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| ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ  ΣΧΟΛΗ ΗΛΕΚΤΡΟΛΟΓΩΝ ΜΗΧΑΝΙΚΩΝ ΚΑΙ ΜΗΧΑΝΙΚΩΝ ΗΛΕΚΤΡΟΝΙΚΩΝ ΥΠΟΛΟΓΙΣΤΩΝ  ΑΚΑΔΗΜΑΙΚΟ ΕΤΟΣ 2012 – 2013 Εαρινό εξαμηνο |
| Διαδίκτυο και Εφαρμογές |
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| 1η Άσκηση |
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8Ο ΕΞΑΜΗΝΟ

**ΦΟΙΤΗΤΗΣ:**

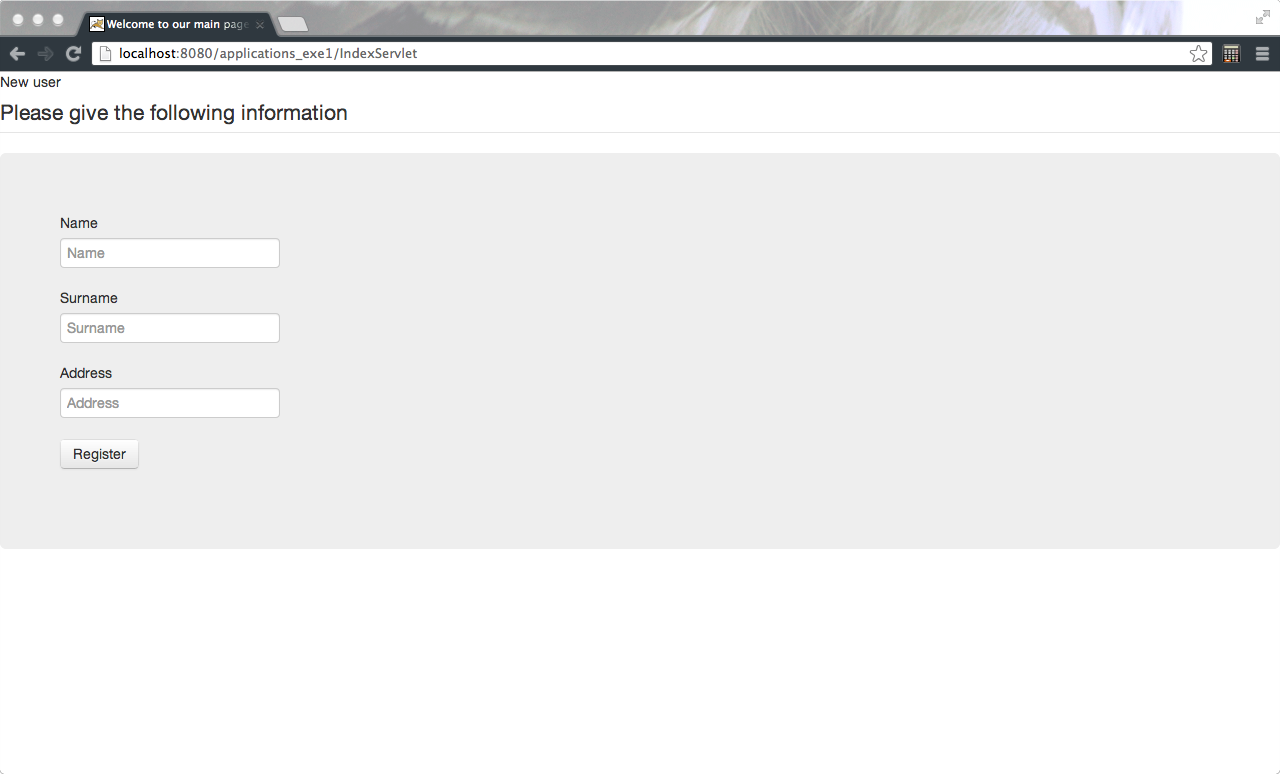
ΚΟΓΙΑΣ ΜΑΡΙΟΣ-ΕΥΑΓΓΕΛΟΣ

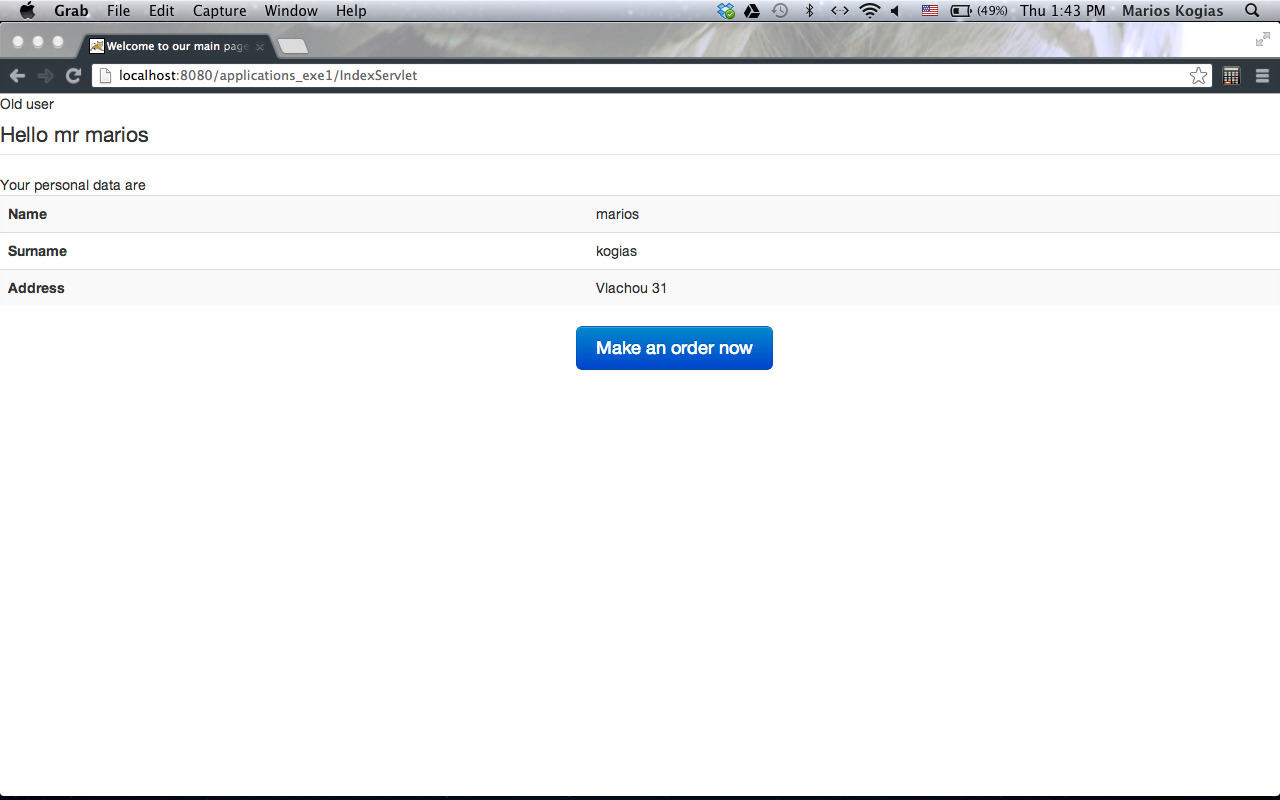
***Σκοπός***

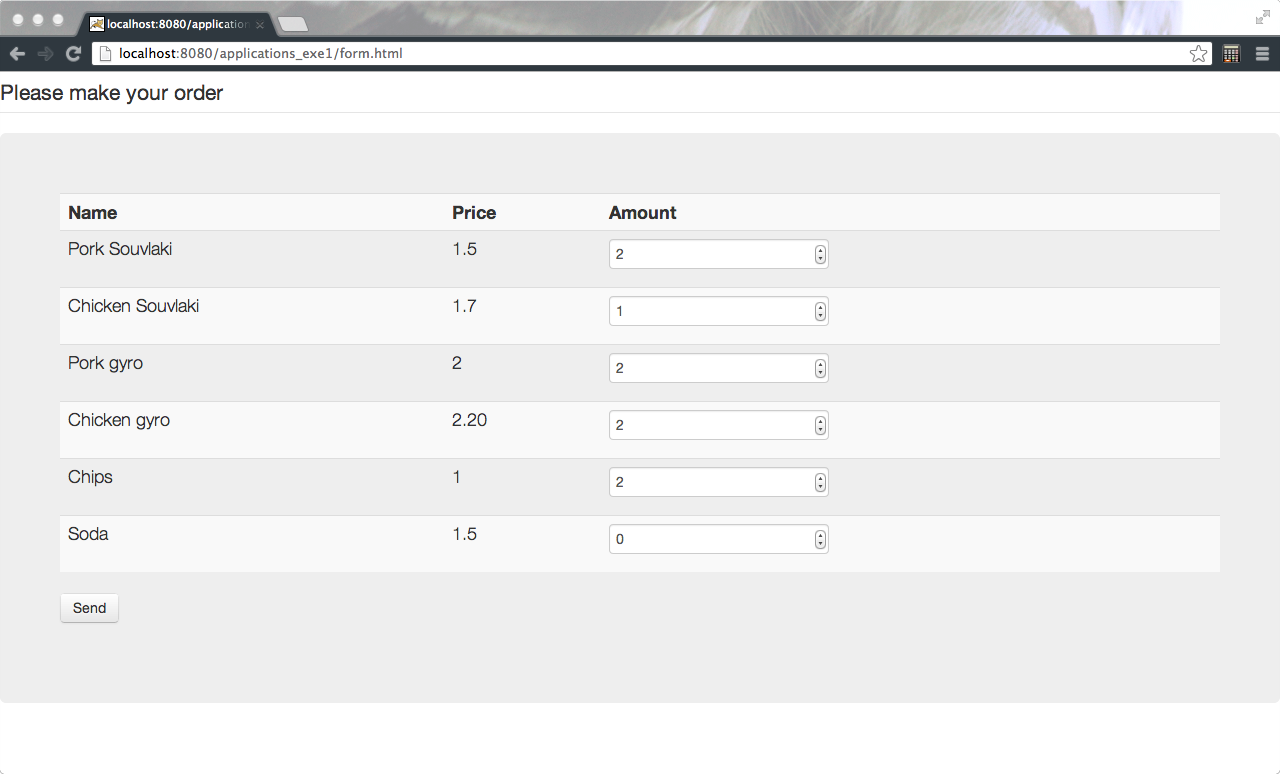
Σκοπός της συγκεκριμένης εργασίας ήταν η εξοικείωση με την τεχνολογία των Servlets και η δημιουργία μιας δυναμικής σελίδας με αυτά. Στη σελίδα αυτή χρησιμοποιήθηκαν επιπλέον κάποια στατικά τμήματα html. Τέλος για να διατηρήσουμε κάποιες πληροφορίες του χρήστη δημιουργήσαμε ορισμένα cookies.

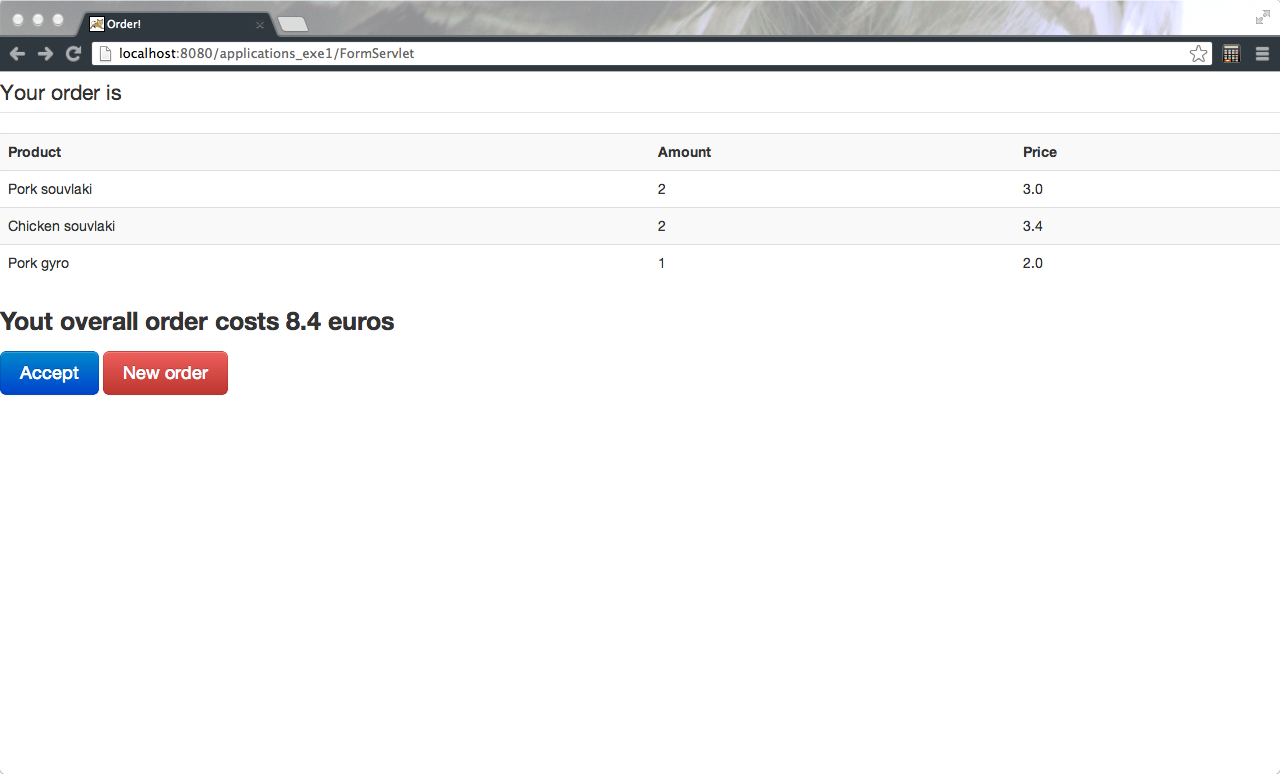
Η ροή εκτέλεσης είναι η εξής. Αρχικά για ένα χρήστη που μπαίνει πρώτη φορά ζητούνται προσωπικά δεδομένα όπως όνομα και επίθετο. Στην περίπτωση που ο χρήστης έχει ξαναμπεί στην ιστοσελίδα πρόσφατα τα δεδομένα αυτά είναι κρατημένα σε cookies και επομένως το στάδιο αυτό παραλείπεται. Στη συνέχεια παρουσιάζονται συγκεντρωτικά τα στοιχεία χρήστη και του ζητείται να δώσει μια παραγγελία. Η συγγεκριμένη 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.

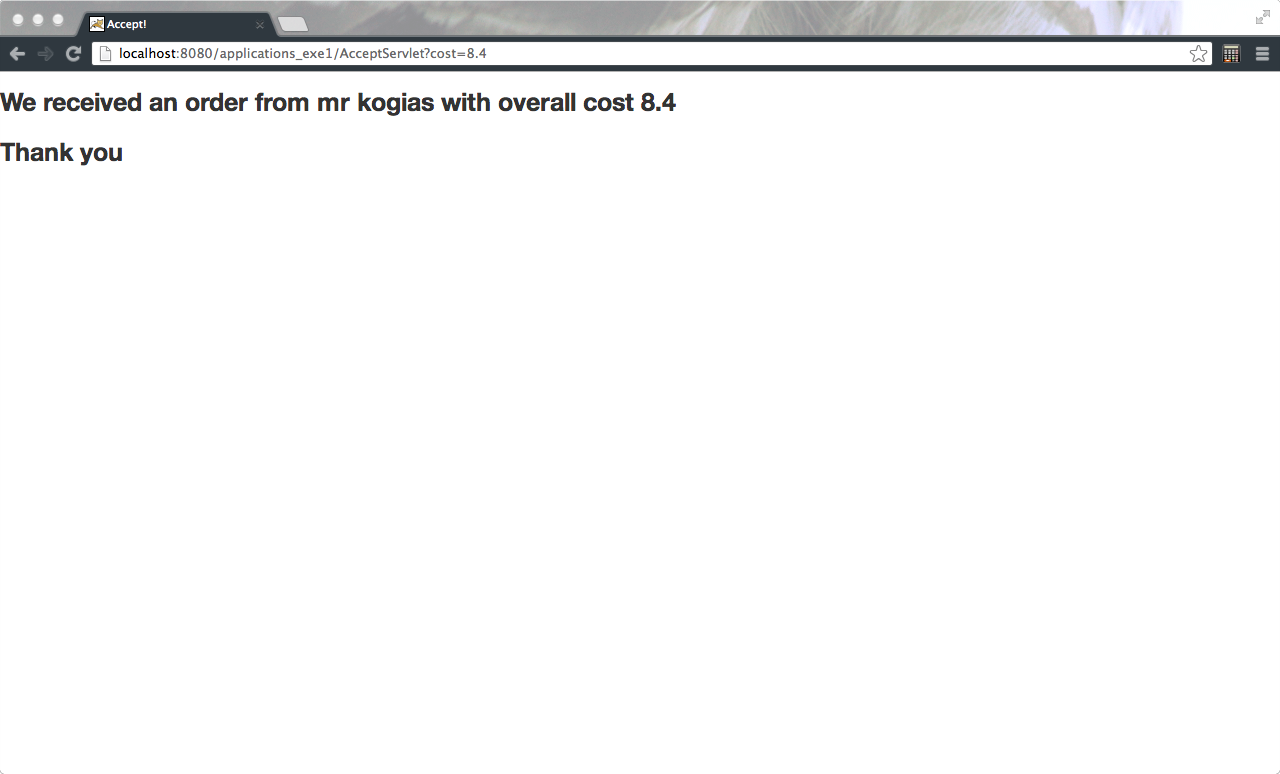
Παρακάτω μπορείτε να δείτε τα διαδοχικά screenshots της εφαρμογής.











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 preceede 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 preceede 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 cooikies");

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>Price</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>