

ΤΕΧΝΟΛΟΓΙΕΣ ΕΦΑΡΜΟΓΩΝ
ΔΙΑΔΥΚΤΙΟΥ

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COIN CONVERTER USING SERVLET AND STATIC INPUT

- Concurrency.java

```
public class concurrency {  
    private String coin;  
    private String description;  
    private int conc;  
    public concurrency(String c,String d,int cn)  
    {  
        this.coin=c;  
        this.description=d;  
        this.conc=cn;  
    }  
    public String getDescription() {return this.description;}  
    public String getCoin() {return this.coin;}  
    public int getConcurrency() {return this.conc;}  
}
```

- CurrencyConverter.java

```
import java.io.IOException;  
  
import java.io.PrintWriter;  
  
import java.math.BigDecimal;  
  
import java.util.ArrayList;  
  
import java.util.List;  
  
  
import javax.servlet.ServletException;  
  
import javax.servlet.annotation.WebServlet;  
  
import javax.servlet.http.HttpServlet;  
  
import javax.servlet.http.HttpServletRequest;  
  
import javax.servlet.http.HttpServletResponse;
```

```
/**
```

```

* Servlet implementation class CurrencyConverter
*/
@WebServlet("/CurrencyConverter")
public class CurrencyConverter extends HttpServlet {

    private static final long serialVersionUID = 1L;

    private static List <currency> coins=new ArrayList<currency>();

    static
    {
        coins.add(new currency("EUR","Ευρώ",100));
        coins.add(new currency("USD","Δολάριο ΗΠΑ",106));
        coins.add(new currency("GBP","Λίρα Αγγλίας",84));
        coins.add(new currency("AUD","Δολάριο Αυστραλίας",142));
        coins.add(new currency("CAD","Δολάριο Καναδά",139));
        coins.add(new currency("CHF","Φράγκο Ελβετίας",108));
        coins.add(new currency("JPY","Γιεν Ιαπωνίας",12269));
        coins.add(new currency("ALL","Λεκ Αλβανίας",13621));
        coins.add(new currency("CNY","Γουάν Κίνας",732));
        coins.add(new currency("RUB","Ρούβλι Ρωσίας",6487));
    }

    public CurrencyConverter() {

        super();

    }

    private int getConcurency(String id)
    {

        for(currency c:this.coins)

```

```

    {
        if(c.getDescription().equals(id))
        {
            return c.getConcurrency();
        }
    }
    return -1;
}

private void fill_from_select(PrintWriter pw)
{
    for(int i=0;i<coins.size();i++)
    {
        pw.println("<option
value=\""+coins.get(i).getDescription()+"\">"+coins.get(i).getDescription()+"</option>");
    }
}

private void fill_to_select(PrintWriter pw)
{
    for(int i=0;i<coins.size();i++)
    {
        pw.println("<option
value=\""+coins.get(i).getDescription()+"\">"+coins.get(i).getDescription()+"</option>");
    }
}

```

```

private double convert(String from,String to,double amount)
{
    if(from.equals(to))
    {
        return amount;
    }
    int fromtransaction=this.getConcurency(from);
    int totransaction=this.getConcurency(to);
    return (amount*totransaction)/fromtransaction;
}

```

```

private String find_coin(String id)
{
    for(concurrency c:this.coins)
    {
        if(c.getDescription().equals(id))
        {
            return c.getCoin();
        }
    }
    return "";
}

```

```

protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {

```

```

// TODO Auto-generated method stub

response.setContentType("text/html");

response.setCharacterEncoding("utf-8");

String fromvalue=null,tovalue=null,amountinput=null;

PrintWriter pw=response.getWriter();

amountinput=request.getParameter("price");

fromvalue=request.getParameter("from");

tovalue=request.getParameter("to");

pw.println("<html><body style=\"bgcolor=\"\#97c9ab;\">");

pw.println("<center><h2>Μετατροπή Ποσών σε Διαφορετικά  
Νομίσματα</h2><br>");

String form="<form><center>Ποσό:<input type=\"text\" name=\"price\"  
value=\"\"+(amountinput!=null?amountinput:\"\")+\"\"/>"

        + "<label for=\"from\" style=\"border:1px  
solid;\">Από:</label><select name=\"from\" id=\"from\">";

pw.println(form);

this.fill_from_select(pw);

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

pw.println("<label for=\"to\" style=\"border:2px solid;\">Σε:</label><select  
name=\"to\" id=\"to\">");

this.fill_to_select(pw);

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

pw.println("<input type=\"submit\" value=\"Μετατροπή\"/>");

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

pw.println("<br><br><br><center>");

boolean checkinput=true;

double amount=0;

```

```

try
{
    amount=Double.parseDouble(amountinput);
}catch(NumberFormatException ne)
{
    checkinput=false;
}

//checkpoint for amount
if(!checkinput)
{
    pw.println("<textarea id=\"res\" name=\"res\" style=\"width=30%;
border:2px solid; text-align:center;\" rows=\"1\" cols=\"50\">Παρακαλώ εισάγεται έναν
πραγματικό αριθμό</textarea>");

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

    return;
}

double res=convert(fromvalue,tovalue,amount);

String coin=this.find_coin(tovalue);

String sres=String.format("Result:%.3f %s",res,coin);

pw.println("<textarea id=\"res\" name=\"res\" style=\"width=30%; border:2px
solid; text-align:center;\" rows=\"1\" cols=\"50\">"+sres+"</textarea>");

pw.println("</center></body></html>");

}
}

```

COIN CONVERTER USING SERVLET AND INPUT FROM FILE

```

import java.io.BufferedReader;

import java.io.FileInputStream;

```

```

import java.io.FileNotFoundException;

import java.io.FileReader;

import java.io.IOException;

import java.io.InputStream;

import java.io.InputStreamReader;

import java.io.PrintWriter;

import java.io.UnsupportedEncodingException;

import java.math.BigDecimal;

import java.util.ArrayList;

import java.util.List;


import javax.servlet.ServletException;

import javax.servlet.annotation.WebServlet;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;


/*
 * Servlet implementation class CurrencyConverter
 */
@WebServlet("/CurrencyConverter")
public class CurrencyConverter extends HttpServlet {

    private static final long serialVersionUID = 1L;

    private PrintWriter pw;

    private static List <currency> inf=new ArrayList<currency>();

    private void read_data()

```



```

{
    if(inf.size()!=0) {return;}

    try {

        BufferedReader br=new BufferedReader(new InputStreamReader
(new FileInputStream(

                                getServletContext().getRealPath("/WEB-
INF/rates.txt")), "UTF-8"));

        try {

            String line=br.readLine();

            while(line!=null)

            {

                String data[]=line.split(",");

                inf.add(new
currency(data[0],data[1],Integer.parseInt(data[2])));

                line=br.readLine();

            }

        } catch (IOException e) {

            // TODO Auto-generated catch block

            e.printStackTrace();

        }

        } catch (UnsupportedEncodingException e) {

        } catch (FileNotFoundException e) {

        }

    }

    public CurrencyConverter() {

        super();

```

```

        // TODO Auto-generated constructor stub
    }

    private void fill_selection()
    {
        for(currency c:inf)
        {
            pw.println("<option
value=\""+c.getType()+"\">" +c.getType()+"</option>");
        }
    }

    private int getConc(String title)
    {
        for(currency c:inf)
        {
            if(c.getType().equals(title))
            {
                return c.getAmount();
            }
        }
        return -1;
    }

    private String getType(String title)
    {

```

```

        for(currency c:inf)
        {
            if(c.getType().equals(title))
            {
                return c.getId();
            }
        }
        return "";
    }
}

```

```

private void convert(String from,String to,double am)
{
    int fr=this.getConc(from);
    int t=this.getConc(to);
    double res=(am*t)/fr;
    String result=String.format("Result:%3f %s",res,this.getType(to));
    pw.println("<center><textarea id=\"res\" rows=\"2\" cols=\"50\" style=\"text-align:center; color:blue;\">"+result+"</textarea></center>");
}

```

```

protected void doGet(HttpServletRequest request, HttpServletResponse response)
throws ServletException, IOException {
    response.setContentType("text/html");
    response.setCharacterEncoding("utf-8");
    pw=response.getWriter();
    this.read_data();
}

```

```

String fromvalue=request.getParameter("from");

String tovalue=request.getParameter("to");

String inputammount=request.getParameter("amount");

pw.println("<html><body stle=\"background-
color;;\"><center><h2>Μετατροπή Ποσών σε Διαφορετικά
Νομίσματα</h2></center><form>");

pw.println("<center><label for=\"input\" style=\"border:2px
solid;\">Ποσό:</label>");

pw.println("<input type=\"text\" name=\"amount\"
value=\"\"+(inputammount!=null?inputammount:\"o.o\")+\"\"/>");

pw.println("<label for=\"from\" style=\"border:2px
solid;\">Από:</label><select id=\"from\" name=\"from\">");

this.fill_selection();

pw.println("</select><label for=\"to\" style=\"border:2px
solid;\">Σε:</label><select name=\"to\" id=\"to\">");

this.fill_selection();

pw.println("</select><input type=\"submit\"
value=\"Μετατροπή\"/></form></center><br><br><br>");

boolean checkinput=true;

BigDecimal moneyamount=null;

try
{
    moneyamount=new BigDecimal(Double.parseDouble(inputammount));
}
catch(NumberFormatException ne)
{
    checkinput=false;
}

if(!checkinput)

```

```

        {
            pw.println("<center><strong><textarea id=\"res\" rows=\"2\"
cols=\"50\">Παρακαλώ εισάγεται Κανονικό ποσό για μετατροπή</textarea></strong>");
            pw.println("</body></html>");
            return;
        }

        this.convert(fromvalue, tovalue, moneyamount.doubleValue());
        pw.println("</body></html>");
    }
}

```

COIN CONVERTER USING JSP PAGE

- Currencyconverter.jsp

```

<%@ page language="java" contentType="text/html; charset=ISO-8859-1"
pageEncoding="utf-8"%>

<%@ page
import="java.util.*,java.io.*,java.io.BufferedReader,java.util.HashMap,java.math.BigDe
cimal" %>

<%
    response.setContentType("text/html");
    response.setCharacterEncoding("utf-8");
%>

<%
    HashMap <String,String> coin=new HashMap<String,String>();
    HashMap <String,Integer> currency=new HashMap<String,Integer>();
    double finalconvert=0.0;
    BufferedReader bf=new BufferedReader(new InputStreamReader (new
FileInputStream(
        getServletContext().getRealPath("/WEB-INF/rates.txt")), "UTF-8"));
    String num=bf.readLine();
    while(num!=null)
    {
        String data[]=num.split(",");

```

```

        coin.put(data[1],data[0]);
        currency.put(data[0],Integer.parseInt(data[2]));
        num=bf.readLine();
    }
    bf.close();
%>

<%
    String fromvalue=request.getParameter("from");
    String tovalue=request.getParameter("to");
    String inputamount=request.getParameter("input");
%>

<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8">
<title>Μετατροπέας Νομισμάτων</title>
</head>
<body>
<% request.setCharacterEncoding("UTF-8"); %>
<div style="text-align:center;"><h2 style="color:red; text-align:center;
border:collapse;">Μετατροπή Ποσών σε Διαφορετικά Νομίσματα</h2></div>
<br><br>
<form>
<div style="text-align:center">
Ποσό:
<%
    out.println("<input type='text' name='input' id='input'
value='"+(inputamount!=null?inputamount:"")+"'/>");
%>
<label for="from" style="border:2px solid;">Απο:</label>
<select name="from" id="from" style="margin-right:10px;">
<%
    for(String i:coin.keySet())
    {
        out.println("<option value='"+coin.get(i)+"'>"+i+"</option>");
    }
%>
</select>
<label for="to" style="border:2px solid;">Σε:</label>
<select name="to" id="to" style="margin-right:10px;">

```

```

<%
    for(String i:coin.keySet())
    {
        out.println("<option value=\""+coin.get(i)+"\">"+i+"</option>");
    }
%>
</select>
<input type="submit" value="Μετατροπή" style="border:1px-solid;"/>
</div>
</form>
<br><br>
<%
    boolean checkvalidance=true;
    double amount=0.0;
    int fcunc=0;
    int tcunc=0;
    try
    {
        if(inputamount!=null)
            amount=Double.parseDouble(inputamount);
    }catch(NumberFormatException ne)
    {
        checkvalidance=false;
    }
    if(!checkvalidance)
    {
        out.println("<center><marquee style=\"color:red; font-size:21px;\" width=\"60%\"
direction=\"right\">Λάθος Είσοδος:Παρακαλώ δώστε ένα έγκυρο ποσό</marquee>");
    }
    else
    {
        String id="";
        boolean found1=false,found2=false;
        for(String i:currency.keySet())
        {
            if(i.equals(fromvalue) && !found1)
            {
                fcunc=currency.get(i);
                found1=true;
            }
            if(i.equals(tovalue) && !found2)
            {

```

```

        tcunc=currency.get(i);
        id=i;
        found2=true;
    }
    if(found1 && found2)
    {
        break;
    }
}
finalconvert=(amount*tcunc)/fcunc;
String result=String.format("Result:%3f %s",finalconvert,id);
out.println("<center><textarea name=\"res\" style=\"color:#4a121c;
width=100px;\">"+result+"</textarea></center>");
}
%>
</body>
</html>

```