STRATEGIC WEBSITE TECHNOLOGIES

LECTURE 9
(OTHER TECHNOLOGIES)

Common Gateway Interface [CGI]

CGI is a mechanism (standard) to pass data from "the web" to a program which resides on the server and vice versa.

With CGI, the data entered in a form is extracted by a program on the server and run to perform a task. The program can also pass the result back to the client's browser as **a HTML page**.

> **CGI is a technology but not a language itself.**
>
> It allows scripting languages to interact with the user.

Example

```
<BODY>
  <FORM action = "/cgi-bin/rm-partfile.pl" method = "POST">
  Part description: <INPUT type="text" name="desc" value="computer">
  <p>Part number: <INPUT type="text" name="partno" value ="56 78">
  <p><INPUT type="submit" value="Submit query">
  <INPUT type="reset" value="Clear the details">
  </FORM>
</BODY>
```

An example form that sends the data entered in a form to a cgi script.

PERL

- CGI and Perl are often mentioned in the same breadth but they are two different technologies.

- Perl is a programming language which can exist on its own without CGI or the web.

- Perl syntax is close to C syntax.

- Perl is a structured language which can be used for text processing. Since a great deal of tasks in programming for the Internet is string processing related, Perl would be the natural choice.

- Perl can also pass back anything to the browser easily as a set of HTML pages by writing simple print statements.

- The same task can be done with any language.

Example

```
#!c:\perl\bin\perl
print "Content-type: text/html", "n\n";
print "<HTML><HEAD><TITLE>My Homepage</TITLE><BODY>";
print"<H1>Ron Meegoda</H1>";
print"<p>Hello, I am going to tell you about myself.....";
... more Perl code here
print"</BODY>/HTML>";
```

Typical Perl code

```
#!c:\perl\bin\perl
use CGI;
$query= new CGI;
print $query->partno;
print "<html><head><title>A test</title></head>\n";
print "<body>The test was successful.</body></html>";
```

Processing forms in Perl.

How CGI Works?

- The request to load and run a script (Perl) file comes from the browser. (as a result of a user submitting some data through a HTML)

- The server loads the script (Perl code) and executes it.

- The script (Perl code) creates a stream of text and HTML as if it is sending it to a printer.

- This "print file" is assembled into a temporary page in the server, packaged up for HTTP transmission and is sent to the browser.

- The browser interprets the HTML commands and the the file appears like a static HTML page to to the user.

- The actual page is no longer a copy of the file on the server, rather it is created on the fly and the information of the page can be different every time the script (Perl code) on the server runs.

PHP

- PHP is another technology for server side scripting.

- It mainly runs on Unix platforms (can be used with Windows 2000 and NT).

- It is like ASP. Unlike ASP, however, PHP is a language itself.

- PHP is free of charge (www.php.net)

- PHP is an open source software.

- PHP works with some of the well known standards including ODBC, POP3 etc.

Example

```
<HTML> <HEAD>
<TITLE> My First PHP Program </TITLE>
</HEAD><BODY>
<?PHP print("Hello world!"); ?>
</BODY>
</HTML>
```

Typical PHP code

```
<HTML><BODY>              Variables are preceded by a
<?PHP                            $ sign.
  print("$name");
  mysql_connect('hostname', 'username', 'password');
  mysql_select_db('users');
  $query="INSERT INTO users (username, usersname)
             VALUES('$name','$surname');";
  mysql_query($query);
?>
has been registered.
</BODY></HTML>    Processing forms in PHP.
```

Cold Fusion

- Cold Fusion is another server side technology (provided by Allaire Technologies – www.allaire.com)

- It is actually a server itself and comes in three versions:
  - Express – For introducing the newcomers (free)
  - Professional – All tags enabled (30 day trial)
  - Enterprise – Can handle huge traffic

- Although a few major sites are using Cold Fusion it is not as common as ASP or PHP.

- Cold Fusion is a tag based technology.

- CF tags are used in HTML code to give orders to the server.

Example

```
<HTML> <HEAD>
<TITLE> My First Cold Fusion Program </TITLE>
</HEAD><BODY>
<CFSET FirstName=#FORM.name#>
<CFSET LastName=#FORM.surname#>
<CFSET WholeName="#fistname# #lastname#">
<CFOUTPUT Hello #firstname# #lastname#>
<CFQUERY Name="NewCustomer" DataSource="WEBLOG">
   INSERT INTO users (username, usersname)
               VALUES('#FirstName#','#LastName#')
</CFQUERY>
</BODY>

</HTML>
```