

## Quiz #6 Answers

For this quiz you can open your browser and use the API. You aren't allowed to go look at code samples, but you can use anything in the API to help you.

1. Write code that reads in words the user types and stores them in a list. It should stop reading when the user types the word "quit". (Hint: the LinkedList and ArrayList classes are in the java.util package.)

```
ArrayList<String> list=new ArrayList<String>();  
Scanner sc=new Scanner(System.in);  
String word=sc.next();  
while(!word.equals("quit")) {  
    list.add(word);  
    word=sc.next();  
}
```

2. Why do we use layout managers to position elements in GUIs in Java? Give two examples of layout managers we have used.

**We use layout managers so that the GUIs that we produce are flexible. The Layout managers have rules for controlling how elements are placed and sized. This allows them to look good when the window is resized or when the program is run on a machine with a different screen size. The three layout managers that we discussed in Java were the FlowLayout, GridLayout, and BorderLayout.**

Extra Credit: What is polymorphic code?

**The short answer is: polymorphic code is code that can work with multiple types. This is right in line with the second part of the answer to #2. In Java we get polymorphism through inheritance. If I have type A and types B, C, and D inherit from it, when I write a method that works for type A it will automatically work for the other three types. If someone comes along later and writes a type E that also inherits from A that will work with our method as well. So technically our code can work with a potentially infinite number of types.**