

COMPS203 F

Quiz 1

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(a)

```
public class GUI extends JFrame {  
    private JLabel label = new JLabel("5");  
    private JTextField textField = new JTextField(8);  
    private JButton button = new JButton("+3");
```

```
    public JLabel getLabel() {return label;}  
    public JTextField getTextField() {return textField;}  
    public JButton getButton() {return button;}  
}
```

```
public GUI {  
    setLayout(new FlowLayout());  
    add(label); add(textField); add(button);  
    setDefaultCloseOperation(EXIT_ON_CLOSE);  
    pack();  
}
```

}

(b)

```
private JMenuBar menuBar = new JMenuBar();  
private JMenu menu = new JMenu("Action");  
private JMenuItem menuItem = new JMenuItem("No vowels");
```

```
    setJMenuBar(menuBar);
```

```
    menuBar.add(menu); menu.add(menuItem);
```

(c) `import javax.swing.*; import java.awt.event.*; import java.awt.*;`

`public class GUI extends JFrame implements ActionListener {`

`button.addActionListener(this);`

`public void actionPerformed (ActionEvent event) {`

`Object source = event.getSource();`

`if (source == button) {`

`int t = Integer.parseInt (label.getText());`

`t = t + 3;`

`label.setText (t);`

`}`

`pack();`

`}`

(d) `import java.util. ArrayList.`

`menuItem.addActionListener (this);`

`else if (source == menuItem) {`

`String s = textField.getText();`

`ArrayList<char> ch = new ArrayList<char>();`

`ch.add('a'); ch.add('e'); ch.add('i'); ch.add('o'); ch.add('u');`

`for (char c : s) {`

`if (ch.contains(c)) {`

(e) `private JButton button2 = new JButton("Multiply");`

`add(button2);`

`button2.addActionListener (this);`

`else if (source == button2) {`


```
int num1 = Integer.parseInt(textField.getText());  
int num2 = Integer.parseInt(label.getText());  
label.setText(num1 * num2 + "");  
}
```