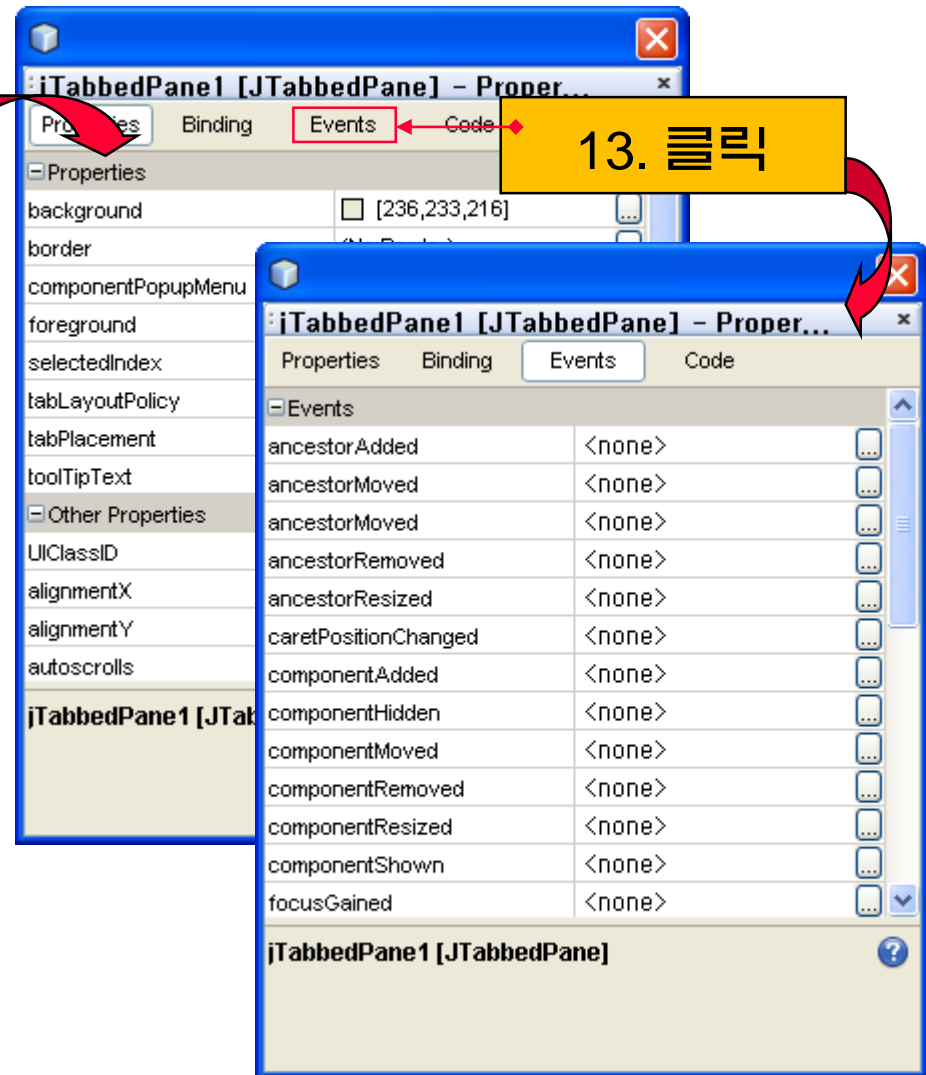
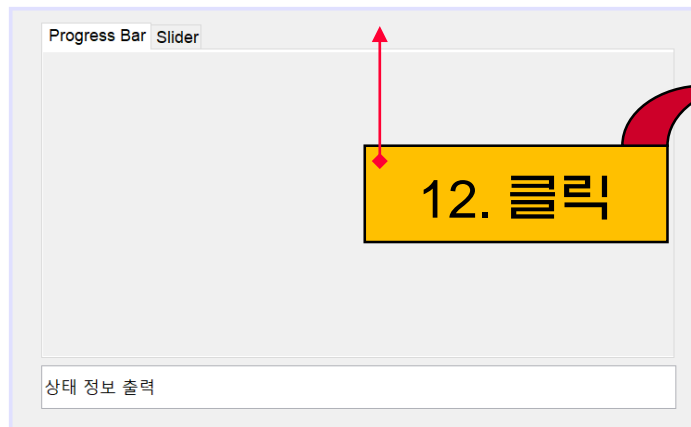
컨트롤	속성 지정
jTabbedPane1	
jPanel1	<ul style="list-style-type: none">• Tab Title: ProgressBar
jPanel2	<ul style="list-style-type: none">• Tab Title: Slider
jTextField1	<ul style="list-style-type: none">• Variable Name: txtStateInfo• Text: 상태 정보 출력





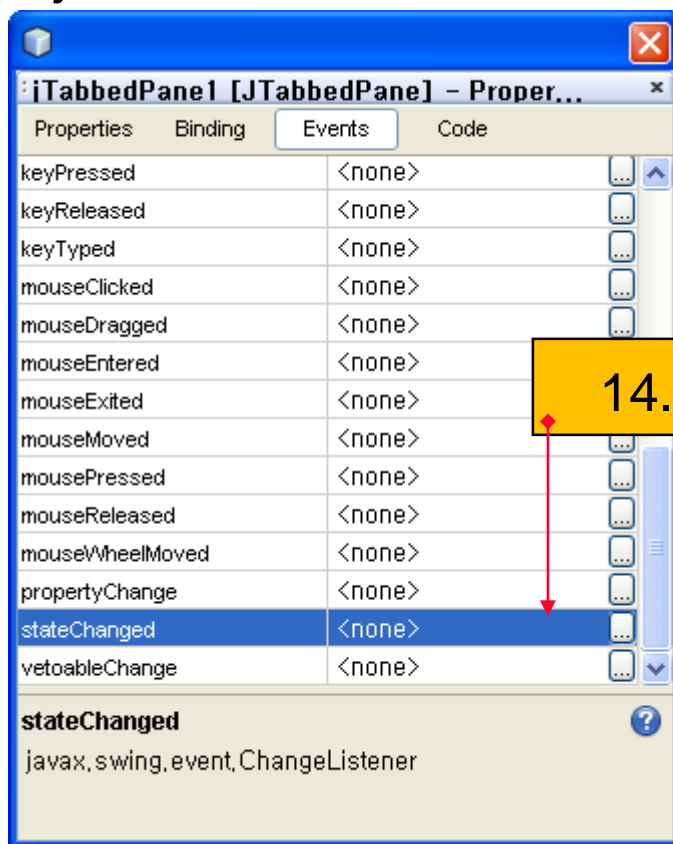
실습: Tab 컨트롤 (6)

■ JTabbedPane1 컨트롤 Event 지정

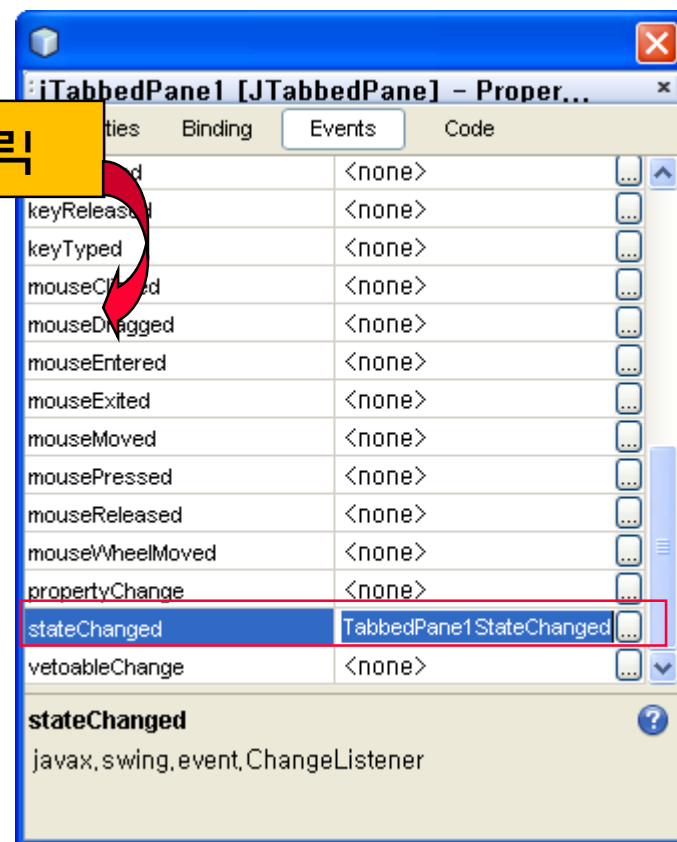


실습: Tab 컨트롤 (7)

■ JTabbedPane1 컨트롤 StateChanged() Event 지정



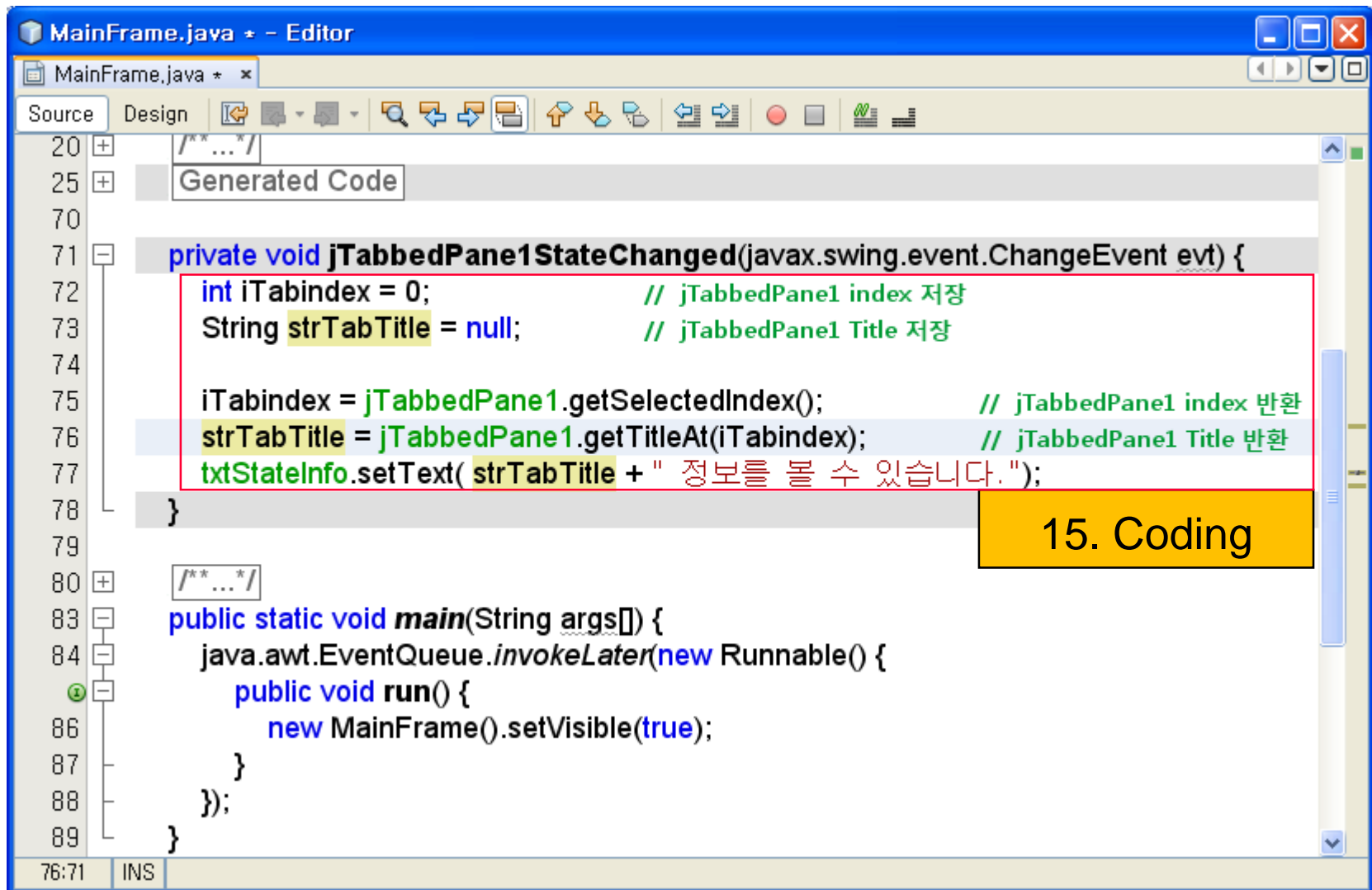
14. 더블 클릭





실습: Tab 컨트롤 (8)

❖ jTablebedPane1StateChanged() Event Handler



```
MainFrame.java * - Editor
MainFrame.java *
Source Design
20  /** ... */
25  Generated Code
70
71  private void jTablebedPane1StateChanged(javax.swing.event.ChangeEvent evt) {
72      int iTabIndex = 0;           // jTablebedPane1 index 저장
73      String strTabTitle = null;    // jTablebedPane1 Title 저장
74
75      iTabIndex = jTablebedPane1.getSelectedIndex();           // jTablebedPane1 index 반환
76      strTabTitle = jTablebedPane1.getTitleAt(iTabIndex);      // jTablebedPane1 Title 반환
77      txtStateInfo.setText( strTabTitle + " 정보를 볼 수 있습니다.");
78  }
79
80  /** ... */
83  public static void main(String args[]) {
84      java.awt.EventQueue.invokeLater(new Runnable() {
85          public void run() {
86              new MainFrame().setVisible(true);
87          }
88      });
89  }
```

15. Coding



실습: Tab 컨트롤 (9)

❖ JTabbedPane 컨트롤 선언 Code

```
MainFrame.java - Editor
MainFrame.java x
Source Design History
110 /**
111  * @param args the command line arguments
112  */
113 public static void main(String args[]) {
114
115     /* Create and display the form */
116     java.awt.EventQueue.invokeLater(new Runnable() {
117         public void run() {
118             new MainFrame().setVisible(true);
119         }
120     });
121 }
122
123 // Variables declaration - do not modify
124 private javax.swing.JPanel jPanel1;
125 private javax.swing.JPanel jPanel2;
126 private javax.swing.JTabbedPane jTabbedPane1;
127 private javax.swing.JTextField txtStateInfo;
128 // End of variables declaration
129 }
```





실습: Tab 컨트롤 (10)

❖ JTabbedPane 컨트롤 속성 지정 Code

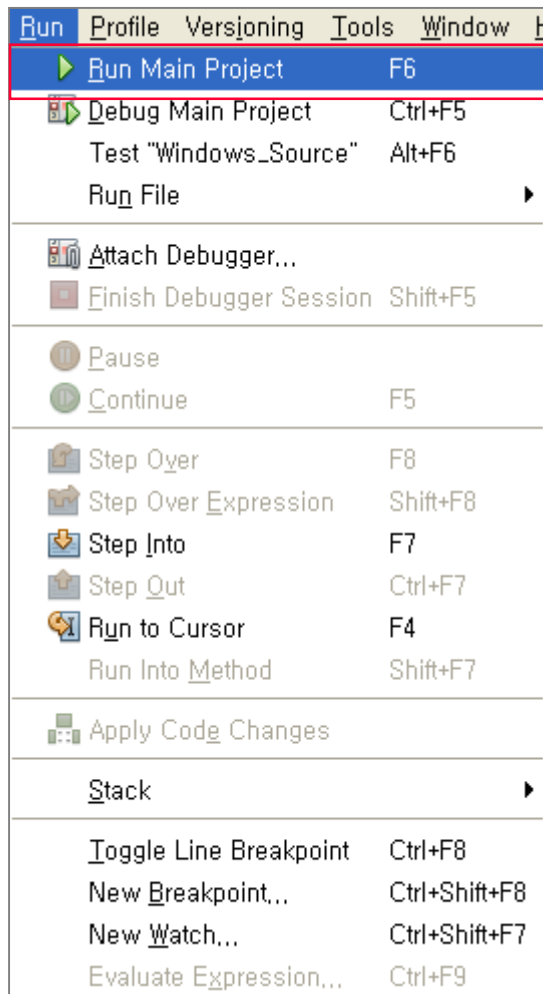
```
MainFrame.java - Editor
MainFrame.java x
Source Design History
26 // <editor-fold defaultstate="collapsed" desc="Generated Code">
27 private void initComponents() {
28
29     txtStateInfo = new javax.swing.JTextField();
30     jTabbedPane1 = new javax.swing.JTabbedPane();
31     jPanel1 = new javax.swing.JPanel();
32     jPanel2 = new javax.swing.JPanel();
33
34     setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
35
36     txtStateInfo.setFont(new java.awt.Font("맑은 고딕", 0, 18)); // NOI18N
37     txtStateInfo.setText("상태 정보 출력");
38
39     jTabbedPane1.setFont(new java.awt.Font("Arial", 0, 18)); // NOI18N
40     jTabbedPane1.addChangeListener(new javax.swing.event.ChangeListener() {
41         public void stateChanged(javax.swing.event.ChangeEvent evt) {
42             jTabbedPane1StateChanged(evt);
43         }
44     });
45 }
```



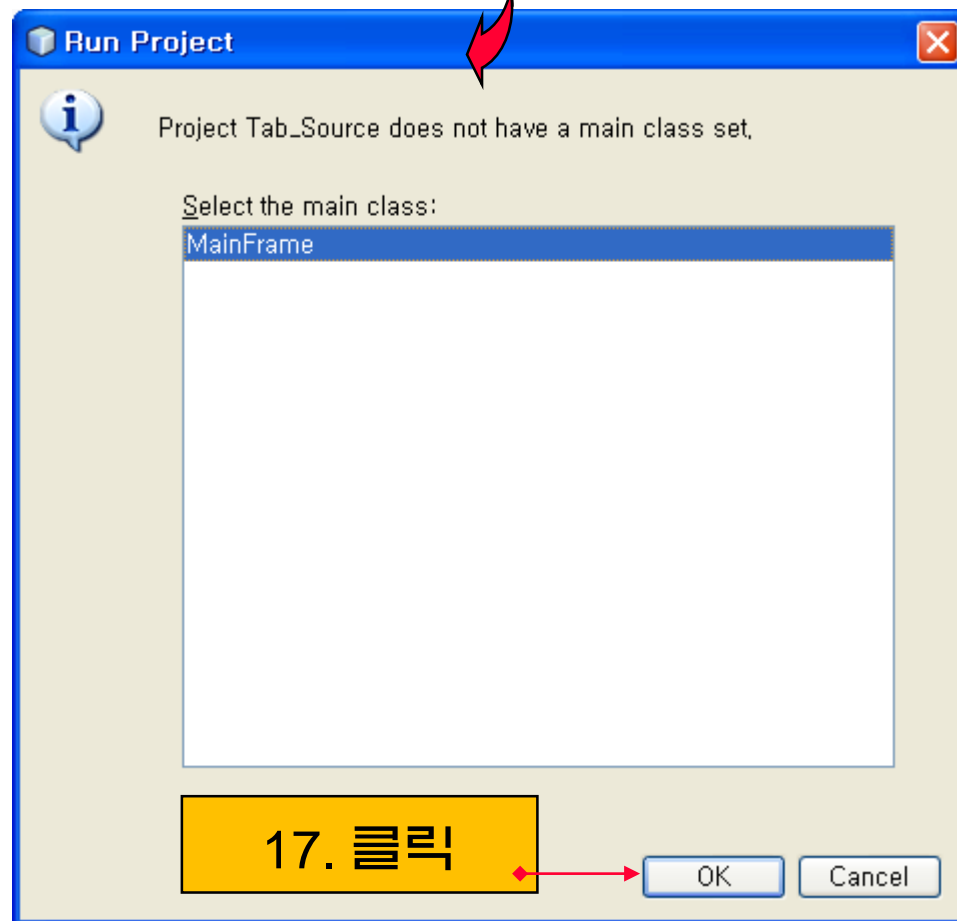


실습: Tab 컨트롤 (11)

실행



16. 클릭



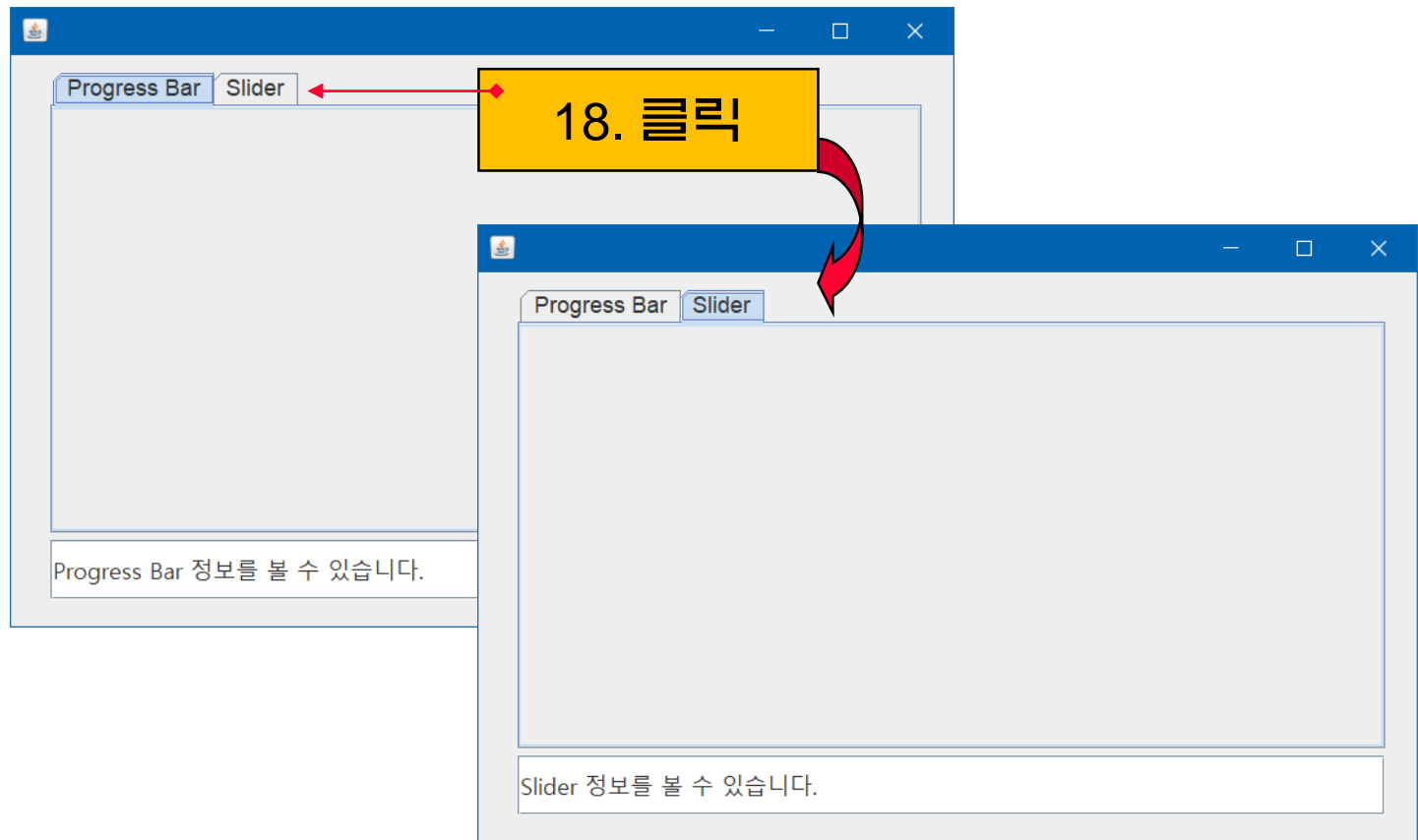
17. 클릭



실습: Tab 컨트롤 (12)

■ 실행 결과

❖ Tab 클릭

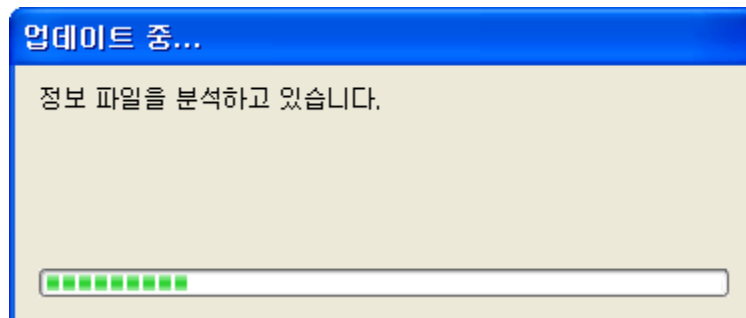




Progress Bar 컨트롤

■ ProgressBar 컨트롤 기능

❖ 작업 진행 상태 표현

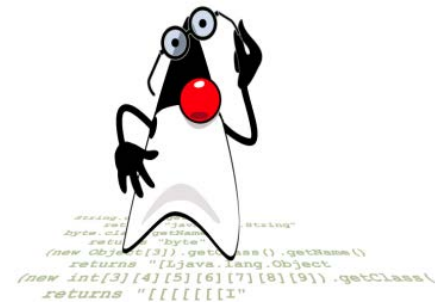
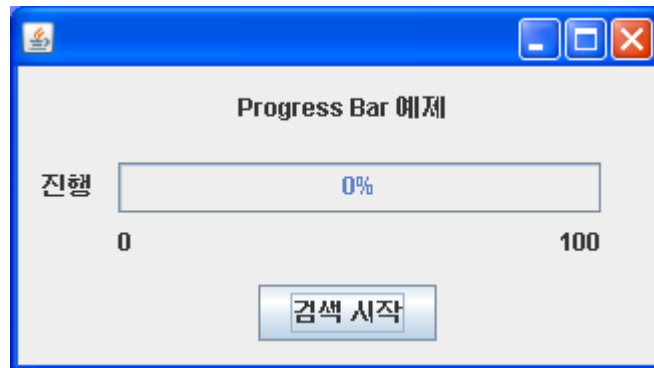




실습: Progress Bar 컨트롤

❖ Project Name: ProgressBar_Source(실습시간 : 20분)

- [검색 시작] button 클릭
 - 진행 상태를 Progress Bar에 나타낸다.





실습: Progress Bar 컨트롤 (1)

Application 생성

1. 클릭

2. 클릭

3. 클릭

NetBeans IDE 6.0.1

File Edit View Navigate Source Refactor

New Project... Ctrl+Shift+N

New File... Ctrl+N

Open Project... Ctrl+O

Open Recent Project

Close Project

Open File... Ctrl+O

Open Recent File

Project Group

Set Main Project

Project Properties

Save Ctrl+S

Save As... Ctrl+Shift+S

Save All Ctrl+Shift+A

Page Setup... Ctrl+P

Print... Ctrl+P

Print to HTML... Ctrl+Shift+P

Exit Ctrl+N

New Project

Steps

1. Choose Project
2. ...

Choose Project

Categories:

- Java
- NetBeans Modules
- Samples

Projects:

- Java Application
- Java Desktop Application
- Java Class Library
- Java Project with Existing Sources
- Java Project with Existing Ant Script

Description:

Creates a new Java SE application in a standard IDE project. You can also generate a main class in the project. Standard projects use an IDE-generated Ant build script to build, run, and debug your project.

Back Next > Finish Cancel Help





실습: Progress Bar 컨트롤 (2)

■ Project Name and Location

❖ Project name: ProgressBar_Source

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name: ProgressBar_Source

Project Location: E:\W\LECTURE\Java_프로그래밍\Source Browse...

Project Folder: E:\W\Java_프로그래밍\Source\ProgressBar_Source

☒ Set as Main Project

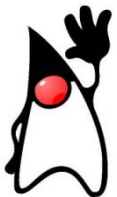
☐ Create Main Class progressbar_source.Main

5. 클릭 → ☒ Set as Main Project

4. Project Name 입력 → ProgressBar_Source

6. 클릭 → Finish

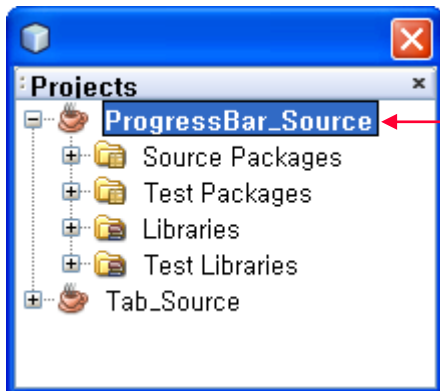
< Back Next > Finish Cancel Help



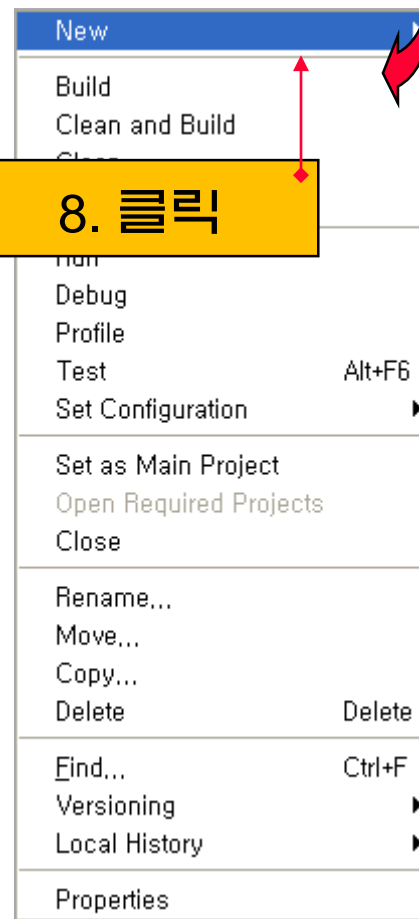


실습: Progress Bar 컨트롤 (3)

■ JFrame Form 생성

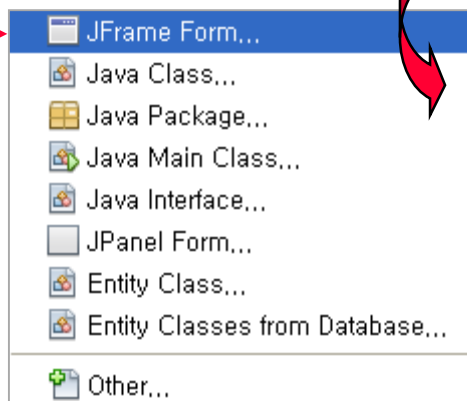


7. 마우스 오른쪽 버튼 클릭



8. 클릭

9. 클릭





실습: Progress Bar 컨트롤 (4)

■ JFrame Form Name 지정

❖ MainFrame.java 생성

New JFrame Form

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

Class Name: MainFrame **10. MainFrame 입력**

Project: ProgressBar_Source

Location: Source Packages

Package:

Created File: C:\Java_프로그래밍\Source\ProgressBar_Source\src\MainFrame.java

11. 클릭

Warning: It is highly recommended that you do NOT place Java classes in the def...

< Back Next > Finish Cancel Help





실습: Progress Bar 컨트롤 (5)

■ 컨트롤 배치 및 속성 지정



컨트롤	속성 지정
jLabel1	<ul style="list-style-type: none">• Variable Name: lblTitle• Text: Progress Bar 예제
jProgressBar	<ul style="list-style-type: none">• stringPainted: <input checked="" type="checkbox"/>
jLabel2	<ul style="list-style-type: none">• Variable Name: lblProgress• Text: 진행
jLabel3	<ul style="list-style-type: none">• Variable Name: lblStartVal• Text: 0
jLabel4	<ul style="list-style-type: none">• Variable Name: lblEndVal• Text: 100
jButton1	<ul style="list-style-type: none">• Variable Name: btnSearch• Text: 검색 시작





실습: Progress Bar 컨트롤 (6)

■ btnSearchActionPerformed() Event Handler 지정



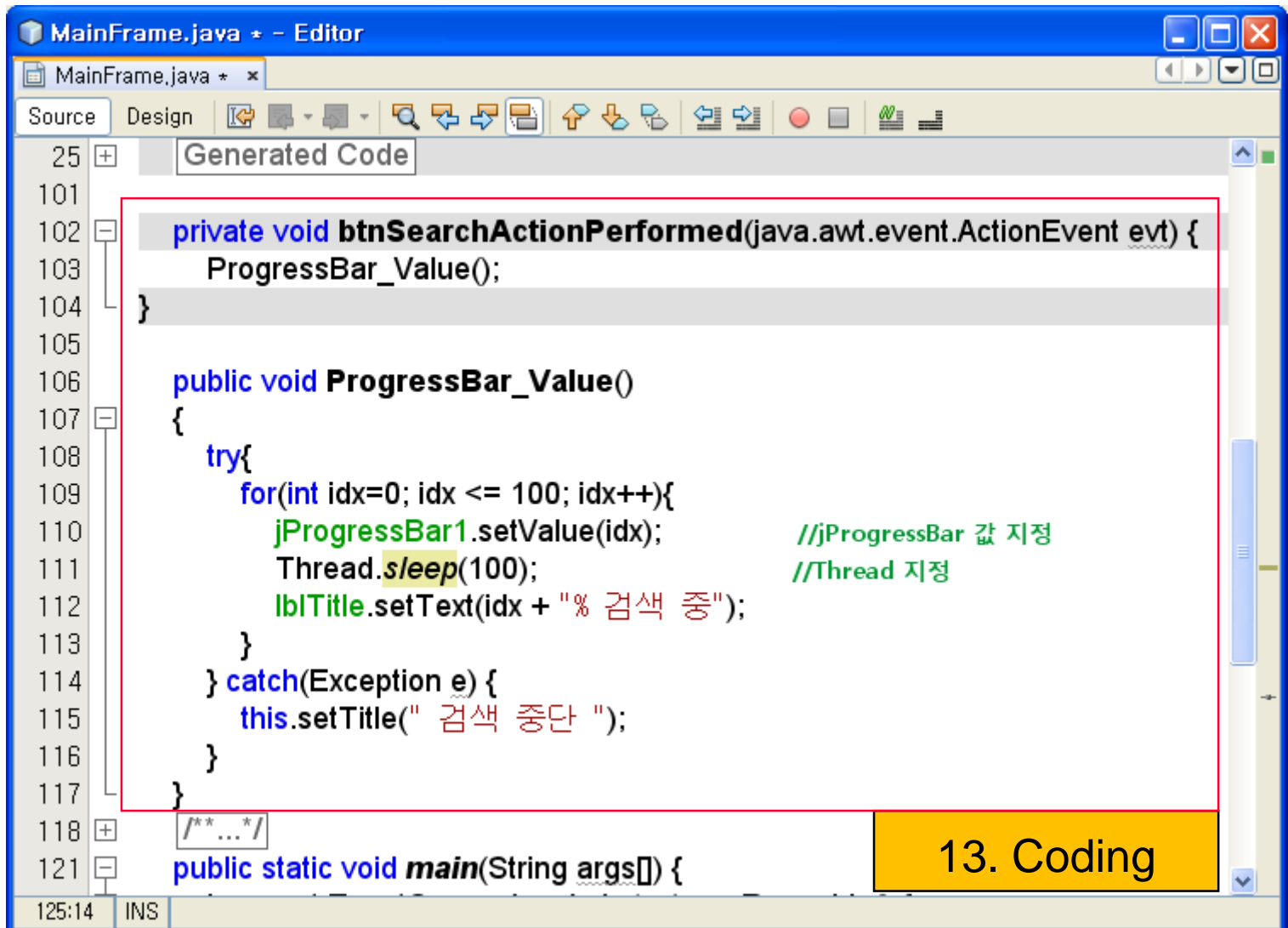
12. 더블 클릭





실습: Progress Bar 컨트롤 (7)

❖ btnSearchActionPerformed() Event Handler



```
25  Generated Code
101
102  private void btnSearchActionPerformed(java.awt.event.ActionEvent evt) {
103      ProgressBar_Value();
104  }
105
106  public void ProgressBar_Value()
107  {
108      try{
109          for(int idx=0; idx <= 100; idx++){
110              jProgressBar1.setValue(idx);           //jProgressBar 값 지정
111              Thread.sleep(100);                     //Thread 지정
112              lblTitle.setText(idx + "% 검색 중");
113          }
114      } catch(Exception e) {
115          this.setTitle(" 검색 중단 ");
116      }
117  }
118  /** ... */
121  public static void main(String args[]) {
```

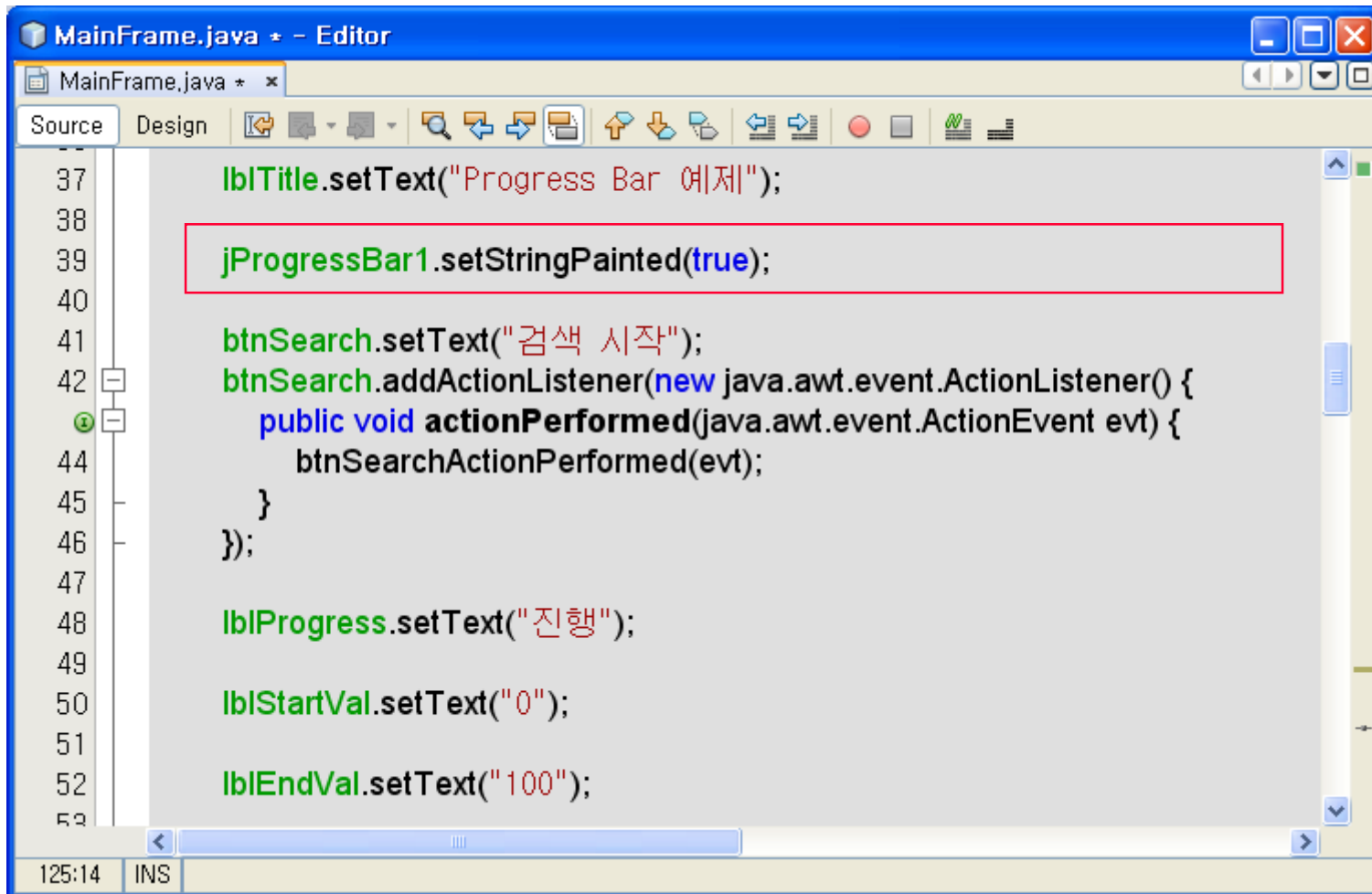
13. Coding





실습: Progress Bar 컨트롤 (8)

❖ JProgressBar1 컨트롤 속성 지정 Code



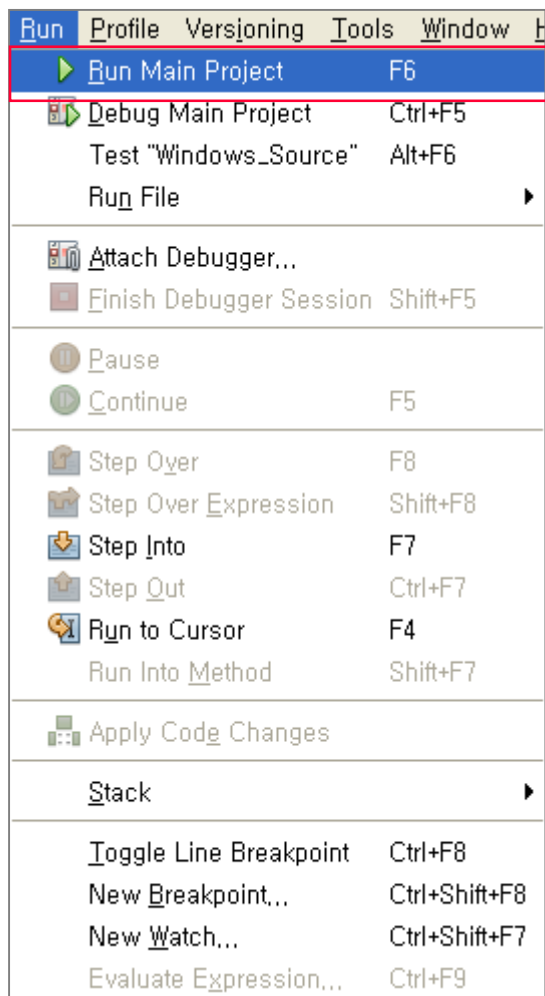
```
MainFrame.java * - Editor
MainFrame.java * x
Source Design
37 lblTitle.setText("Progress Bar 예제");
38
39 jProgressBar1.setStringPainted(true);
40
41 btnSearch.setText("검색 시작");
42 btnSearch.addActionListener(new java.awt.event.ActionListener() {
43     public void actionPerformed(java.awt.event.ActionEvent evt) {
44         btnSearchActionPerformed(evt);
45     }
46 });
47
48 lblProgress.setText("진행");
49
50 lblStartVal.setText("0");
51
52 lblEndVal.setText("100");
53
```



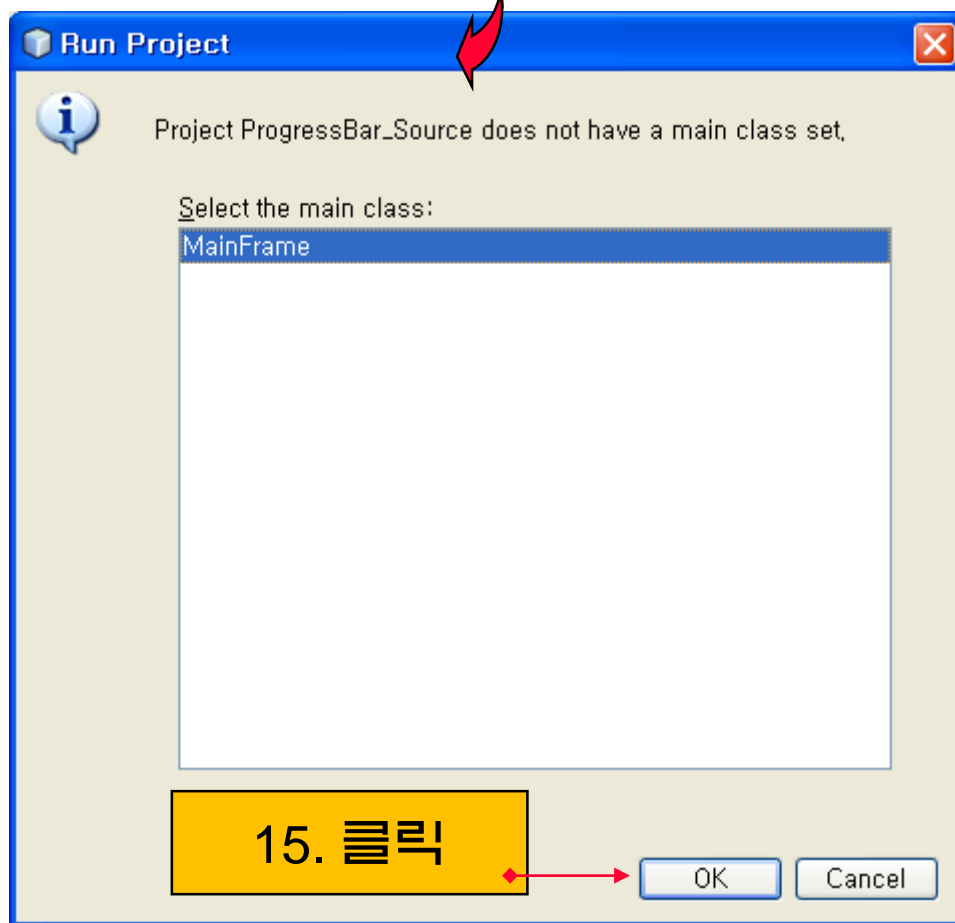


실습: Progress Bar 컨트롤 (9)

실행



14. 클릭

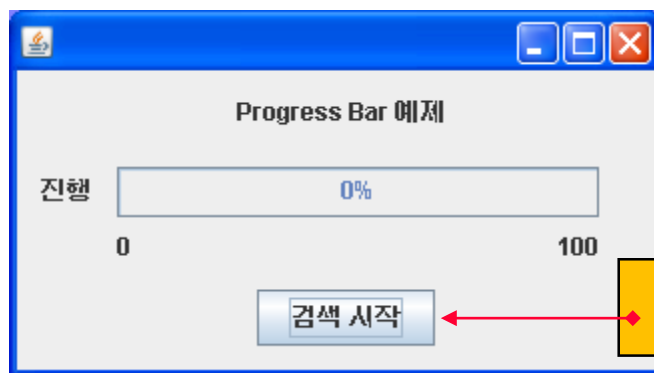




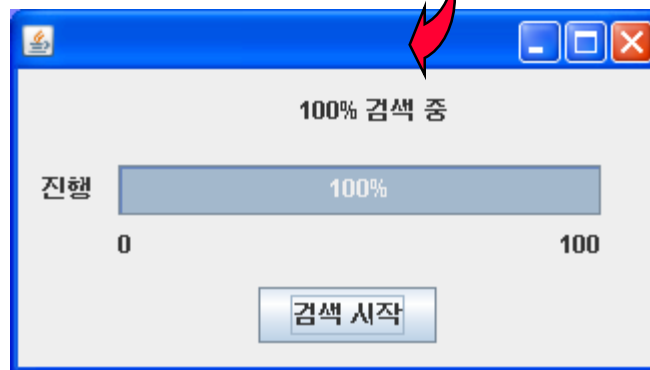
실습: Progress Bar 컨트롤 (10)

■ 실행 결과

❖ [검색 시작] button 클릭



16. 클릭



Slider 컨트롤

■ Slider 컨트롤 기능

❖ 값 조정 및 진행 상태 표현



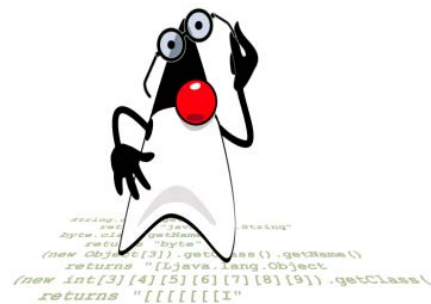
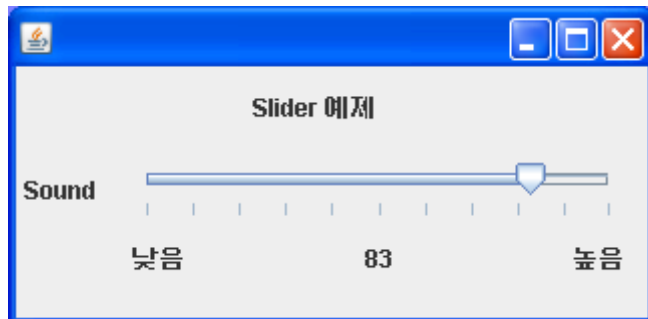


실습: Slider 컨트롤

❖ Project Name: Slider_Source(실습시간 : 20분)

■ Slider 조정

- Slider의 값을 Label 컨트롤에 표현하시오.





실습: Slider 컨트롤 (1)

Application 생성

1. 클릭

NetBeans IDE 6.0.1

- File Edit View Navigate Source Refactor
- New Project... Ctrl+Shift+N
- New File... Ctrl+N
- Open Project... Ctrl+O
- Open Recent Project
- Close Project
- Open File... Ctrl+O
- Open Recent File
- Project Group
- Set Main Project
- Project Properties
- Save Ctrl+S
- Save As... Ctrl+Shift+S
- Save All Ctrl+Shift+A
- Page Setup... Ctrl+P
- Print... Ctrl+P
- Print to HTML... Ctrl+Shift+P
- Exit

2. 클릭

New Project

Steps

1. Choose Project
2. ...

Choose Project

Categories:

- Java
- NetBeans Modules
- Samples

Projects:

- Java Application
- Java Desktop Application
- Java Class Library
- Java Project with Existing Sources
- Java Project with Existing Ant Script

Description:

Creates a new Java SE application in a standard IDE project. You can also generate a main class in the project. Standard projects use an IDE-generated Ant build script to build, run, and debug your project.

3. 클릭

Back Next > Finish Cancel Help





실습: Slider 컨트롤 (2)

■ Project Name and Location

❖ Project name: Slider_Source

New Java Application

Steps

1. Choose Project
2. **Name and Location**

Name and Location

Project Name: Slider_Source

Project Location: E:\W\LECTURE\Java_프로그래밍\Source Browse...

Project Folder: ECTURE\Java_프로그래밍\Source\Slider_Source

☒ Set as Main Project

☐ Create Main Class slider_source.Main

4. Project Name 입력

5. 클릭

6. 클릭

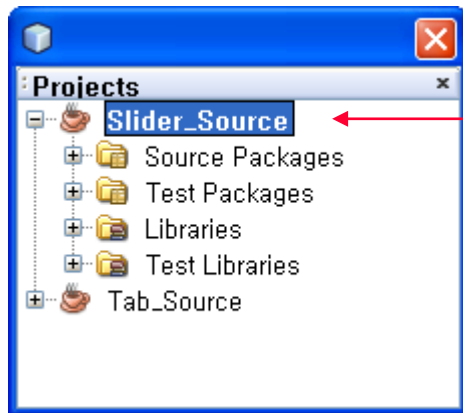
< Back Next > Finish Cancel Help



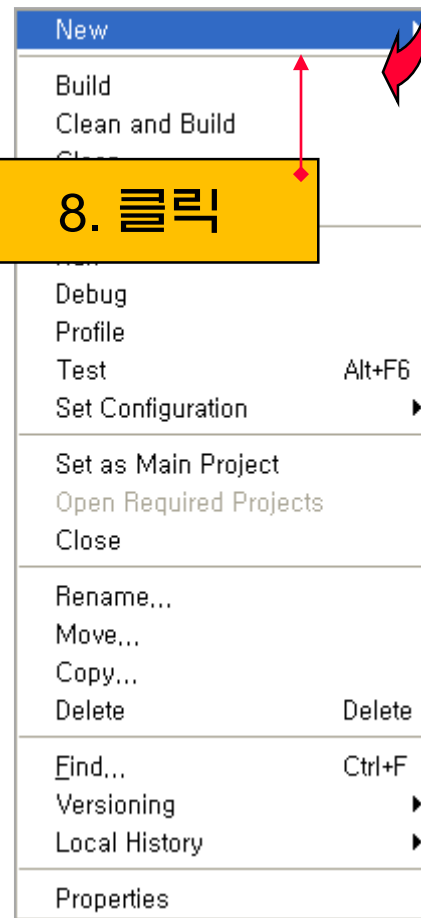


실습: Slider 컨트롤 (3)

JFrame Form 생성

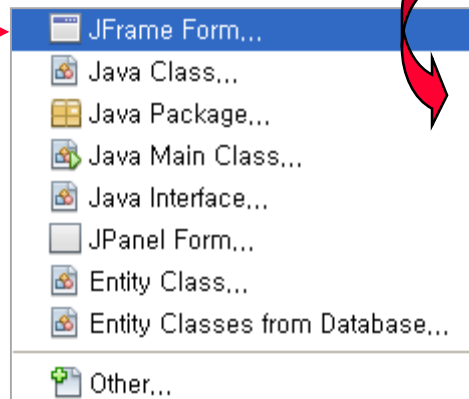


7. 마우스 오른쪽 버튼 클릭



8. 클릭

9. 클릭





실습: Slider 컨트롤 (4)

■ JFrame Form Name 지정

❖ MainFrame.java 생성

New JFrame Form

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

Class Name: MainFrame

Project: Slider_Source

Location: Source Packages

Package:

Created File: C:\TURE\Java_프로그래밍\Source\Slider_Source\src\MainFrame.java

10. MainFrame 입력

11. 클릭

Warning: It is highly recommended that you do NOT place Java classes in the def...

< Back Next > **Finish** Cancel Help

Projects

- Slider_Source
 - Source Packages
 - <default package>
 - MainFrame.java**
 - Test Packages
 - Libraries
 - Test Libraries
 - Tab_Source



실습: Slider 컨트롤 (5)

■ 컨트롤 배치 및 속성 지정

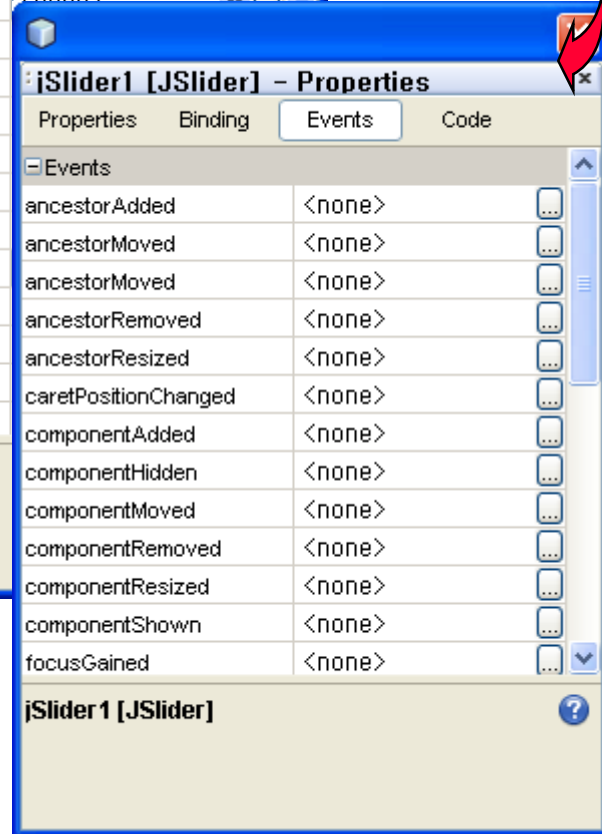
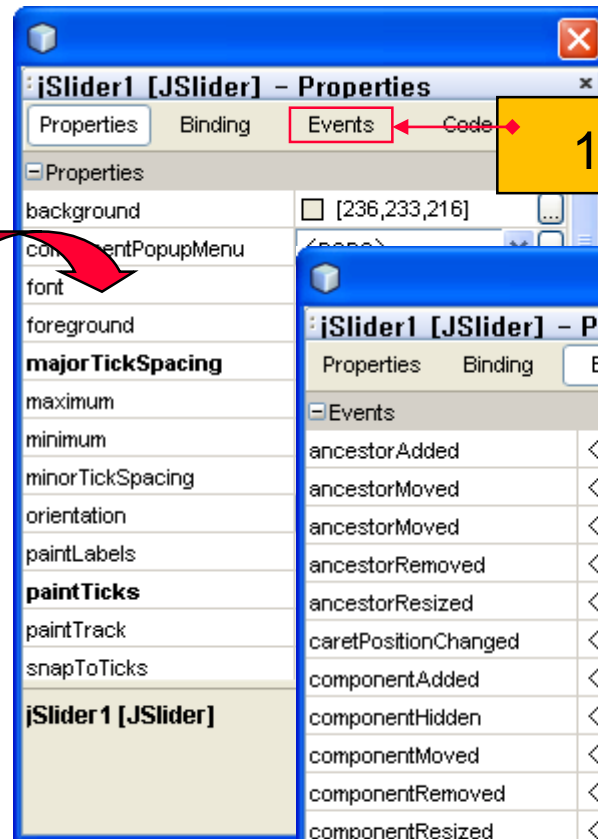
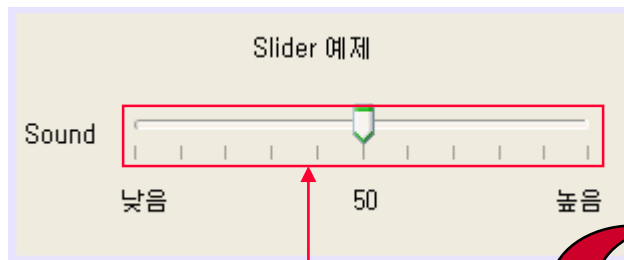


컨트롤	속성 지정
jLabel1	<ul style="list-style-type: none">• Variable Name : lblTitle• Text : Slider 예제
jSlider1	<ul style="list-style-type: none">• majorTickSpacing : 10• paintTicks : <input checked="" type="checkbox"/>• paintTrack : <input checked="" type="checkbox"/>
jLabel2	<ul style="list-style-type: none">• Variable Name : lblSound• Text : Sound
jLabel3	<ul style="list-style-type: none">• Variable Name : lblLow• Text : 낮음
jLabel4	<ul style="list-style-type: none">• Variable Name : lblHigh• Text : 높음
jLabel5	<ul style="list-style-type: none">• Variable Name : lblValue• Text : 50

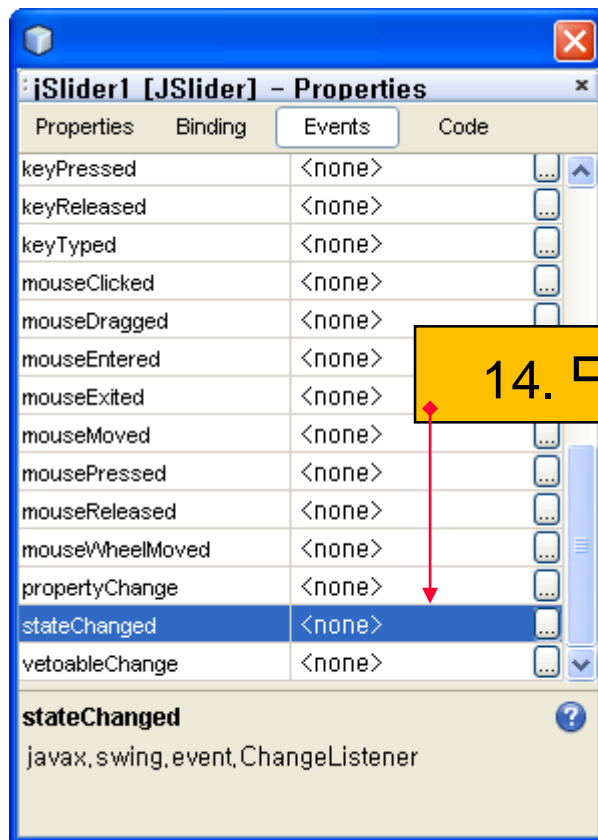


실습: Slider 컨트롤 (6)

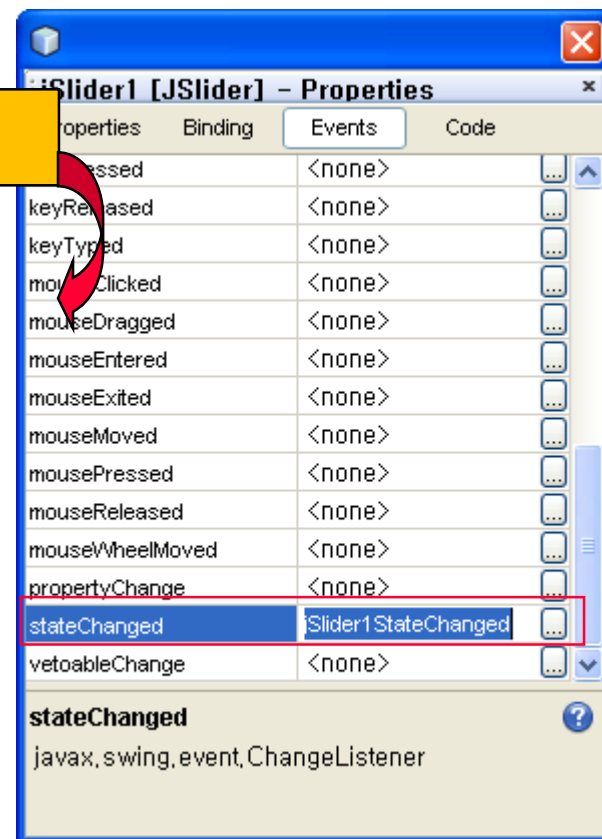
■ jSlider1 컨트롤 StateChanged() Event Handler 지정



실습: Slider 컨트롤 (7)



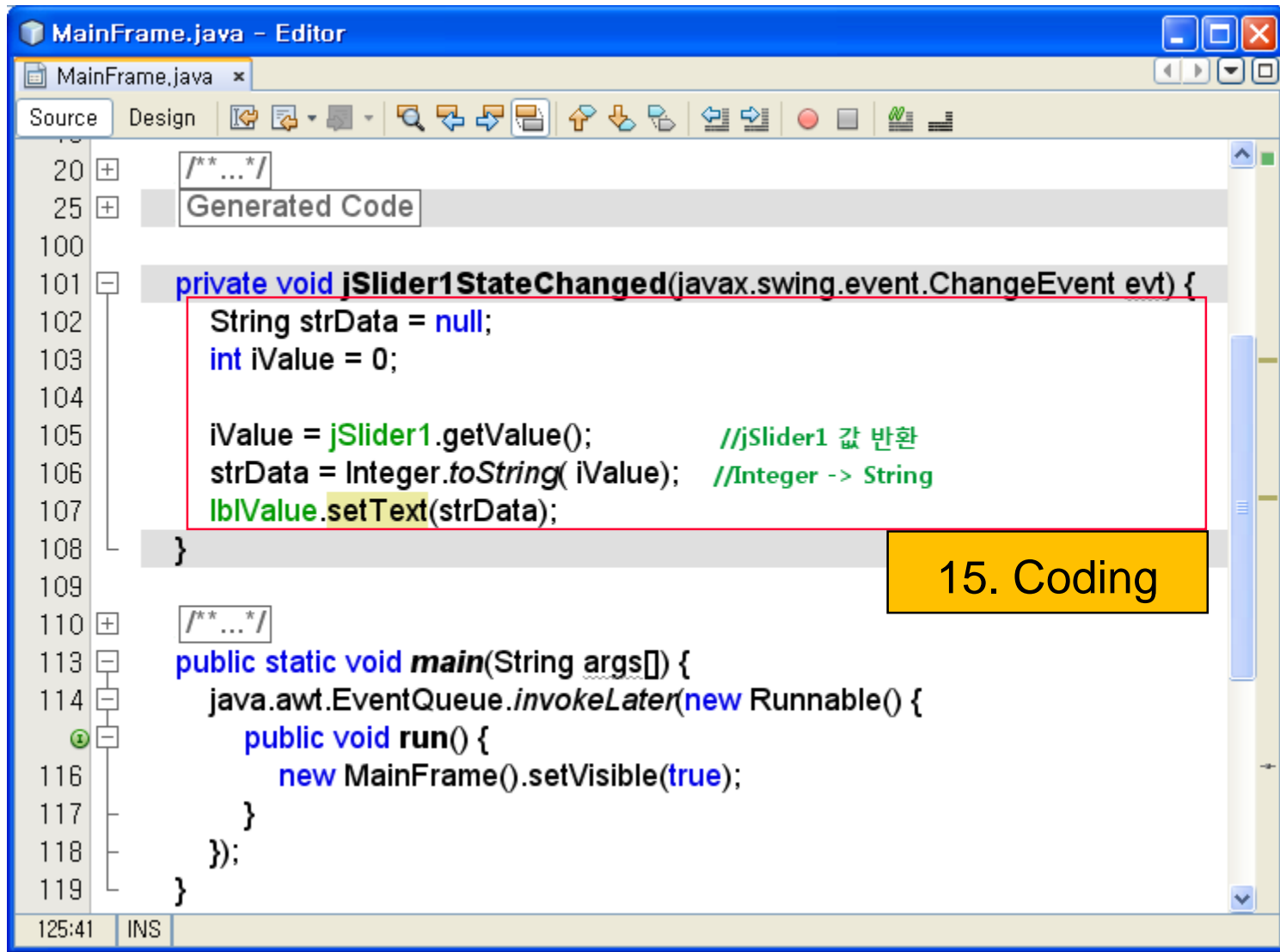
14. 더블 클릭





실습: Slider 컨트롤 (8)

❖ jSlider1 StateChanged() Event Handler



```
MainFrame.java - Editor
MainFrame.java x
Source Design
20 /** ... */
25 Generated Code
100
101 private void jSlider1StateChanged(javax.swing.event.ChangeEvent evt) {
102     String strData = null;
103     int iValue = 0;
104
105     iValue = jSlider1.getValue();           //jSlider1 값 반환
106     strData = Integer.toString(iValue);    //Integer -> String
107     lblValue.setText(strData);
108 }
109
110 /** ... */
113 public static void main(String args[]) {
114     java.awt.EventQueue.invokeLater(new Runnable() {
115         public void run() {
116             new MainFrame().setVisible(true);
117         }
118     });
119 }
```

15. Coding





실습: Slider 컨트롤 (9)

❖ jSlider1 컨트롤 속성 지정 Code

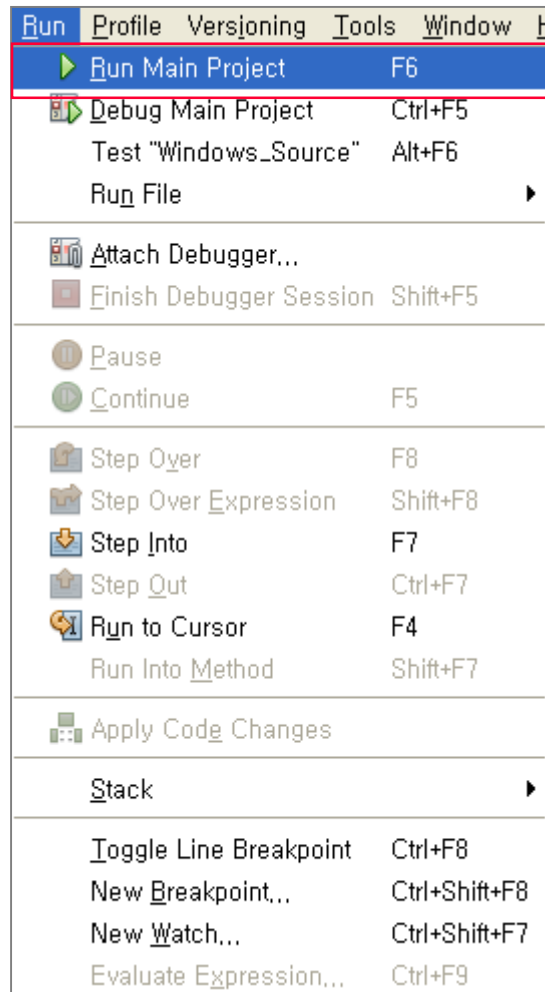
```
MainFrame.java - Editor
MainFrame.java x
Source Design
36
37 lblTitle.setText("Slider 예제");
38
39 jSlider1.setMajorTickSpacing(10);
40 jSlider1.setPaintTicks(true);
41 jSlider1.addChangeListener(new javax.swing.event.ChangeListener() {
42     public void stateChanged(javax.swing.event.ChangeEvent evt) {
43         jSlider1StateChanged(evt);
44     }
45 });
46
47 lblSound.setText("Sound");
48
49 lblLow.setText("낮음");
50
51 lblHigh.setText("높음");
52
53 lblValue.setText("50");
54
```



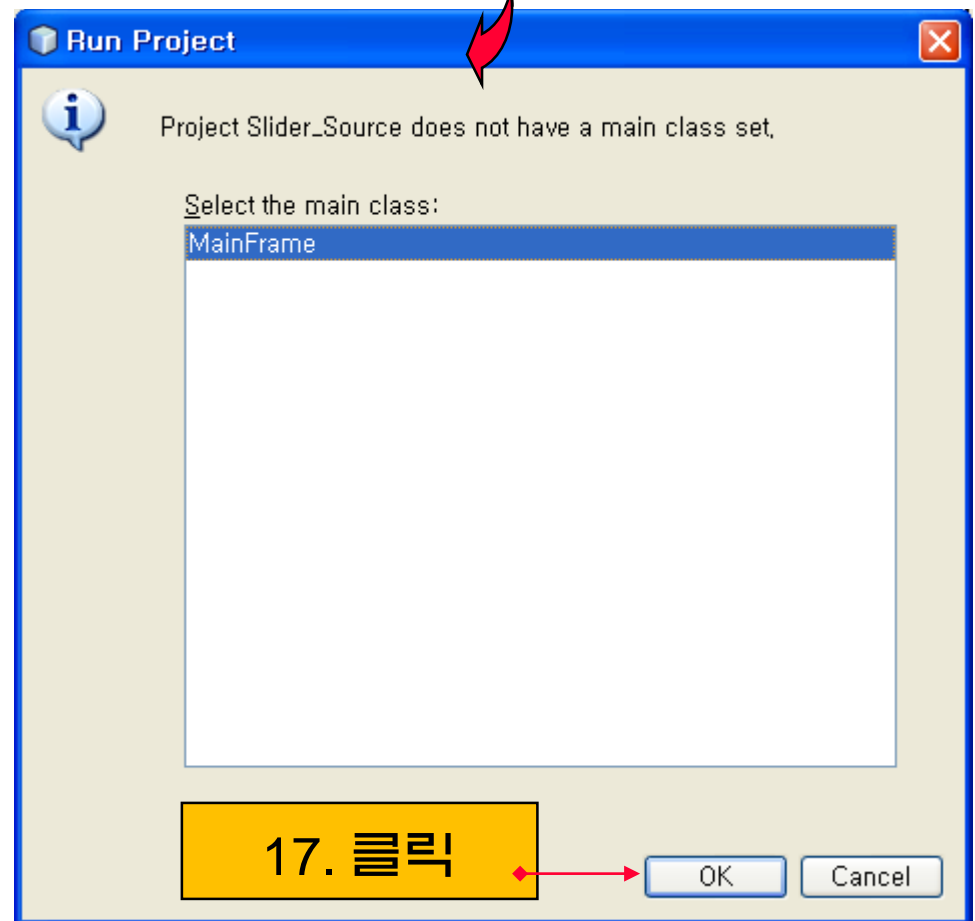


실습: Slider 컨트롤 (10)

실행



16. 클릭



17. 클릭





실습: Slider 컨트롤 (11)

■ 실행 결과

❖ Slider 조정





학습 요약

- TabbedPane 컨트롤
- Progress Bar 컨트롤
- Slider 컨트롤

