

## CS 180 Problem Solving and OO Programming

Fall 2011

Recitation Week 10  
Discussion and Problem Set

**Problem 1:** Write a method named `createArray()` that takes two parameters `r` and `c` and performs the following tasks.

- (a) Creates a 2-dimensional array named `hello` of strings containing `r` rows and `c` columns.
- (b) Initializes each element of `hello` so that element at row `i` and column `j` contains the string "Hello `i j`". For example the element at row 5 and column 7 should contain the string "Hello 5 7".
- (c) Returns the array to the calling program. [What should be the return type of `createArray()`?]

Next, write the `main()` method that (a) reads two integers, denoted by say `p` and `q`, corresponding to the number of rows and columns, (b) calls `createArray()` to generate the two dimensional array, and (c) prints the elements of the array so that each row is printed on one line of console.

**Problem 2:** In this problem we will add a GUI to the program created in Problem 1. Write a method named `createGui()` that creates a GUI containing one text field and one button labeled ENTER. The `createGui()` method is called by the `main()` method. Once the GUI is visible, the user types two integers in the text field separated by a space character. After typing the two integers the user clicks the ENTER button.

When the ENTER button is clicked, your program should read the string in the text field, extract the two integers typed and treat the first one as the number of rows (`p`) and the second as the number of columns (`q`). The `main()` method now calls the `createArray()` method with `p` and `q` as inputs and finally prints the array generated by this method.

Note that if `t` is a `JTextField` then `t.getText()` can be used to extract the string typed by the user in the field.

<End of Problems for Week 10>

