# Question 1:

A JFrame is the main container that contain other containers. It is the root of containers. So, it can contain other design elements such as JButton, or JTextField …

# Question 2:

The content pane is the first child of JFrame main content. Every container in the main content will be in the content pane.

# Question 3:

There are two ways to add JButton in content pane. Insert a layout in the content pane. Layout will dispose object in the content pane from a certain way (Depend on the type of layout).

First, through designer, select JButton and drop it where you want to be printed.

Second way, is to declare a new JButton instance. Define a layout constraint: define the location of the JButton and add the JButton to the chosen panel.

# Question 4:

The layout manager is an object that manage the disposition of layouts. The layout manager provides many kinds of layouts. A layout is an object that manage the disposition of all objects in the container that layout is applied on.

# Question 5:

To add a BoxLayout, just select BoxLayout in tool box and click on the content pane (getContentPane()). Or in the properties of content pane, you can select the wanted layout. Here it is BoxLayout. You can add Box layout through code too by adding a new BoxLayout() object and setting it on content pane via setLayout() method.

# Question 6:

On the wanted JButton, operate a method addActionListener() and pass a new object of MouseListener(). There is an event for each possibility of the mouse such as click, entered …

For example: myButton.addActionListener(new MouseListener() {}). In the ‘{}’ perform all action you want to do on specific event.

# Question 7:

A KeyListener() is the same object as MouseListener but for keys of the keyboard. We can bin a key to an action. For example: mybutton.addKeyListener(new KeyListener()). keyPressed(…), keyReleased(…) and keyTyped(…) are 3 methods of interface to override to create actions on events.