

ΟΝΟΜΑ: AMPIT ΠΑΛ

ΕΞΑΜΗΝΟ: 7ο

ΑΜ:2245

Εκδοχή πρώτη Currency Converter

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package CurrencyConverter;

import java.io.*;
import javax.servlet.*;
import javax.servlet.annotation.*;
import javax.servlet.http.*;

@WebServlet("/currencyconverter")
public class CurrencyConverter extends HttpServlet {

    private static final double EUR_TO_USD = 1.06;
    private static final double EUR_TO_GBP = 0.84;

    protected void doGet(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {
        response.setContentType("text/html");
        response.setCharacterEncoding("UTF-8");
        PrintWriter out = response.getWriter();

        out.println("<!DOCTYPE html>");
        out.println("<html><head><title>Currency Converter</title></head><body>");
        out.println("<h1>Μετατροπή Ποσών σε Διαδοχικά Νομίσματα</h1>");

        String amountStr = request.getParameter("amount");
        String fromCurrency = request.getParameter("from");
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String toCurrency = request.getParameter("to");

out.println("<form method=\"get\">");

out.println("Ποσό: <input type=\"text\" name=\"amount\" value=\"" + (amountStr !=
null ? amountStr : "") + "\">");

out.println("Απο: ");

out.println("<select name=\"from\">");

out.println("<option value=\"Ευρώ\" + (fromCurrency != null &&
fromCurrency.equals(\"Ευρώ\") ? \" selected\" : \"\") + ">Ευρώ</option>");

out.println("<option value=\"Δολάρια\" + (fromCurrency != null &&
fromCurrency.equals(\"Δολάρια\") ? \" selected\" : \"\") + ">Δολάρια</option>");

out.println("<option value=\"Λίρες\" + (fromCurrency != null &&
fromCurrency.equals(\"Λίρες\") ? \" selected\" : \"\") + ">Λίρες</option>");

out.println("</select>");

out.println("Σε: ");

out.println("<select name=\"to\">");

out.println("<option value=\"Ευρώ\" + (toCurrency != null &&
toCurrency.equals(\"Ευρώ\") ? \" selected\" : \"\") + ">Ευρώ</option>");

out.println("<option value=\"Δολάρια\" + (toCurrency != null &&
toCurrency.equals(\"Δολάρια\") ? \" selected\" : \"\") + ">Δολάρια</option>");

out.println("<option value=\"Λίρες\" + (toCurrency != null &&
toCurrency.equals(\"Λίρες\") ? \" selected\" : \"\") + ">Λίρες</option>");

out.println("</select>");

out.println("<input type=\"submit\" value=\"Convert\">");

out.println("</form>");

if (amountStr != null && isValidNumber(amountStr) && fromCurrency != null &&
toCurrency != null) {

    double amount = Double.parseDouble(amountStr);

    double result = convertCurrency(amount, fromCurrency, toCurrency);

    out.println("<h1> " + amount + " " + fromCurrency + " = " + result + " " + toCurrency +
"</h1>");

} else if (amountStr != null || fromCurrency != null || toCurrency != null) {

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        out.println("<h1 style=\"color:red;\">Παρακαλώ εισάγετε έγκυρα δεδομένα.</h1>");
    }

    out.println("</body></html>");
}

private boolean isValidNumber(String number) {
    try {
        Double.parseDouble(number);
        return true;
    } catch (NumberFormatException e) {
        return false;
    }
}

private double convertCurrency(double amount, String fromCurrency, String toCurrency) {
    double result;

    if (fromCurrency.equals("Ευρώ")) {
        if (toCurrency.equals("Δολάρια")) {
            result = amount * EUR_TO_USD;
        } else if (toCurrency.equals("Λίρες")) {
            result = amount * EUR_TO_GBP;
        } else {
            result = amount;
        }
    } else if (fromCurrency.equals("Δολάρια")) {
        if (toCurrency.equals("Ευρώ")) {
            result = amount / EUR_TO_USD;
        } else if (toCurrency.equals("Λίρες")) {
            result = (amount / EUR_TO_USD) * EUR_TO_GBP;
        }
    }
}

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    } else {  
        result = amount;  
    }  
} else if (fromCurrency.equals("Λίρες")) {  
    if (toCurrency.equals("Ευρώ")) {  
        result = amount / EUR_TO_GBP;  
    } else if (toCurrency.equals("Δολάρια")) {  
        result = (amount / EUR_TO_GBP) * EUR_TO_USD;  
    } else {  
        result = amount;  
    }  
} else {  
    result = amount;  
}  
  
return result;  
}  
}
```