Assignment 4: Basic Server Scripting \{CGI+Perl\}

Introduction to Information Technology, Summer 2014

This assignment is worth 20 points ([0..10]:U, [10..15]:3, [15..18]:4, [18..20]:5) and it contains one problem to which each student should provide an individual solution in the form of a CGI script written in Perl. Submissions can be made electronically on Studentportalen.

The problem consists in writing a CGI script in Perl (i.e. a script that runs on the server side) which, when called, sends back an HTML page to the client. The content of the page depends on the country from which the request was made.

Unlike the phone system and international / regional calling codes (+46 for Sweden, 18 for Uppsala), IP address ranges are not clearly divided among countries. In fact, IP address ranges are allocated to organisations, such as network operators, organisations and big companies rather than to countries. For your information, there are servers on the internet that you can ask for the geographical localisation of a given IP address.

For this assignment, we will assume the following partition\[1\]:

i) The IP address range [78.64.0.0, 78.79.255.255] contains swedish IP addresses.
ii) The IP address range [84.128.0.0, 84.191.255.255] contains german IP addresses.
iii) The IP address range [90.0.0.0, 90.127.255.255] contains french IP addresses.
iv) "Hello World!" for any other IP addresses.

Depending on which range the client IP address falls in, the HTML page returned by your script should contain the following message:

i) "Hej Sverige!" for swedish IP addresses.
ii) "Hallo Deutschland!" for german IP addresses.
iii) "Bonjour la France!" for french IP addresses.
iv) "Hello World!" for any other IP addresses.

The IP address of the client is contained in the environment variable REMOTE_ADDR. To get its value, you just need to do:

```perl
my $client_ip = $ENV{ 'REMOTE_ADDR' };
```

As a start point, you can modify the Hello World! CGI script provided during the CGI lecture:

```perl
#!/usr/local/bin/perl
# hello.pl - My first CGI program

print "Content-Type: text/html\n\n";
# Note there is a newline between
# this header and Data

# Simple HTML code follows

print "<html><head><\n";
print "<title>Hello, world!</title>";
print "</head><\n";
```

\[1\] Ranges were taken from [http://www.nirsoft.net/countryip/](http://www.nirsoft.net/countryip/)
If you want to test your script from different countries without travelling there, you can use free proxy servers from the internet, such as [http://www.cyberghostvpn.com/en_us](http://www.cyberghostvpn.com/en_us).