

CS 303e

Final Exam Name: _____

EID: _____

Section Time: _____

Section TA: _____

question	points lost	points possible
1		4
2		4
3		6
4		4
5		4
6		8
7		8
8		8
9		8
10		21
11		25
Total		100

Answer all questions legibly and completely. You must show your UT ID to the proctor before you leave the exam room in order to receive credit for this exam.

Fill in the blank.

1. An object can refer to itself by using the keyword _____ .

2. Complete the following lines of Java code so that the message “single letter” is printed if and only if the String s contains only a single letter. (For example, if s contains “a” or “R”, then the message “single letter” should be printed. If it contains “hello” or “2”, nothing should be printed).

```
if( _____ )  
    System.out.println(“single letter”);
```

3. Complete the following lines of Java code so that execution continues until every command line argument has been printed to the screen.

```
public static void main(String[] args)  
{  
    for( _____ ; _____ ; _____ )  
        System.out.println( _____ );  
}
```

4. Assume that you have written a class called Square (we did this in class). Complete the following lines of code so that the message “It’s a square!” is printed when the variable s refers to an instance of the Square class.

```
if( _____ )  
    System.out.println(“It’s a square!”);
```

5. Complete the code so that the message “super” is printed when the String str contains “great” as a substring:

```
if( _____ )  
    System.out.println(“super”);
```

Short Answer.

6. What does it mean for a method name to be overloaded?

7. Suppose that the String array

`String[] myStrings;`

has been declared and initialized. Write Java code that randomly chooses a String from this array and prints it to the screen. (All strings in the array must have an equal chance of being chosen).

8. Write Java code that reads 10 integers from the keyboard and stores them in an integer array.

9. Write a method that takes an array of integers and swaps the first and last elements in the array.

Programming.

10. Write a method that takes an array `stringArray` of `Strings` and returns an array of two integers - the first entry in the returned array will be the number of elements in `stringArray` that start with a lowercase letter, and the second entry in the array will be the number of elements in `stringArray` that end with a digit.

That is, if the method is passed the array that contains the following 4 `Strings`

hello

aardvark2

My favorite number is 36

#12

Then the returned array should contain the `int` values 2 and 3.

11. Write a class called DictionaryEntry that contains:

- An instance variable that stores a word in a String
- An instance variable that stores a definition for a word in a String
- accessor and mutator methods for the instance variables
- a constructor that takes a word and a definition for that word
- toString() - overwrite this method from the Object class
- clone() - overwrite this method from the Object class
- equals() - overwrite this method from the Object class