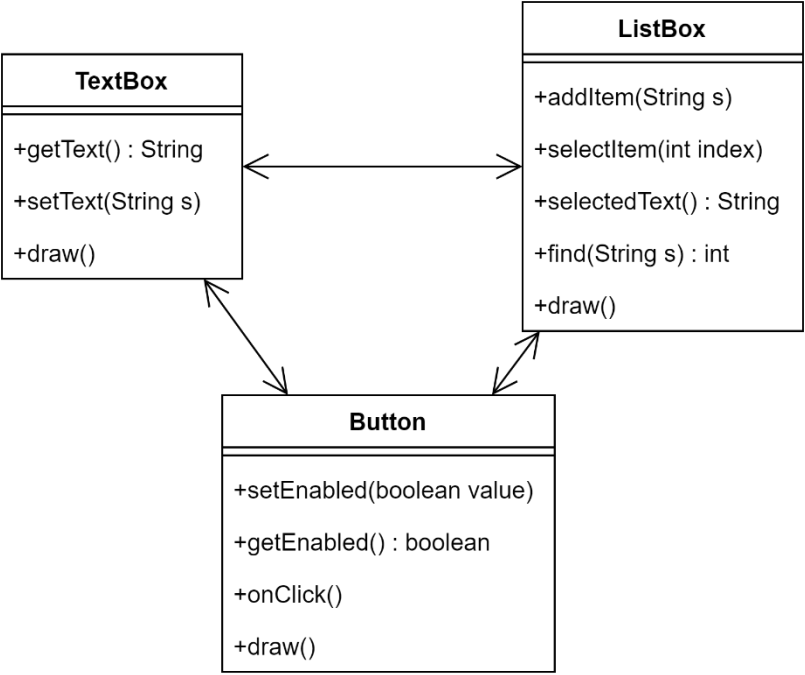


1) 개요



2) TextBox.java

```
1 package mediator.e1;
2
3 public class TextBox {
4     private String text;
5     private ListBox listBox;
6     private Button button;
7
8     public TextBox() {
9         text = "";
10    }
11
12    public void setListBox(ListBox listBox) {
13        this.listBox = listBox;
14    }
15
16    public void setButton(Button button) {
17        this.button = button;
18    }
19
20    public String getText() {
21        return text;
22    }
23
24    public void setText(String s) {
25        if (s.equals(text) == false) {
26            if (listBox != null) {
27                text = s;
28                int index = listBox.find(text);
29                if (index >= 0)
30                    listBox.selectItem(index);
31            }
32            if (button != null)
33                button.setEnabled(true);
34        }
35    }
36
37    public void draw() {
38        System.out.println("---- TextBox " + text);
39    }
40 }
```

textbpx -> listBox 참조함

textbox -> button 참조함

3) ListBox.java

```
1 package mediator.e1;
2
3 import java.util.ArrayList;
4
5 public class ListBox {
6     private ArrayList<String> items;
7     private TextBox textBox;
8     private Button button;
9     private int selectedItem;
10
11     public ListBox() {
12         items = new ArrayList<String>();
13         selectedItem = -1;
14     }
15
16     public void setTextBox(TextBox textBox) {
17         this.textBox = textBox;
18     }
19
20     public void setButton(Button button) {
21         this.button = button;
22     }
23
24     public void addItem(String s) {
25         items.add(s);
26     }
27
28     public void selectItem(int index) {
29         if (selectedItem != index) {
30             selectedItem = index;
31             if (textBox != null)
32                 textBox.setText(items.get(selectedItem));
33             if (button != null)
34                 button.setEnabled(true);
35         }
36     }
37
38     public String selectedText() {
39         return items.get(selectedItem);
40     }
41
42     public int find(String s) {
43         for (int i = 0; i < items.size(); ++i)
44             if (s.equals(items.get(i)))
45                 return i;
46         return -1;
47     }
48
49     public void draw() {
50         System.out.print("---- ListBoxWn");
51         for (int i = 0; i < items.size(); ++i)
52             System.out.printf("    %d: %s %sWn", i, items.get(i), (i == selectedItem) ? " SELECTED" : "");
53     }
54 }
```

listbox -> textbox 참조함

listbox -> button 참조함

4) Button.java

```
1 package mediator.e1;
2
3 public class Button {
4     private boolean enabled;
5     private TextBox textBox;
6
7     public void setTextBox(TextBox textBox) {
8         this.textBox = textBox;
9     }
10
11    public void setEnabled(boolean value) {
12        enabled = value;
13    }
14
15    public boolean getEnabled() {
16        return enabled;
17    }
18
19    public void draw() {
20        System.out.print("---- Button ");
21        System.out.println(enabled ? "enabled" : "disabled");
22        System.out.println();
23    }
24
25    public void onClick() {
26        if (enabled) {
27            String fileName = textBox.getText();
28            System.out.println("File Open (" + fileName + ")");
29            System.exit(0);
30        }
31    }
32 }
```

button -> textbox 참조함

5) Example1.java

```
1 package mediator.e1;
2
3 import java.util.Scanner;
4
5 public class Example1 {
6
7     public static void main(String[] args) throws Exception {
8         try (Scanner scanner = new Scanner(System.in)) {
9             TextBox textBox = new TextBox();
10            ListBox listBox = new ListBox();
11            Button button = new Button();
12            textBox.setListBox(listBox);
13            textBox.setButton(button);
14            listBox.setTextBox(textBox);
15            listBox.setButton(button);
16            button.setTextBox(textBox);
17
18            listBox.addItem("one");
19            listBox.addItem("two");
20            listBox.addItem("three");
21            for (;;) {
22                System.out.print("WnWnWn");
23
24                listBox.draw();
25                textBox.draw();
26                button.draw();
27
28                System.out.print("ListBox 항목 선택 : s <번호>Wn");
29                System.out.print("TextBox 입력 : t <문자열>Wn");
30                System.out.print("Button 클릭 : bWn");
31                System.out.print("? ");
32                String s = scanner.nextLine();
33                switch (s.charAt(0)) {
34                    case 's':
35                        listBox.selectItem(Integer.parseInt(s.substring(2).trim()));
36                        break;
37                    case 't':
38                        textBox.setText(s.substring(2).trim());
39                        break;
40                    case 'b':
41                        button.onClick();
42                        break;
43                }
44            }
45        }
46    }
47 }
```

실행 사례

```
---- ListBox
0: one
1: two
2: three
---- TextBox
---- Button disabled

ListBox 항목 선택 : s <번호>
TextBox 입력 : t <문자열>
Button 클릭 : b
? s 0
```

```
---- ListBox
  0: one  SELECTED
  1: two
  2: three
---- TextBox one
---- Button enabled
```

ListBox 항목 선택 : s <번호>
TextBox 입력 : t <문자열>
Button 클릭 : b
? t two

```
---- ListBox
  0: one
  1: two  SELECTED
  2: three
---- TextBox two
---- Button enabled
```

ListBox 항목 선택 : s <번호>
TextBox 입력 : t <문자열>
Button 클릭 : b
? b

File Open (two)

노란색: 사용자 입력
보라색: 객체들의 상태