

ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ

ΣΧΟΛΗ ΗΛΕΚΤΡΟΛΟΓΩΝ ΜΗΧΑΝΙΚΩΝ ΚΑΙ ΜΗΧΑΝΙΚΩΝ ΗΛΕΚΤΡΟΝΙΚΩΝ
ΥΠΟΛΟΓΙΣΤΩΝ

ΑΚΑΔΗΜΑΙΚΟ ΕΤΟΣ 2012 – 2013 Εαρινό εξάμηνο

Διαδίκτυο και Εφαρμογές

1η Άσκηση

8^ο ΕΞΑΜΗΝΟ

ΦΟΙΤΗΤΗΣ:

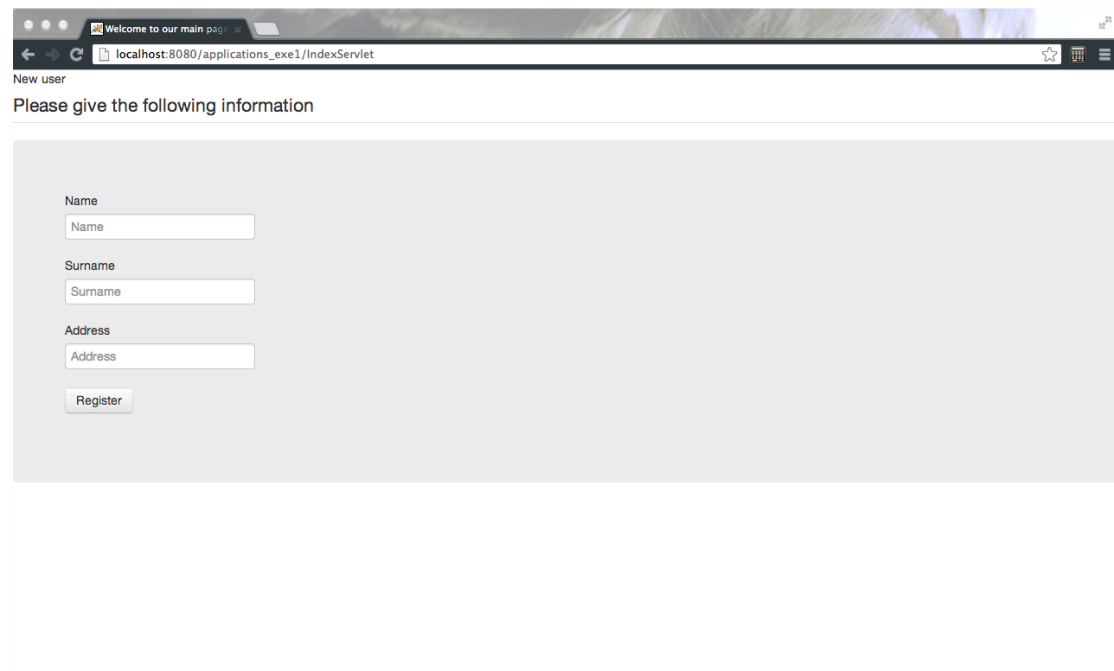
ΚΟΓΙΑΣ ΜΑΡΙΟΣ-ΕΥΑΓΓΕΛΟΣ

Σκοπός

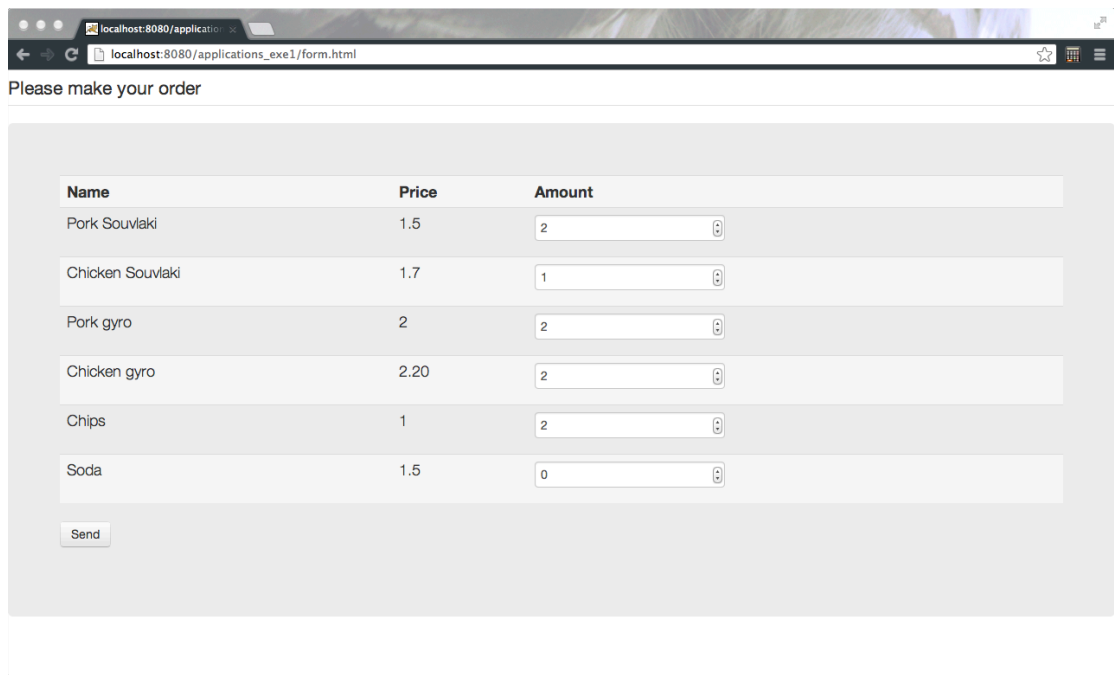
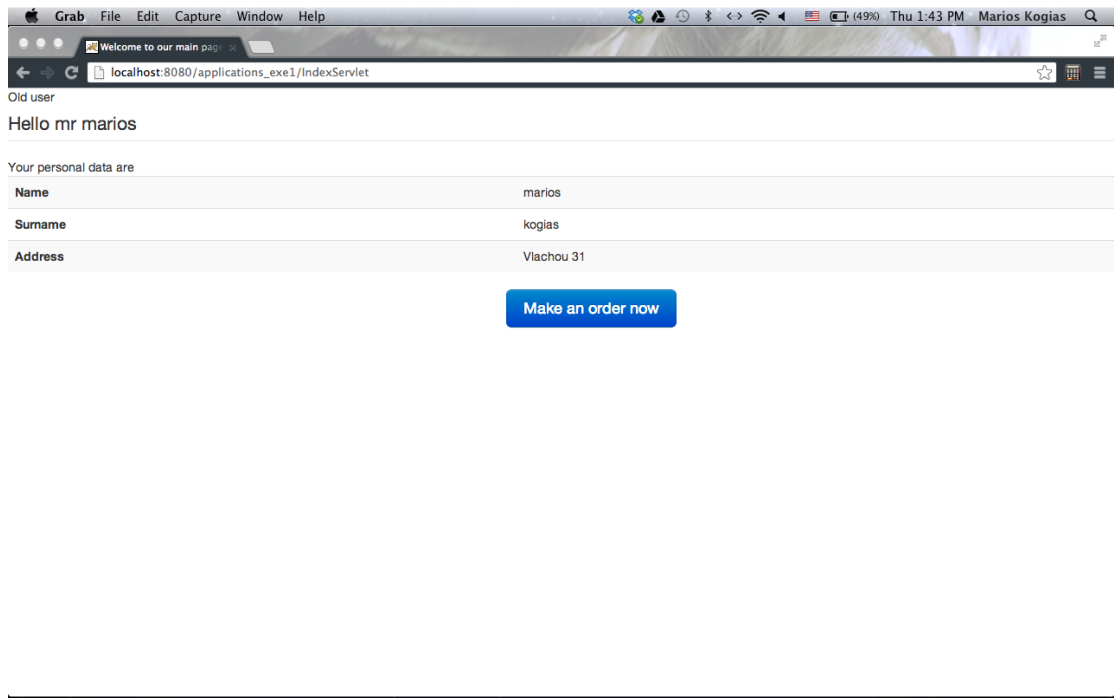
Σκοπός της συγκεκριμένης εργασίας ήταν η εξοικείωση με την τεχνολογία των Servlets και η δημιουργία μιας δυναμικής σελίδας με αυτά. Στη σελίδα αυτή χρησιμοποιήθηκαν επιπλέον κάποια στατικά τμήματα html. Τέλος για να διατηρήσουμε κάποιες πληροφορίες του χρήστη δημιουργήσαμε ορισμένα cookies.

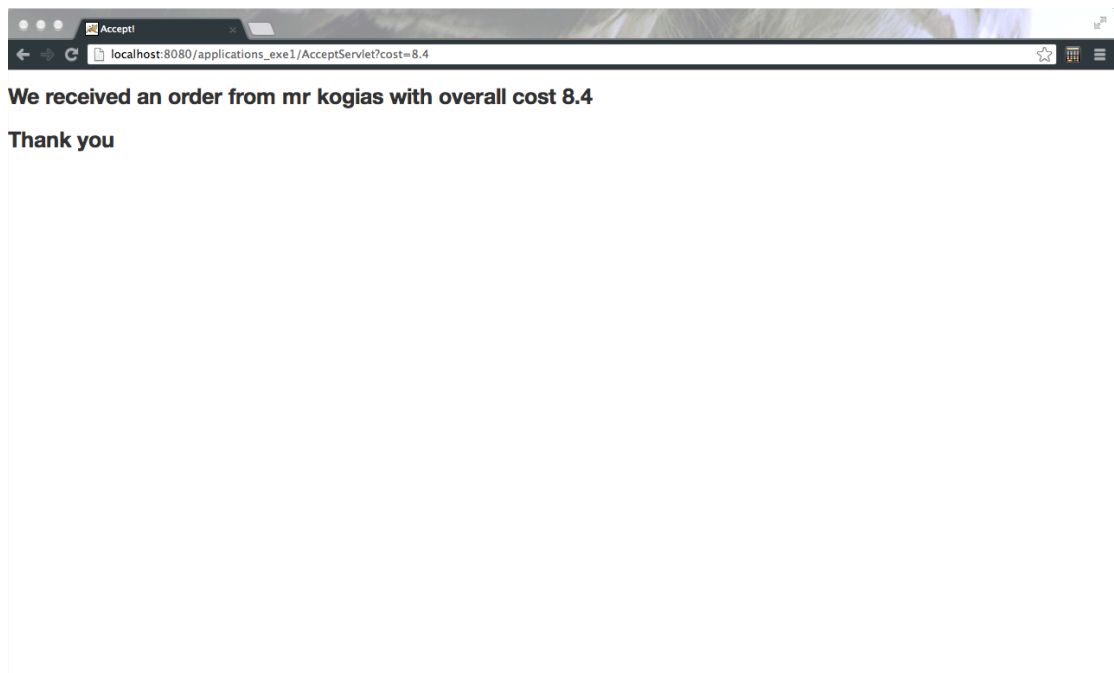
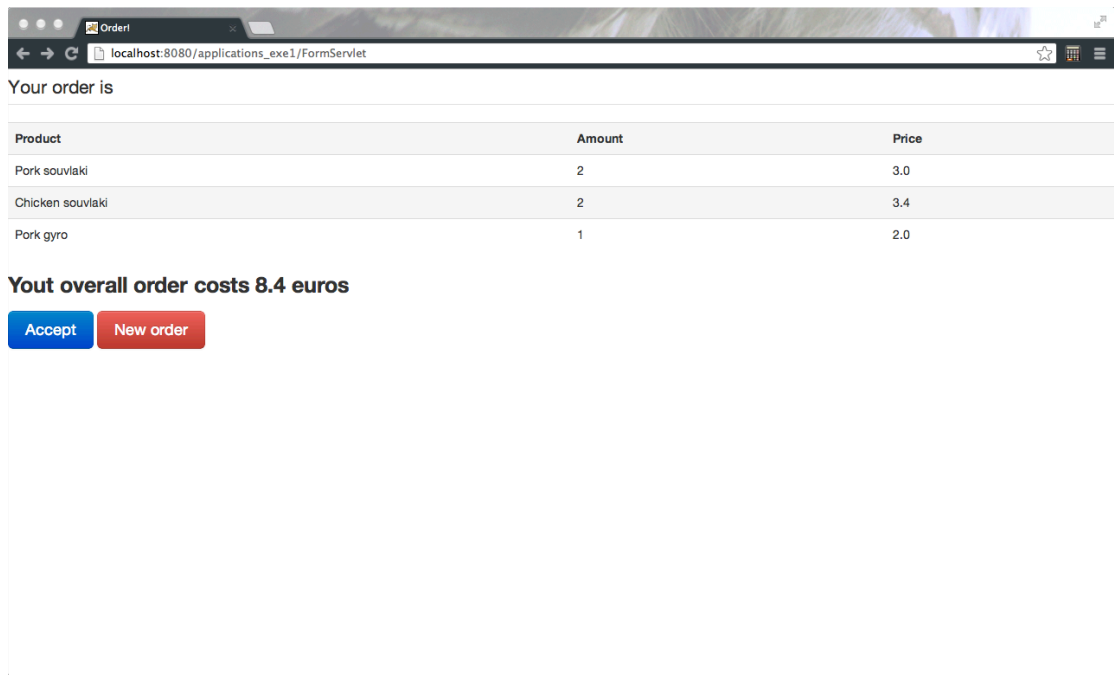
Η ροή εκτέλεσης είναι η εξής. Αρχικά για ένα χρήστη που μπαίνει πρώτη φορά ζητούνται προσωπικά δεδομένα όπως όνομα και επίθετο. Στην περίπτωση που ο χρήστης έχει ξαναμπει στην ιστοσελίδα πρόσφατα τα δεδομένα αυτά είναι κρατημένα σε cookies και επομένως το στάδιο αυτό παραλείπεται. Στη συνέχεια παρουσιάζονται συγκεντρωτικά τα στοιχεία χρήστη και του ζητείται να δώσει μια παραγγελία. Η συγκεκριμένη εφαρμογή αφορά ένα εστιατόριο επομένως οι παραγγελίες είναι σχετικές με φαγητό. Αφού ο χρήστης δώσει την παραγγελία του έχει επιλογή να την επιβεβαιώσει ή να την ακυρώσει. Αν την ακυρώσει κάνει νέα παραγγελία ενώ αν την επιβεβαιώσει του τυπώνεται το συνολικό κόστος και μια ευχαριστία από το κατάστημα.

Παρακάτω μπορείτε να δείτε τα διαδοχικά screenshots της εφαρμογής.



The screenshot shows a web browser window with the address bar displaying 'localhost:8080/applications_exe1/IndexServlet'. The page content includes a header 'Welcome to our main page' and a message 'New user'. Below this, a form titled 'Please give the following information' is displayed. The form contains three text input fields labeled 'Name', 'Surname', and 'Address'. At the bottom of the form is a 'Register' button.





Συνολικά τον κώδικά της εφαρμογής μπορείτε να βρείτε στο https://github.com/marioskogias/webApplications/tree/master/applications_exe1.

Επιπλέον, ο κώδικας αυτός επισυνάπτεται.

```

/*
 * IndexServlet
 */
package servlets;

import java.io.IOException;
import java.io.PrintWriter;

import javax.servlet.*;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import java.util.HashMap;
/**
 * Servlet implementation class IndexServlet
 */
public class IndexServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public IndexServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request,
    HttpServletResponse
     * response)
     */
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws
ServletException, IOException {
        response.setContentType("text/html");
        PrintWriter output;
        output = response.getWriter();
        output.println("<!DOCTYPE html><HEAD>");
        output.println("<link
href=\"bootstrap/css/bootstrap.css\" rel=\"stylesheet\">");

        output.println("<TITLE>");
        output.println("Welcome to our main page!");
        output.println("</TITLE></HEAD><BODY>");

```

```

        Cookie cookies[];
        cookies = request.getCookies(); // get client's
cookies
        if (cookies == null) {
            output.println("New user");
            output.println("<fieldset><legend>Please give
the following information</legend></fieldset>");
            output.println("<div class = 'hero-unit'>");
            output.println("<form method = 'post' action =
'IndexServlet'>");
            output.println("<div class='control-group'>
<label class='control-label' for='Name'>Name</label>");
            output.println("<div class='controls'> <input
type='text' name='name' placeholder='Name'></div></div>");
            output.println("<div class='control-group'>
<label class='control-label' for='Surname'>Surname</label>");
            output.println("<div class='controls'> <input
type='text' name='surname'
placeholder='Surname'></div></div>");
            output.println("<div class='control-group'>
<label class='control-label' for='Address'>Address</label>");
            output.println("<div class='controls'> <input
type='text' name='Address'
placeholder='Address'></div></div>");
            output.println("<button type='submit'
class='btn'>Register</button>");
            output.println("</form>");
            output.println("</div>");

        } else {
            //create cookie dictionary
            int i;
            HashMap<String,String> cookieMap = new
HashMap<String,String>(3);
            for (i=0;i<cookies.length;i++)

                cookieMap.put(cookies[i].getName(),cookies[i].getValue())
;

            output.println("Old user");
            output.println("<fieldset><legend>Hello mr "+
cookieMap.get("name") + "</legend></fieldset>");
            output.println("Your personal data are");
            output.println("<table class='table table-

```

```

        striped'> <tbody>");

        output.println("<tr><td><strong>Name</strong></td><td>" + cookieMap.get("name") + "</td></tr>");

        output.println("<tr><td><strong>Surname</strong></td><td>" + cookieMap.get("surname") + "</td></tr>");

        output.println("<tr><td><strong>Address</strong></td><td>" + cookieMap.get("Address") + "</td></tr>");

        output.println("</tbody></table>");

        output.println("<a style = 'margin-left : 45%' class='btn btn-large btn-primary' type='button' href = 'form.html'>Make an order now</a>");
    }

    output.println("<script src = 'http://code.jquery.com/jquery.js'></script>");
    output.println("<script src = 'bootstrap/js/bootstrap.js'></script>");
    output.println("</BODY></HTML>");
}

/**
 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
 */
protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {
    String val = request.getParameter("name");
    Cookie c = new Cookie("name",val); // to be stored there as a cookie
    c.setMaxAge(120); // seconds until cookie removed
    response.addCookie(c); // must precede getWriter
    val = request.getParameter("surname");
    c = new Cookie("surname",val); // to be stored there as a cookie
    c.setMaxAge(120); // seconds until cookie removed
    response.addCookie(c); // must precede getWriter
    val = request.getParameter("Address");
    c = new Cookie("Address",val); // to be stored

```

```

        there as a cookie
        c.setMaxAge(120); // seconds until cookie removed
        response.addCookie(c); // must preceede getWriter

        //PrintWriter output;
        //output = response.getWriter();
        //output.println("got the cookies");
        response.sendRedirect("IndexServlet");
    }

}

/*
 * FormServlet
 */
package servlets;

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;

/**
 * Servlet implementation class FormServlet
 */
public class FormServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public FormServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request,
     HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request,
        HttpServletResponse response) throws ServletException,
        IOException {
        // TODO Auto-generated method stub

```



```

    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request,
     HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request,
        HttpServletResponse response) throws ServletException,
        IOException {
        PrintWriter output;
        output = response.getWriter();
        output.println("<!DOCTYPE html><HEAD>");
        output.println("<link
href=\"bootstrap/css/bootstrap.css\" rel=\"stylesheet\">");

        output.println("<TITLE>");
        output.println("Order!");
        output.println("</TITLE></HEAD><BODY>");

        double over_all_cost = 0;
        output.println("<fieldset><legend>Your order is
</legend></fieldset>");
        output.println("<table class='table table-striped'>
<tbody>");

        output.println("<tr><th>Product</th><th>Amount</th><th>Pr
ice</th></tr>");
        String amount = request.getParameter("ps");
        double price;
        if (!amount.equals("0")) {
            price = Double.parseDouble(amount) * 1.5;
            output.println("<tr><td>Pork
souvlaki</td><td>"+amount+"</td><td>"+price+"</td></tr>");
            over_all_cost = over_all_cost + price;
        }

        amount = request.getParameter("cs");
        if (!amount.equals("0")) {
            price = Double.parseDouble(amount) * 1.7;
            output.println("<tr><td>Chicken
souvlaki</td><td>"+amount+"</td><td>"+price+"</td></tr>");
            over_all_cost = over_all_cost + price;
        }
        amount = request.getParameter("pg");
        if (!amount.equals("0")) {
            price = Double.parseDouble(amount) * 2;
            output.println("<tr><td>Pork

```

```

gyro</td><td>"+amount+"</td><td>"+price+"</td></tr>");
        over_all_cost = over_all_cost + price;
    }

    amount = request.getParameter("cg");
    if (!amount.equals("0")) {
        price = Double.parseDouble(amount) * 2.2;
        output.println("<tr><td>Chicken
gyro</td><td>"+amount+"</td><td>"+price+"</td></tr>");
        over_all_cost = over_all_cost + price;
    }
    amount = request.getParameter("ch");
    if (!amount.equals("0")) {
        price = Double.parseDouble(amount) * 1;

        output.println("<tr><td>Chips</td><td>"+amount+"</td><td>"+price+"</td></tr>");
        over_all_cost = over_all_cost + price;
    }
    amount = request.getParameter("so");
    if (!amount.equals("0")) {
        price = Double.parseDouble(amount) * 1.5;

        output.println("<tr><td>Soda</td><td>"+amount+"</td><td>"+price+"</td></tr>");
        over_all_cost = over_all_cost + price;
    }

    output.println("</tbody></table>");
    output.println("<h3>Yout overall order costs "+
over_all_cost + " euros</h3>");
    output.println("<div id = 'buttons'>");
    output.println("<a id = 'accept' class='btn btn-
large btn-primary' type='button' href =
'AcceptServlet?cost="+over_all_cost+"'>Accept</a>");
    output.println("<a class='btn btn-large btn-danger'
type='button' href = 'form.html'>New order</a>");
    output.println("</div>");

    output.println("</body></html>");

}

}

/*

```

```

    * AcceptServlet
    */
package servlets;

import java.io.IOException;
import java.io.PrintWriter;
import java.util.HashMap;

import javax.servlet.ServletException;
import javax.servlet.http.Cookie;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

/**
 * Servlet implementation class AcceptServlet
 */
public class AcceptServlet extends HttpServlet {
    private static final long serialVersionUID = 1L;

    /**
     * @see HttpServlet#HttpServlet()
     */
    public AcceptServlet() {
        super();
        // TODO Auto-generated constructor stub
    }

    /**
     * @see HttpServlet#doGet(HttpServletRequest request,
    HttpServletResponse response)
     */
    protected void doGet(HttpServletRequest request,
    HttpServletResponse response) throws ServletException,
    IOException {
        Cookie cookies[];
        cookies = request.getCookies(); // get client's
cookies
        int i;
        HashMap<String,String> cookieMap = new
HashMap<String,String>(3);
        for (i=0;i<cookies.length;i++)

            cookieMap.put(cookies[i].getName(),cookies[i].getValue())
;

        PrintWriter output;

```

```

        output = response.getWriter();
        output.println("<!DOCTYPE html><HEAD>");
        output.println("<link
href=\"bootstrap/css/bootstrap.css\" rel=\"stylesheet\">");

        output.println("<TITLE>");
        output.println("Accept!");
        output.println("</TITLE></HEAD><BODY>");
        output.println("<h3>We received an order from mr " +
cookieMap.get("surname") + " with overall cost " +
request.getParameter("cost"));
        output.println("</h3><h3>Thank you</h3>");
    }

    /**
     * @see HttpServlet#doPost(HttpServletRequest request,
HttpServletResponse response)
     */
    protected void doPost(HttpServletRequest request,
HttpServletResponse response) throws ServletException,
IOException {
        // TODO Auto-generated method stub
    }
}

```

Και τα στατικά αρχεία

form.html

```

<!DOCTYPE html>
<body>
    <link href="bootstrap/css/bootstrap.css"
rel="stylesheet">
    <fieldset>
        <legend>Please make your order</legend>
    </fieldset>
    <div class='hero-unit'>
        <form method='post' action='FormServlet'>
            <table class='table table-striped'> <tbody>

                <tr><th>Name</th><th>Price</th><th>Amount</th></tr>
                <tr><td>Pork
Souvlaki</td><td>1.5</td><td><input type = "number" value = 0
name = "ps" min = 0></td></tr>
                <tr><td>Chicken
Souvlaki</td><td>1.7</td><td><input type = "number" value = 0

```

```

name = "cs" min = 0></td></tr>
      <tr><td>Pork gyro</td><td>2</td><td><input
type = "number" value = 0 name = "pg" min = 0></td></tr>
      <tr><td>Chicken
gyro</td><td>2.20</td><td><input type = "number" value = 0
name = "cg" min = 0></td></tr>
      <tr><td>Chips</td><td>1</td><td><input type =
"number" value = 0 name = "ch" min = 0></td></tr>
      <tr><td>Soda</td><td>1.5</td><td><input type =
"number" value = 0 name = "so" min = 0></td></tr>
      </tbody></table>
      <button type='submit'
class='btn'>Send</button>
    </form>
  </div>
  <script src='http://code.jquery.com/jquery.js'></script>
  <script src='bootstrap/js/bootstrap.js'></script>

</body>
</html>

```

Τέλος το αρχείο web.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://java.sun.com/xml/ns/javaee"
xmlns:web="http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"
xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
http://java.sun.com/xml/ns/javaee/web-app_2_5.xsd"
id="WebApp_ID" version="2.5">
  <display-name>applications_exe1</display-name>
  <welcome-file-list>
    <welcome-file>index.html</welcome-file>
    <welcome-file>index.htm</welcome-file>
    <welcome-file>index.jsp</welcome-file>
    <welcome-file>default.html</welcome-file>
    <welcome-file>default.htm</welcome-file>
    <welcome-file>default.jsp</welcome-file>
  </welcome-file-list>
  <servlet>
    <description></description>
    <display-name>firstApplet</display-name>
    <servlet-name>firstApplet</servlet-name>
    <servlet-class>servlets.firstApplet</servlet-class>
  </servlet>
  <servlet-mapping>
    <servlet-name>firstApplet</servlet-name>
    <url-pattern>/firstApplet</url-pattern>

```

```
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>firstServlet</display-name>
  <servlet-name>firstServlet</servlet-name>
  <servlet-class>servlets.firstServlet</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>firstServlet</servlet-name>
  <url-pattern>/firstServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>IndexServlet</display-name>
  <servlet-name>IndexServlet</servlet-name>
  <servlet-class>servlets.IndexServlet</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>IndexServlet</servlet-name>
  <url-pattern>/IndexServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>FormServlet</display-name>
  <servlet-name>FormServlet</servlet-name>
  <servlet-class>servlets.FormServlet</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>FormServlet</servlet-name>
  <url-pattern>/FormServlet</url-pattern>
</servlet-mapping>
<servlet>
  <description></description>
  <display-name>AcceptServlet</display-name>
  <servlet-name>AcceptServlet</servlet-name>
  <servlet-class>servlets.AcceptServlet</servlet-class>
</servlet>
<servlet-mapping>
  <servlet-name>AcceptServlet</servlet-name>
  <url-pattern>/AcceptServlet</url-pattern>
</servlet-mapping>
</web-app>
```