

1. The Graphical User Interface(GUI) is a program, the code runs from top to down, this is very useful for users to directly see the display of code visually. The program consists of labels and buttons and many other components that can be used for a variety of software or applications.
2. a) GUI applications uses Swing code, a function that will begin upon the specific user's input, if a component is present, it allows the programmers the ability to write code after an event.  
  
b) The code runs like a flow of a program, it executes, and is determined by events that are established by the programmer. The user's input is either by a mouse clicking or key pressing or messages from the computer. Which allows the screen to execute code and show which code has been inputed.
3. Components are directly added to the frame, the program automatically adds the component to the J-Panel. The programmer needs to make adjustments to the components to allow it to flow better to the programmer's needs, if the code isn't adjusted, it may or may not directly apply on the frame, and it may not work.
4. J-Labels is able to respond to different events, because labels can have methods where the programmer can input codes like displaying images and text, the MouseListener requires a mouse adapter to work. The label includes a label name, and other functions as the frame, like textfield and button.
5. Without a thread, most of the Swing object methods will fail and become unable to run smoothly. Creating multiple threads has a risk of interference with each other and many memory issues, as well as errors during running. The Java program sometimes does not tell the programmer if the Swing thread has an error or not.
6. a) J-Label is a label that is able to display messages, hold or release specific texts or image sources from the user when they enter an action or press a button. J-Labels can be changed by the user, the user can overwrite text onto the box while using or running the program.  
  
b) The button can be used to activate codes to release information that the J-label has. The button is like a light switch, it activates the code upon the user's input.