

SOUTH EASTERN UNIVERSITY OF SRI LANKA

THIRD EXAMINATION IN BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

FOR MANAGEMENT STUDIES 2009/2010

SEMESTER-11, FEBRUARY -2012

ITMS 3223 – Java Components and Technology

Answer all questions

Time: 3 Hours

1)

a) Explain what are the special features of Java languages compare to other languages?

(05 Marks)

b) What is the Collections API?

(05 Marks)

c) What will be the output of the following program?

```

class PassA
{
    public static void main(String [] args)
    {
        PassA p = new PassA();
        p.start();
    }
    void start()
    {
        long [] a1 = {3,4,5};
        long [] a2 = fix(a1);
        System.out.print(a1[0] + a1[1] + a1[2] + " ");
        System.out.println(a2[0] + a2[1] + a2[2]);
    }
    long [] fix(long [] a3)
    {
        a3[1] = 7;
        return a3;
    }
}

```

(06 Marks)

2)

- a) What is an applet? How does applet differ from applications? (04 Marks)
- b) What are the Applets Life Cycle methods? Explain them? (04 Marks)
- c) Which method is used to output a string to an applet? Which function is this method included in? (04 Marks)
- d) Using java Applet class create a drawing class to display the following drawing objects (Figure 1).

(Note : Fill Circle with any Colour)

(08 Marks)

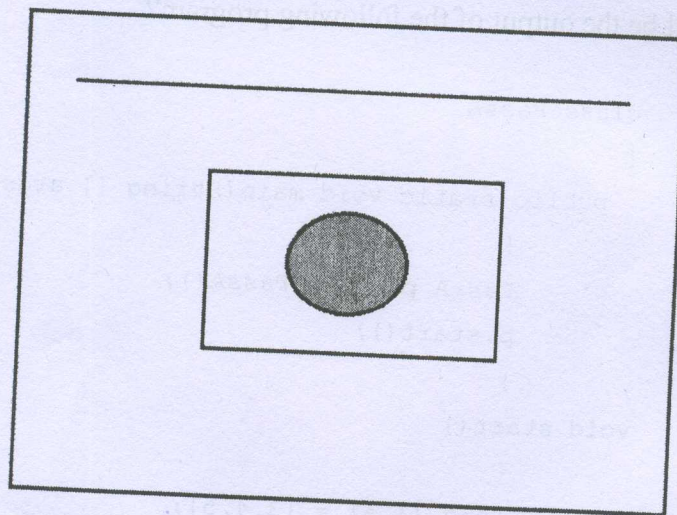


Figure 1

3)

- a) Which method of the Component class is used to set the position and size of a component? (04 Marks)
- b) In which package are most of the AWT events that support the event-delegation model defined? (04 Marks)

(04 Marks)

- c) What is the difference between a Window and a Frame? (04 Marks)
 - d) Write the Java driver class to connect MySQL database using JDBC connectivity? (10 Marks)
- 4.
- a. What is the Servlet? (04 Marks)
 - b. What are the advantages of using Servlets than CGI? (05 Marks)
 - c. What are the Servlet Life Cycle methods? Explain them? (05 Marks)
 - e. Create a Servlet class called HelloServlet to display the message in web browser shown in figure 2. (08 Marks)

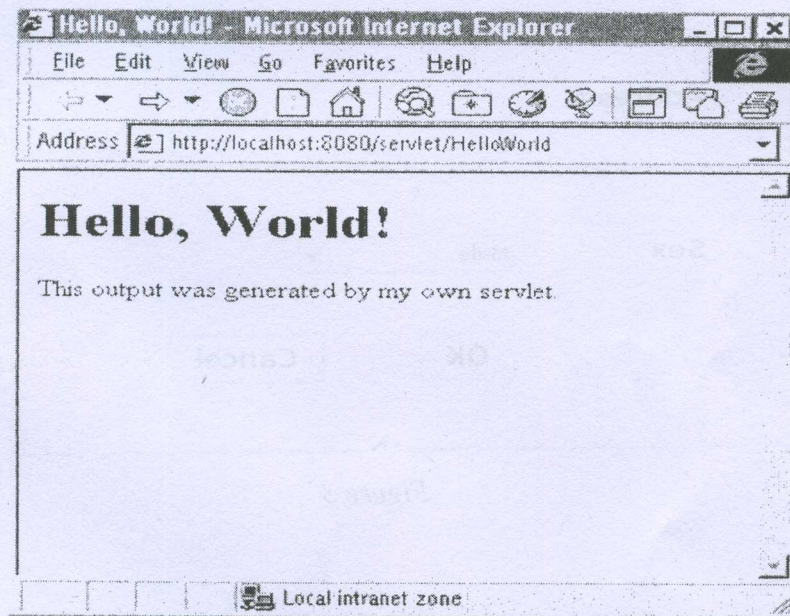


Figure 2

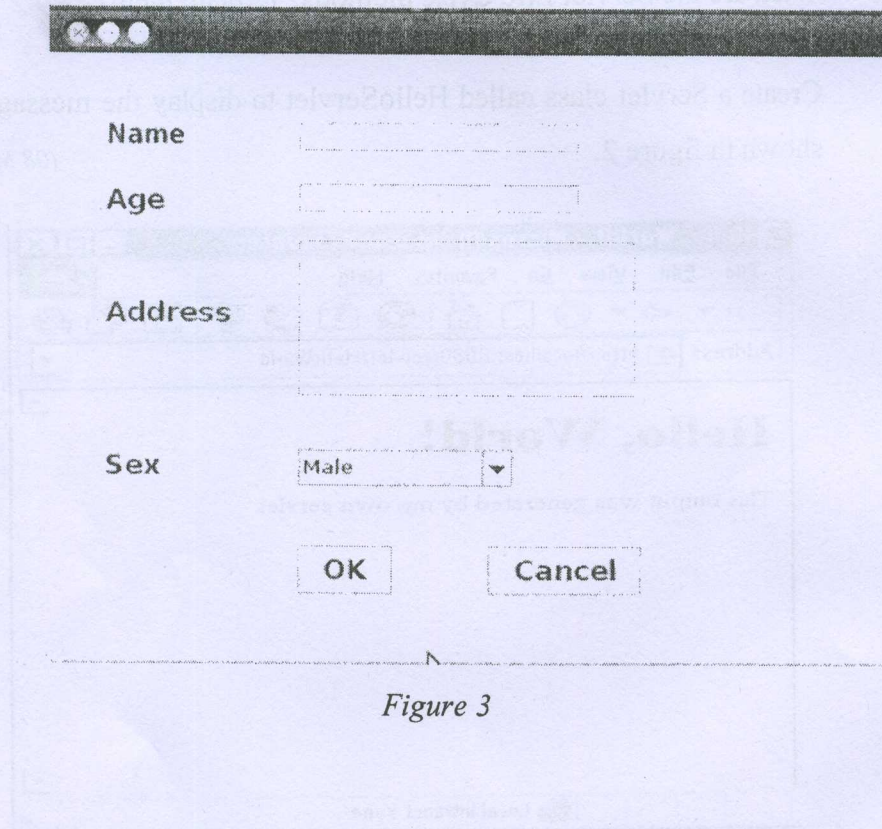
- 5.
- a. What is the difference between AWT and Swing? (04 Marks)
 - b. What method is used to specify a container's layout? (03 Marks)
 - c. What is the difference between a MenuItem and a CheckboxMenuItem? (03 Marks)

- d. Using JFrame Swing components write a class called NewJFrame to create the following Form shown in figure 3.

Hint : Start with the following coding

(10 Marks)

```
public class NewJFrame extends javax.swing.JFrame {  
    /** Creates new form NewJFrame */  
}
```



The image shows a screenshot of a Java Swing window titled "NewJFrame". The window contains a form with the following elements:

- Name:** A text input field.
- Age:** A text input field.
- Address:** A text area.
- Sex:** A dropdown menu currently showing "Male".
- Buttons:** "OK" and "Cancel" buttons.

Figure 3