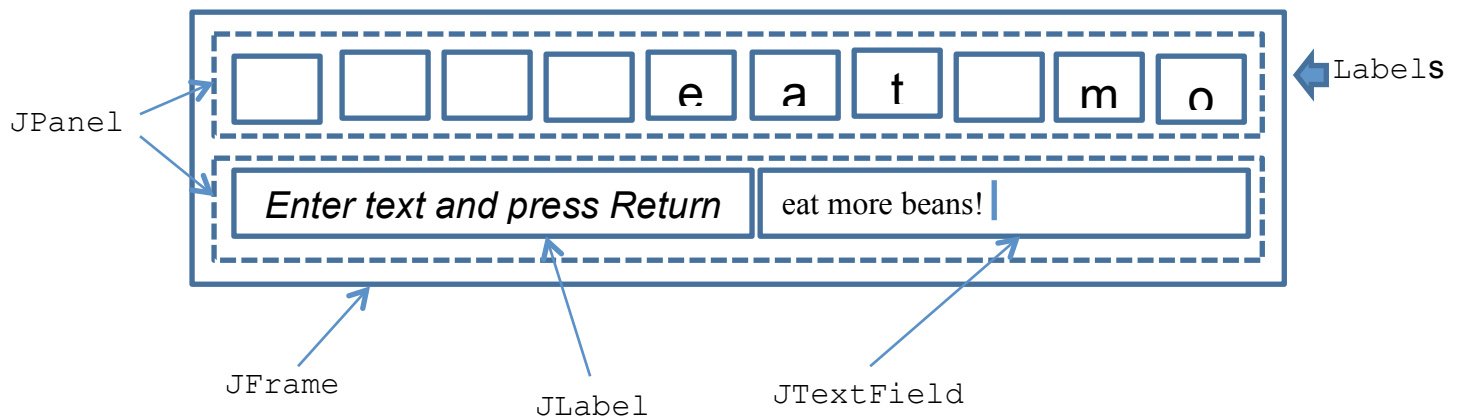# F27SB2 Software Development 2
Laboratory 4

Many TV news programmes have scrolling news headlines along the bottom of the screen. This Laboratory involves developing a program where the user enters text which is then scrolled along a larger display:

The user enters text in the `JTextField` and presses "Return". The text is then scrolled from right to left along the top `JPanel` of `Label`s, with one letter on each `Label`. (You may also use `JLabel`s for this, but see the information at the beginning of Lecture 7).

a) define a class with a constructor for the above interface design.

b) write a method to shift all the `String`s on the `JPanel` of `Label`s to the left by one `String` by setting each `Label`l to the `String` from the `Label` to its right.

c) write a method which given a `String` will scroll it along the top `JPanel` of `Label`s from right to left, until the `Label`s are all empty, with one letter on each `Label`:

i) for each letter in the `String`, shift the displayed letters left by one `Label` and put the next letter from the `String` in the rightmost `Label`

ii) for the number of `Label`s in the `JPanel`, shift the displayed letters to the left by one `Label` and set the rightmost `Label` to ""

d) write a program which when the user enters text in the JTextField and presses "Return", scrolls the text along the `Label`s. During scrolling, the `JTextField` should be disabled.

NB Do not use `charAt` to get individual letters from the `String` as this returns a `char` not a `String`. Instead, to get the letter at position `i` in a `String` as a `String`, use `substring(i,i+1)`.