

## CS506 Web Design and Development

Mid Term Examination – Spring 2006

Time Allowed: 90 Minutes

Please read the following instructions carefully before attempting any question:

1. This examination is open Handouts.
2. Answer all questions.
  - a. There is no choice.
  - b. You will have to answer correctly all questions in this examination to get the maximum possible marks.
3. Do not ask any questions about the contents of this examination from anyone.
  - a. If you think that there is something wrong with any of the questions, attempt it to the best of your understanding.
  - b. If you believe that some essential piece of information is missing, make an appropriate assumption and use it to solve the problem.

You are allowed to use Software J2SE 5.0 or 1.5.0.

**\*\*WARNING: Please note that Virtual University takes serious note of unfair means. Anyone found involved in cheating will get an `F` grade in this course.**

Question No. 1

Marks : 15

Short Questions. (5 + 5 + 5 = 15 pts)

1. What restrictions are placed on method overriding?
2. What is a Container in a GUI?
3. What are the problems faced by Java programmers who don't use layout managers?

Question No. 2

Marks : 1

In Java a final class must be sub-classed before it.

- ★ True
- ★ False

**Question No. 3**

**Marks : 1**

A top level class without any modifier is accessible to

- ★ any class
- ★ any class within the same package
- ★ any class within the same file
- ★ any subclass of this class

**Question No. 4**

**Marks : 1**

A top level class may have only the following access modifier.

- ★ Package
- ★ Private
- ★ Protected
- ★ Public

**Question No. 5**

**Marks : 1**

In Java an abstract class cannot be sub-classed

- ★ True
- ★ False

**Question No. 6**

**Marks : 15**



Fig-1

Fig-2



Fig-3

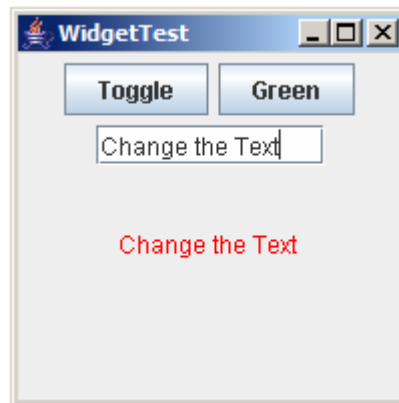


Fig-4

You will write the program whose interface is show above.

The panel consists of Two Buttons and one Text box and a string “Hello World”.

**Toggle Button:** The functionality of the Toggle button is that when it is pressed the color of the text shown on the panel will be changed. Initially you will use two colors for text (here in the figure 1 and 2 blue and red colors are used) but if you want to use more color it will be appreciated.

**Green Button**

Green button will simply change the color of the text to Green.

**Text Box**

Whatever string you will write in the text box will appear on the panel and on this text “Toggle” and “Green” operations can be performed as shown in Fig-4.

1- “Toggle” button will be pressed the color of text will be changed and By press the Toggle button again the color will be changed again you have to use two colors at least for toggling (Here in this case blue and red color are shown).

2- When you press the “Green” button the text will become green

3- There is a text box, when you write some string in the text box the Text on the Panel will change as shown in Fig-3.

**Question No. 7**

**Marks : 1**

Given a one dimensional array arr, what is the correct way of getting the number of elements in arr

- ★ arr.length
- ★ arr.length – 1
- ★ arr.size – 1
- ★ arr.length()

**Question No. 8**

**Marks : 1**

When recursive method is called to solve a problem, the method actually is capable of solving only the simpler case(s), or base case(s).

- ★ True
- ★ False

**Question No. 9**

**Marks : 1**

Which of these are valid declarations for the main method?

- ★ public void main();
- ★ public static void main(String args[]);
- ★ static public void main(String);
- ★ public static int main(String args[]);

**Question No. 10**

**Marks : 1**

Map interface is derived from the Collection interface.

- ★ True
- ★ False

**Question No. 11**

**Marks : 1**

In Java, which of these classes implement the LayoutManager interface?

- ★ RowLayout
- ★ ColumnLayout
- ★ GridBagLayout
- ★ FlowLayoutManager

**Question No. 12**

**Marks : 1**

BorderLayout is the default layout manager for a JFrame's content pane

- ★ True
- ★ False