

SULIT



BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK
KEMENTERIAN PENDIDIKAN TINGGI

JABATAN TEKNOLOGI MAKLUMAT DAN KOMUNIKASI

PEPERIKSAAN AKHIR
SESI JUN 2015

FP612: WEB PROGRAMMING 2

TARIKH : 28 OKTOBER 2015
MASA : 8.30 AM – 10.30 AM (2 JAM)

Kertas ini mengandungi **DUA PULUH DUA (22)** halaman bercetak.

Bahagian A: Objektif (20 soalan)

Bahagian B: Struktur/Esei (4 soalan)

Dokumen sokongan yang disertakan : Tiada

JANGAN BUKA KERTAS SOALANINI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

ПОДАЧА ВОДЫ

Изображение на рисунке показывает
один из способов подачи воды
из колодца в дом.

Рисунок показывает один из способов подачи

воды из колодца

в дом.

Сюда можно
написать:

один из способов подачи воды из колодца

в дом.

Вот что пишут другие ученики:

один из способов подачи воды из колодца

SECTION A : 30 MARKS
BAHAGIAN A : 30 MARKAH

INSTRUCTION:

This section consists of **TWENTY (20)** objective questions. Mark your answers in the OMR form provided.

Bahagian ini mengandungi DUA PULUH (20) soalan objektif. Tandakan jawapan anda di dalam borang OMR yang disediakan.

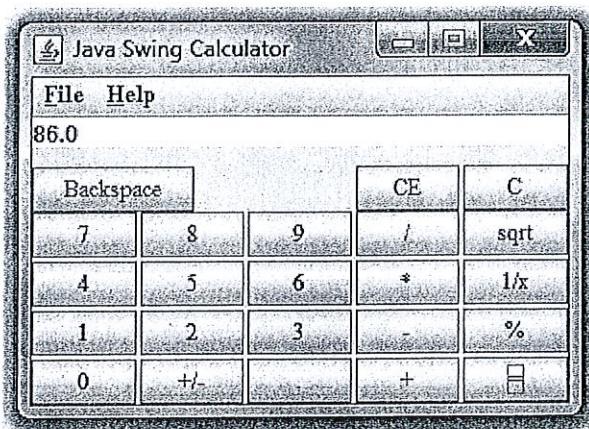


Figure A1/Rajah A1

- CLO1 1. Figure A1 shows the Java program interface using Swing components. Identify lines of code that must be declared at the beginning of this program.
Rajah A1 menunjukkan antaramuka yang dihasilkan program Java dengan menggunakan komponen Swing. Kenalpasti baris kod yang perlu diisyiharkan untuk pada awal program ini.
- import.java.swing.*;
 - javax.swing.awt.*;
 - import javax.swing.*;
 - import javax.swing.awt.*;
- C1 2. Identify the default layout manager for JPanel.
Kenalpasti pengurus susun atur yang 'default' untuk JPanel.
- BorderLayout
 - FlowLayout
 - GridLayout
 - There is no default / Tiada 'default'

CLO1
C2

3. Which of the following Java statement is TRUE to create and display a frame with an object name, myFrame and the size of the frame is 200 pixels width and 100 pixels height.

Yang manakah penyataan Java berikut adalah BETUL untuk mencipta dan memaparkan bingkai dengan objek bernama myframe dan saiz bingkai adalah 200 piksel lebar dan 100 pixel tinggi.

- A. Frame myFrame = new Frame();
myFrame.setSize(100,200);
myFrame.setVisible(true);
- B. myFrame Frame = new Frame("myFrame");
Frame.setSize(200,100);
Frame.setVisible(true);
- C. Frame frm = new Frame("myFrame");
frm.setSize(100,200);
frame.setVisible(true);
- D. Frame myFrame = new Frame();
myFrame.setSize(200,100);
myFrame.setVisible(true);

```
Textfield text = new Texfield(10);
```

Figure A2/Rajah A2

CLO1
C3

4. What is the meaning of the snippet code in Figure A2?
Apakah maksud kepada snipped dalam Rajah A2?

- A. Creates text object that can hold 10 rows and 10 columns of text
Mencipta objek teks yang boleh menyimpan 10 baris dan lajur teks.
- B. Creates text object that can hold 10 rows of text
Mencipta objek teks yang boleh menyimpan 10 baris teks.
- C. Create text object and initializes it with the value of text
Mencipta objek teks dan kepada asal dengan nilai teks
- D. Create text object that can hold 10 columns of text
Mencipta objek teks yang boleh memegang 10 lajur teks

CLO1
C1

5. What is the correct JDBC driver Type for JDBC-ODBC bridge.
Apakah jenis pemacu JDBC yang betul untuk JDBC-ODBC bridge.

- A. Type 1
- B. Type 2
- C. Type 3
- D. Type 4

CLO1
C2

6. Given:

- i. Password
- ii. User ID
- iii. URL or machine name where server runs

Diberi:

- i. Kata Laluan
- ii. Nombor Pengenal
- iii. URL or nama mesin

DriverManager.getConnection("____a____", "____b____", "____c____");

Figure A3/Rajah A3

Based on Figure A3, arrange the **CORRECT** order of parameters to suite the statement above.

Berdasarkan Rajah A3, susun parameter bagi menyesuaikan pernyataan di atas.

- A. i, ii, iii
- B. i, iii, ii
- C. ii, iii, i
- D. iii, ii, i

CLO1
C3

7. Choose the correct sequence for establishing a JDBC connection.

Pilih turutan yang betul untuk mewujudkan sambungan JDBC.

- i. Execute SQL statement
Melaksanakan pernyataan SQL
- ii. Load JDBC driver
Memuatkan pemacu JDBC
- iii. Establish Connection
Mewujudkan sambungan
- iv. Process ResultSet
Pemprosesan ResultSet
- v. Create SQL statement
Membuat pernyataan

- A. ii, iii, v, i, iv
- B. ii, iii, i, v, iv
- C. iii, ii, v, i, iv
- D. iii, ii, v, iv, i

CLO1
C2

8. State the location of AppletViewer tool in JDK directory.

Nyatakan lokasi alatan AppletViewer di dalam direktori JDK.

- A. bin
- B. lib
- C. source
- D. class

CLO1
C3

9. Which of the following shape is produced by the Java statement given in Figure A4?

Yang manakah antara bentuk berikut yang dihasilkan oleh kenyataan Java seperti Rajah A4?

```
g.setColor(Color.RED);
g.drawOval(30, 30, 80, 40);
```

Figure A4/ Rajah A4

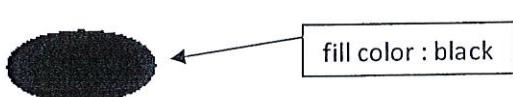
A.



B.



C.



D.



CLO1
C1

10. Refer to Figure A5, choose the **CORRECT** answer that displayed in the applet made by this program.
*Berdasarkan Rajah A5, pilih jawapan yang **BENAR** bagi memaparkan output dari aturcara applet di bawah.*

```
import java.awt.*;
import java.applet.*;
public class myapplet extends Applet {
    public void paint(Graphics g) {
        g.drawString("A Simple Applet", 20, 20);
    }
}
```

Figure A5/ Rajah A5

- A. A Simple Applet
- B. A Simple Applet 20 20
- C. Compilation Error
- D. Runtime Error

CLO1
C2

11. Select the scripting element that is **NOT LISTED** in JSP.
*Pilih elemen skrip yang **TIDAK TERSENARAI** dalam JSP.*

- A. Scriptlets
- B. Expression
- C. Variables
- D. Declaration

CLO2
C1

12. The below statement is related to...
Pernyataan di atas adalah berkaitan dengan...

Often used to leave messages for the user, or to put questions to the user.

- A. Frame windows
- B. Menu bars
- C. Dialog
- D. Panel

SULIT

CLO2
C2

13. Which of the following codes represent an AWT component that is being integrated into another component?
Manakah antara kod berikut mewakili komponen AWT yang sedang disepadukan ke dalam komponen lain?

- A. panel.add(acheckbox);
panel.add(acheckbox);
- B. JPanel panel = new JPanel();
JPanel panel = new JPanel();
- C. aRadioButton = new JRadioButton("16 slices");
aRadioButton = new JRadioButton("16 slices");
- D. aCheckBox = new JCheckBox("Garlic",true);
aCheckBox = new JCheckBox("Garlic",true);

CLO2
C4

14.

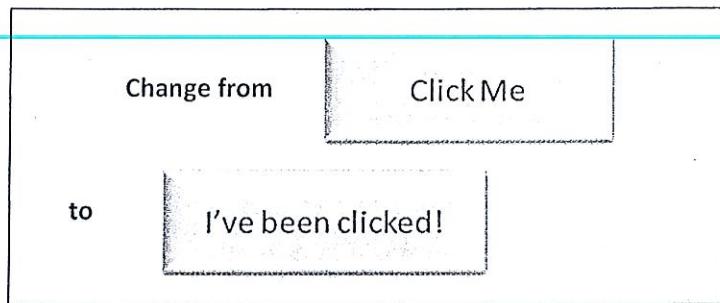


Figure A6 / Rajah A6

Based on Figure A6, identify the appropriate code segment for actionPerformed() method when the user Press the Click Me button and I've been clicked! button will be displayed.

Berdasarkan Rajah A6, kenalpasti segmen kod yang sesuai untuk fungsi 'actionPerformed()' bila pengguna menekan butang Click Me dan butang I've been clicked! akan dipaparkan.

- A. public void actionPerformed(ActionEvent event){
 button.getText("I've been clicked!");
}
- B. public void actionPerformed(ActionEvent event){
 button.setText("I've been clicked!");
}
- C. public void actionPerformed(ActionEvent event){
 button.setObject("I've been clicked!");
}
- D. public void actionPerformed(ActionEvent event){
 button.getSelectedItem("I've been
clicked!");
}

CLO2
C4

15. Based on Figure A7, analyze the following code segment and identify the wrong statement.

Berdasarkan Rajah A7, analisa keratan aturcara yang berikut dan kenalpasti penyataan yang salah.

```
private class ButtonHandler extends ActionListener ... (i)
{
    public void actionPerformed (ActionEvent event) ... (ii)
    {
        String ans1;
        ans1 = new String(inputNum1.getText()); ... (iii)
        int n1 = Integer.parseInt(ans1);
    }
}
```

Figure A7 / Rajah A7

- A. i
- B. ii
- C. iii
- D. All statement correct/ *Semua penyataan betul*

CLO2
C5

16. Identify an error that occurs in the program based on the Figure A8.
Kenalpasti kesalahan yang berlaku dalam program berdasarkan Rajah A8.

```
1. import javax.swing.*;
2.
3. public class MyFrame extends JFrame
4. {
5.     public MyFrame()
6.     {
7.         setLayout(new FlowLayout());
8.         JButton btn = new JButton("SUBMIT");
9.         JTextField txt = new JTextField(10);
10.        add(btn);
11.        add(txt);
12.    }
13.
14.    public static void main(String[] args)
15.    {
16.        MyFrame frame = new MyFrame();
17.        frame.setSize(400, 300);
18.        frame.setVisible(true);
19.    }
20. }
```

Figure A8 / Rajah A8

- A. Package awt must be imported into the program.
Pakej AWT mesti diimport ke dalam program
- B. *extends JFrame* in line 3 is an optional statement for this program.
extends JFrame dalam baris 3 adalah kenyataan pilihan untuk program ini .
- C. Line 10 and line 11, must be *frame.add(btn);* and *frame.add(txt);*
Baris 10 dan 11, mesti frame.add(btn); dan frame.add(txt);
- D. This program is not suitable to use FlowLayout for arranging the components.
Program ini tidak sesuai untuk digunakan untuk mengatur FlowLayout komponen .

CLO2
C1

17. Refer to the Figure A9 below; identify the SQL code to get ResultSet from Student table.

Berdasarkan Rajah A9 di bawah kenalpasti kod SQL untuk mendapatkan ResultSet daripada jadual Student.

```
String queryStudent = "select * from Student";
```

Figure A9 / Rajah A9

- A. ResultSet rs = Stmt.executeQuery(queryStudent);
- B. ResultSet rs = Stmt.executeUpdate(queryStudent);
- C. ResultSet rs = Stmt.executeDisplay(queryStudent);
- D. ResultSet rs = Stmt.executeAll(queryStudent);

CLO2
C3

18. Identify which class header would be used to create an applet that accepts a click on a button?

Kenal pasti kelas header manakah yang akan digunakan untuk applet yang menerima satu klik pada butang?

- A. public class MyApplet extends JApplet implements Listener
- B. public class MyApplet extends JApplet implements ActionListener
- C. public class MyApplet extends JApplet implements ActionEvent
- D. public class MyApplet extends JApplet implements Event

CLO2
C4

19. Choose the **BEST** answer to complete the given program in Figure A10.
Pilih jawapan yang TERBAIK untuk melengkapkan program yang diberikan dalam Rajah A10

```

1.import java.io.*;
2.import javax.____.*;
3.import javax.servlet.http.*;
4.public class HelloWorld extends HttpServlet {
5. public void _____ (HttpServletRequest request,
6.HttpServletResponse response)
7.     _____ ServletException, IOException
8.     {
9.         PrintWriter out = response.getWriter();
10.        _____ ("Happy Hour");
11.    }
12. }
```

Figure A10 / Rajah A10CLO2
C5

20. Based on Figure A11 below, assume that you need to write JSP pages that add numbers from one to ten. Refer to AAA, select the correct statement to compute the sum.

Berdasarkan keratan aturcara di bawah, andaikan bahawa anda perlu menulis satu laman JSP yang menambah nombor satu hingga sepuluh, dan kemudian cetak output. Merujuk pada AAA, pilih pernyataan yang betul untuk mengira jumlah.

```

<%
    int sum = 0;
    for(j = 0; j < 10; j++)
{
%>
// AAA --- ADD J TO SUM
<% } %>
```

Figure A11 / Rajah A11

- A. <% sum = sum + j %>
- B. <% sum = sum + j; %>
- C. <%= sum = sum + j %>
- D. <%= sum = sum + j; %>

SECTION B : 70 MARKS**BAHAGIAN B : 70 MARKAH****INSTRUCTION:**

This section consists of **TWO (2)** structured questions and **TWO (2)** essay questions.
Answer **ALL** questions.

ARAHAN:

*Bahagian ini mengandungi DUA (2) soalan berstruktur dan DUA (2) soalan eseai.
Jawab SEMUA soalan.*

QUESTION 1**SOALAN 1**

- CLO1 a) List **TWO(2)** advantages of Swing component usage in Java programming.
Senaraikan DUA(2) kelebihan komponen Swing di dalam pengaturcaraan Java
[2 marks]
[2 markah]
- CLO1 b) What is the purpose of using Layout Manager in Java program?
Apakah kegunaan 'Layout Manager' dalam program Java?
[2 marks]
[2 markah]
- CLO1 c) Find the error(s) in each of the following statements, and correct them.
Cari kesilapan dalam setiap pernyataan di bawah dan betulkan kesilapan tersebut.
- C2 i) import java.swing.*
 ii) JTextArea j = JTextArea("hai", 2, 2)
[2 marks]
[2 markah]

- CLO1
C3 d) Figure B1 shows an example Graphical User Interface. Define suitable layout manager to produce the interface and explain it.

Rajah B1 menunjukkan contoh antaramuka bergrafik. Kenalpasti 'layout manager' yang sesuai dan terangkan mengapa 'layout manager' tersebut sesuai untuk menghasilkan antaramuka di atas.

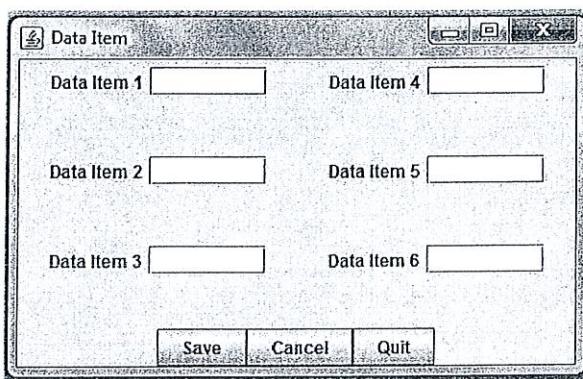


Figure B1 /Rajah B1

[2 marks]

[2 markah]

- CLO1
C1 e) Explain JDBC.
Jelaskan JDBC.

[2 marks]

[2 markah]

- CLO1
C2 f) Complete the database name in Table B1 below.
Lengkapkan nama database pada Jadual B1 di bawah.

Database	Driver Class
_____ (i) _____	<code>sun.jdbc.odbc.JdbcOdbcDriver</code>
_____ (ii) _____	<code>com.mysql.jdbc.Driver</code>
_____ (iii) _____	<code>Oracle.jdbc.driver.OracleDriver</code>

Table B1 / Jadual B1

[2 marks]

[2 markah]

CLO1

C3

- g) Explain how applet program runs through internet.

Jelaskan bagaimana program applet dijalankan melalui internet.

[2 marks]

[2 markah]

CLO1

C2

- h) Servlet allows a software developer to add dynamic content to a web server using Java platform. It have certain method such as init(), doGet() and destroy(). Select one of the methods mentioned and explain its function.

Servlet membenarkan pembangun perisian menambah isi kandungan yang dinamik ke dalam pelayan web menggunakan platform Java. Pilih salah satu method yang telah dinyatakan dan terangkan fungsinya.

[2 marks]

[2 markah]

CLO1

C3

- i)

```
public void doGet(HttpServletRequest request,  
                    HttpServletResponse response)  
throws ServletException, IOException { }
```

Figure B2 /Rajah B2

Based on the Figure B2 above, explain the use of response object.

Berdasarkan Rajah B2 di atas terangkan kegunaan object response.

[2 marks]

[2 markah]

QUESTION 2**SOALAN 2**CLO2
C2

- a) Identify TWO (2) swing packages.
Kenalpasti DUA (2) pakej swing.

[2 marks]

[2 markah]

CLO2
C4

- b) Write a declaration of font and size in AWT programme based on Figure B3.
Tuliskan kod coretan Java program untuk huruf dan saiz program java seperti Rajah B3.

Font = Helvetica , Size = 12

Figure B3 / Rajah B3

[2 marks]

[2 markah]

CLO2
C2

- c) Describe the following JDBC driver type.
Terangkan jenis JDBC driver berikut.

- i) JDBC-Native API

[2 marks]

[2 markah]

CLO2
C3

- d) Illustrate the JDBC driver type from Question 2(c) above in a concept diagram.
Gambarkan konsep JDBC driver seperti yang dinyatakan dalam Soalan 2(c) di atas dalam bentuk diagram.

[2 marks]

[2 markah]

CLO2
C2

- e) Given Java source in HelloWorldApplet.java

```
import java.awt.*;
import java.applet.Applet;
public class HelloWorldApplet extends Applet {
    public void paint(Graphics g)
    {
        Dimension d = getSize();
        g.setColor(Color.BLACK);
        g.fillRect(0,0,d.width, d.height); //paint background
        g.setFont(new Font("San-serif", Font.BOLD, 24));
        g.setColor(new Color(255, 215, 0));
        g.drawString("Hello, world!", 60, 40);
    }
}
```

HTML source in HelloWorld.html

```
<!--HelloWorld.html-->
<html>
    <head>
        <title>HelloWord</title>
    </head>
    <body>
        <center>
            <applet code="HelloWorldApplet.class"
                    width=300 height=350></applet>
        </center>
        <hr/>
        <a href="HelloWorldApplet.java">The source.</a>
    </body>
</html>
```

- i) Explain the syntax on how to compile the program.

Terangkan sintak bagaimana untuk kompil program.

- ii) Explain the syntax on how to run the program.

Terangkan sintak bagaimana untuk 'run' program.

[2 marks]

[2 markah]

- CLO2 C3 f) Illustrate output of Question 2(e)
Gambarkan output daripada Soalan 2(e)
[2 marks]
[2 markah]
- CLO2 C1 g) Identify TWO (2) methods that send requests to Web server.
Kenalpasti DUA (2) metod yang akan hantar permintaan kepada pelayan Web.
[2 marks]
[2 markah]
- CLO2 C5 h) How do you invoke the doGet() method in Servlets?
Bagaimana anda memanggil doGet() metod dalam Servlets?
[2 marks]
[2 markah]

QUESTION 3**SOALAN 3**

- CLO1 C1 a) Give ONE(1) example of Border Layout.
Berikan SATU (1) contoh Border Layout.
[3 marks]
[3 markah]
- CLO1 C2 b) Create an object of type JComboBox named *cbox* that contains the options Red, Blue, Green, and Black.
Cipta objek berjenis JComboBox bernama cbox yang mengandungi pilihan Merah, Biru, Hijau dan Hitam.
[3 marks]
[3 markah]
- CLO1 C3 c) Create a menu bar named *mnuBar* and add the menus named *controlmnu*, *colormnu* and *toolsmnu* to the menu bar.
Cipta menu bar benama mnuBar dan tambar menu benama controlmnu, colormny dan toolsmnu ke dalam menu bar.
[3 marks]
[3 markah]

CLO1
C2

- d) Briefly describe THREE (3) of Applet basic methods.

Huraikan TIGA (3) kaedah asas Applet.

[3 marks]
[3 markah]

CLO1
C1

- e) State THREE (3) unique characteristics that distinguish a JavaBean from other Java classes.

Nyatakan TIGA (3) karekteristik unik yang membezakan sebuah JavaBean daripada Java class.

[3 marks]
[3 markah]

QUESTION 4

SOALAN 4

CLO1
C3

- a) Briefly explain the methods used in the following steps to create JDBC connection:

- i. Establish the connection
- ii. Load the driver
- iii. Create a statement

Nyatakan secara kaedah yang digunakan dalam langkah berikut untuk mencipta sambungan JDBC:

- i. Mengukuhkan sambungan
- ii. Memuat pemacu
- iii. Mencipta penyataan

[3 marks]
[3 markah]

- b) Give ONE (1) listener interface and ONE (1) event class for checkbox, mouse and keyboard.

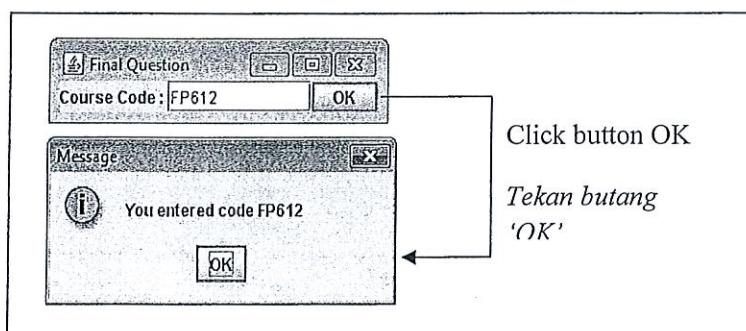
Berikan SATU(1) antaramuka pendengar dan SATU(1) kelas peristiwa untuk checkbox, mouse dan keyboard.

[3 marks]
[3 markah]

- c) Referring to program structure given, write code segment for A to display output below.

Merujuk pada struktur aturcara yang diberi, tuliskan keratan aturcara bagi A untuk memaparkan output di bawah:

```
public void actionPerformed(
ActionEvent event )
{
    ...
}
```



[3 marks]

[3 markah]

- d) Rewrite the correct statement based on the below statement:

Tulis semula pernyataan yang betul berdasarkan pernyataan di bawah:

```
String userid="abcd";
int password = "1234";
con=DriverManager.getConnection("JDBC:odb
c:Family",
userid,password);
```

[3 marks]

[3 markah]

- e) Write a statement for rectangle with the coordinates (20,40), width=70 and height=30 using a Graphic class.

Tulis suatu pernyataan untuk segiempat tepat dengan koordinat (20,40), lebar=70 dan tinggi=30 menggunakan kelas Grafik.

[3 marks]

[3 markah]

- f) Solve the problem below by completing the following codes using servlet.
Selesaikan masalah dibawah dengan melengkapkan kod berikut menggunakan servlet.

```
import java.io.IOException;
import java.io.PrintWriter;
import javax.servlet.ServletException;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.text.SimpleDateFormat;
import _____ (i)
;

public class servletExDate extends HttpServlet {

    protected void processRequest(HttpServletRequest request,
HttpServletResponse response)
        throws ServletException, IOException {
    response.setContentType("text/html; charset=UTF-8");

    PrintWriter out = response.getWriter();
    try {
        Date _____ (ii) _____ = new Date();
        SimpleDateFormat format = new SimpleDateFormat("_
(iii) _____");
        out.println("<html>");
        out.println("<head>");
        out.println("<title>Servlet
servletExDate</title>");
        out.println("</head>");
        out.println("<body>");
        out.println("<br><h2>Date & time : " +
format.format(date) + "</h2>");
        out.println("</body>");
        out.println("</html>");
    } finally {
        out.close();
    }
}
```

[3 marks]

[3 markah]

- g) Write JSP coding to produce output as seen in Figure B3.

Tulis aturcara JSP untuk menghasilkan output seperti Rajah B3.

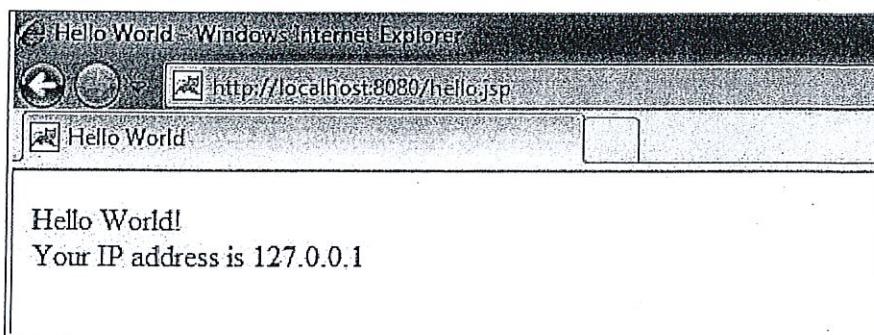


Figure B4 / Rajah B4

[3 marks]

[3 markah]

END OF QUESTIONS
SOALAN TAMAT

