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Appendix - Gantt Chart

Introduction

The following report will provide detail of:

- the concept of the proposed design
 - how the content management element will be addressed
- Accessibility
 - including word pattern matching
- the research and analysis to date
 - including Java Servlet research

Concept of the Proposed Design

Durrington Festival is an annual event and this raises issues for the management of any designed website as follows:

- the site content needs updating each year with:
 - headers with the dates and times of that year's annual event
 - the events themselves
 - the competitions, differ year on year
 - the participants (i.e. stallholders, funfair), differ, year on year
 - sponsors, subject to change of sponsor and contribution
- current updating is achieved using a manual system, html page by html page of non-dynamic content, being:
 - text
 - images
- one particular page is updated dynamically, using an Admin Login on Forthcoming Events page is:-
 - text, linked to a 5-field database designed using PHP and mySql comprising:
 - Title
 - Date
 - Time
 - Event
 - Details
 - There is no other Content Management facility within the website and the current design does not allow update of any other pages of the website or upload of images to this page
- the new design will allow Content Management of all:
 - text
 - images
 - video
 - music

- webcam
on all relevant pages of the site
- the site itself will also provide an Online Payment Facility. This will enable the Durrington Festival Committee to create a business management information tool, which is web-based.

This will enable the Durrington Festival Committee to control and manage their own website and data without any technical knowledge whatsoever, and without relying on any website developer to update on their behalf. Figure (i) shows the planned website design.

Planned website

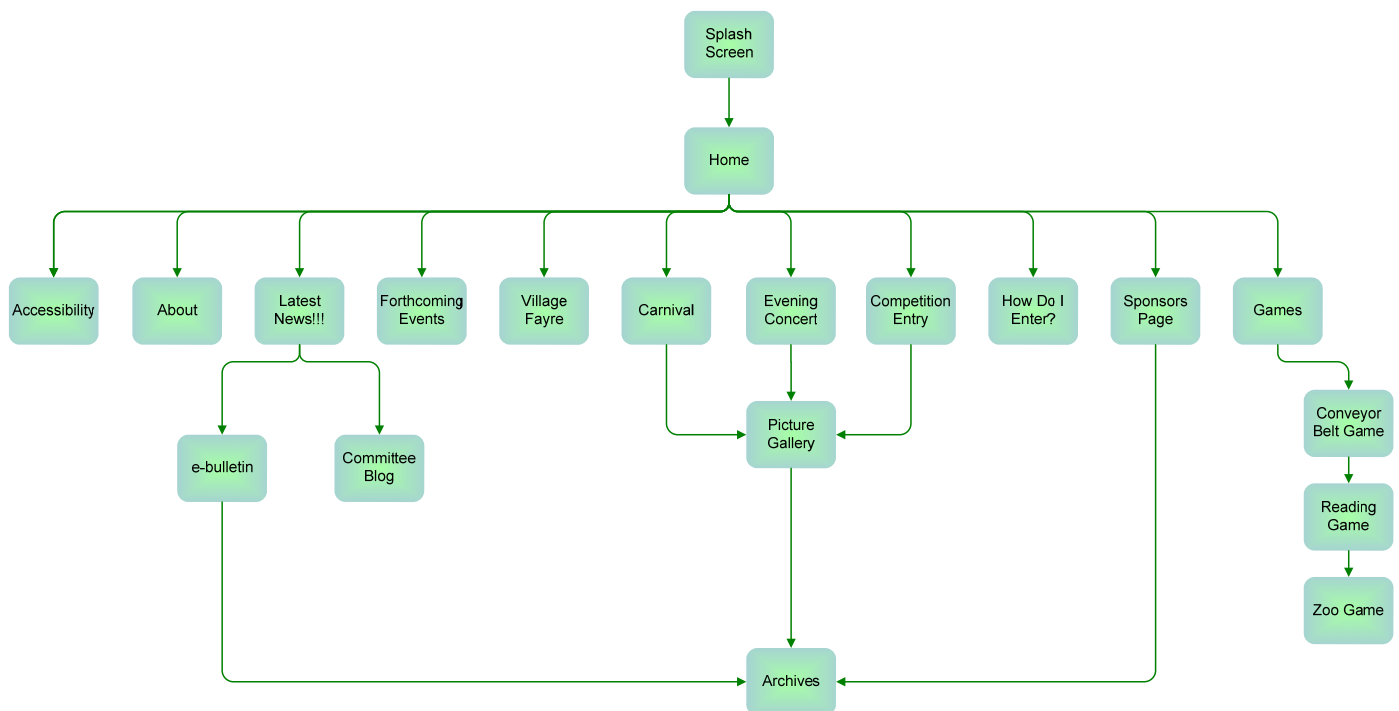


Figure (i) Durrington Festival – Planned Website

Content Management

The Content Management required is detailed below in Figure (ii).

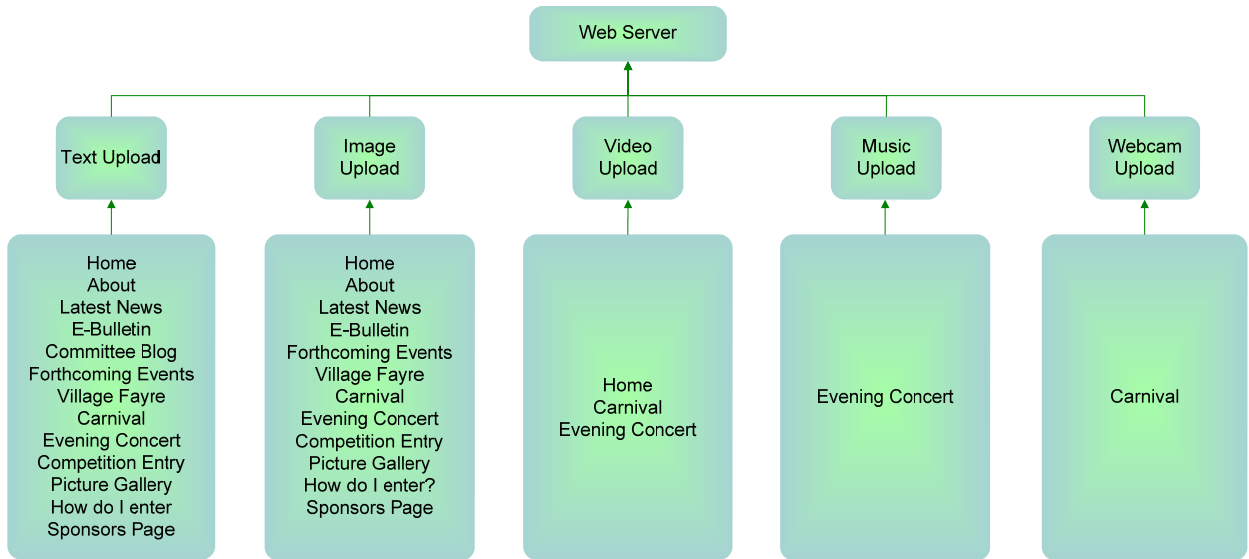


Figure (ii) Durrington Festival – Content Management Requirement

This will be achieved using an Admin Section with a Log In facility, where the Durrington Festival Website Administrator will enter a Username and Password and then gain access to the Admin Section which is where uploads will take place, see Figure (iii).

Admin Section

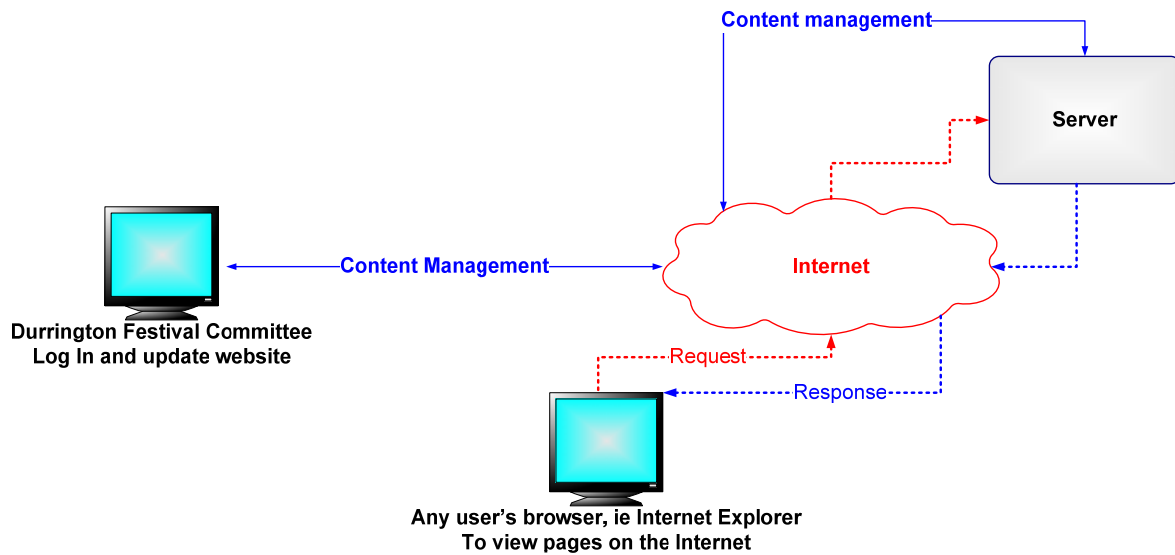


Figure (iii) – Durrington Festival – Admin Section and Update of Content

Online Payment Facility Requirement

The chosen method is Paypal. Figure (iv) below shows the Online Payment Facility required.

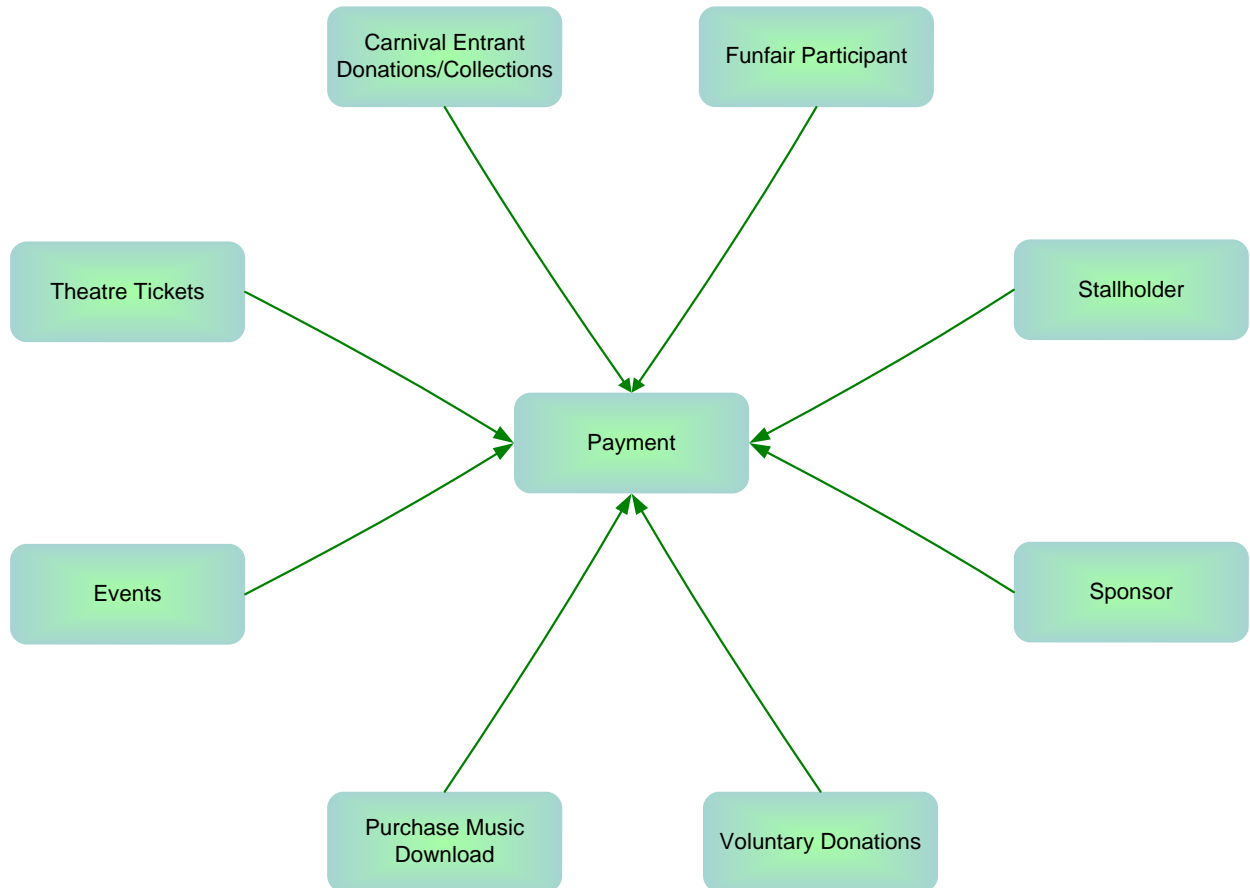


Figure (iv) – Durrington Festival – Online Payment Facility Requirement

Carnival Entrant

- collects loose change on Carnival day from spectators during the Carnival Event

Funfair Participant

- pays to book the space on the field at Pond Lane

Stallholder

- pays for their stall at the Village Fayre for the second Saturday of the Festival Week

Sponsor/Advertiser

- contributes to the Durrington Festival Fund

Voluntary Donations

- from Committee Members, Organisations, Members of the Public

Purchase Music Download

- National Rock/Pop Bands play at the concert and may wish to sell their music tracks online

Events

- Collections from the charity events during the Festival week

Theatre Tickets

- Sale of Theatre Tickets

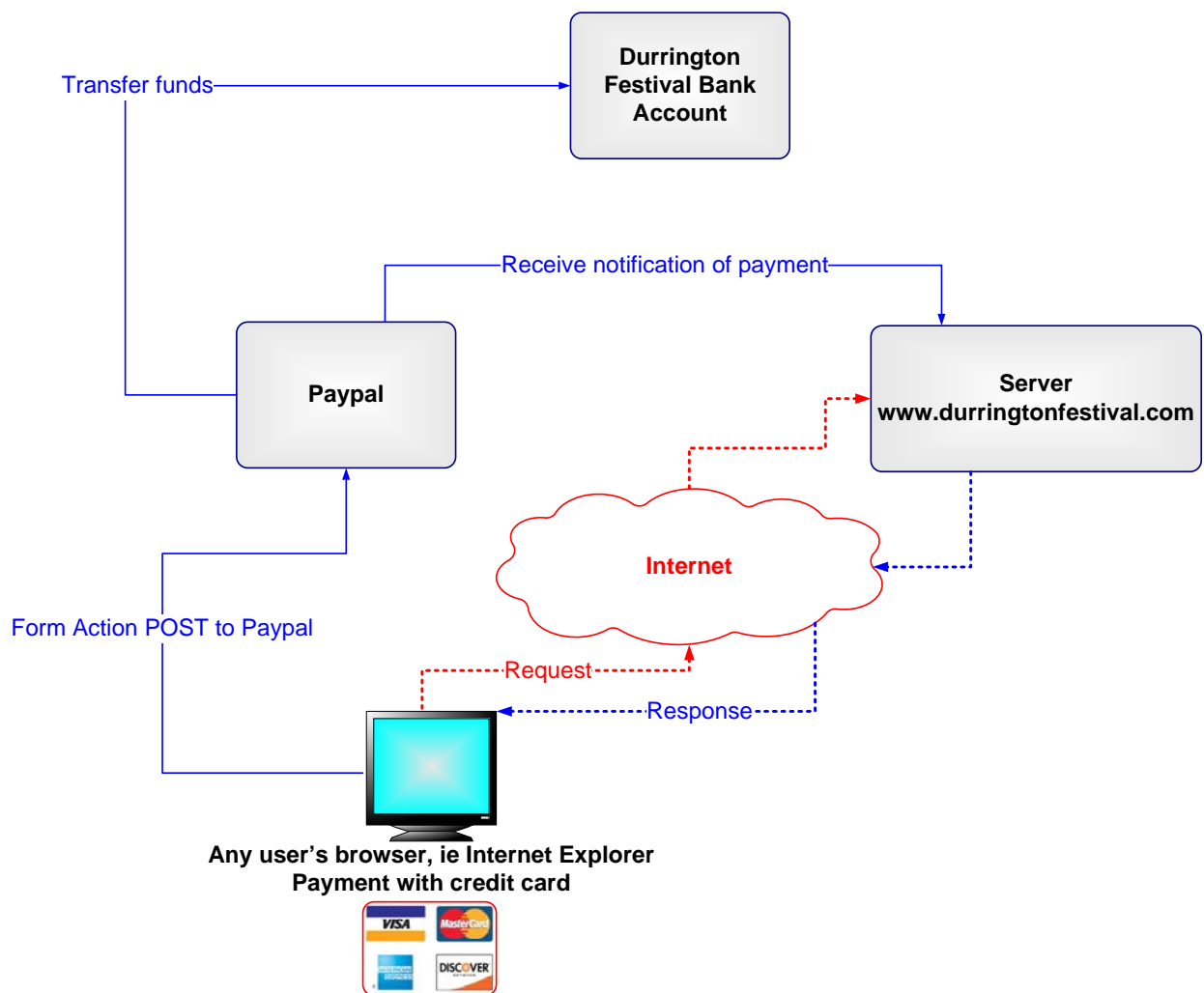
Payment System Design

Figure (v) Payment system

Reports Facility

Reports will allow the Durrington Festival Committee to manage their data, provide financial information and provide management information systems for their Charity business. These reports can be expanded and built as and when the DF Committee require, using a simple, streamlined database design to allow for flexibility for the future.

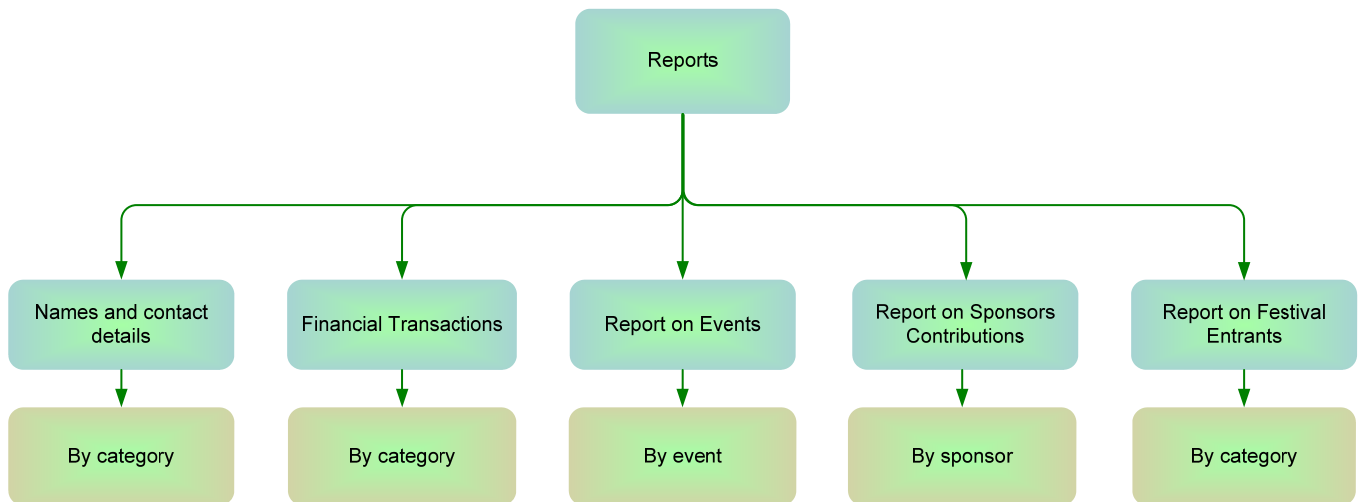


Figure (vi) Reports Facility

Accessibility

Will be addressed using:

- Text only pages
- CSS designs of contrasting background/font colour for user selection
- Keyboard controls
- Alternate text for images
- Speech browser download facility
- Word pattern matching

Word Pattern Matching

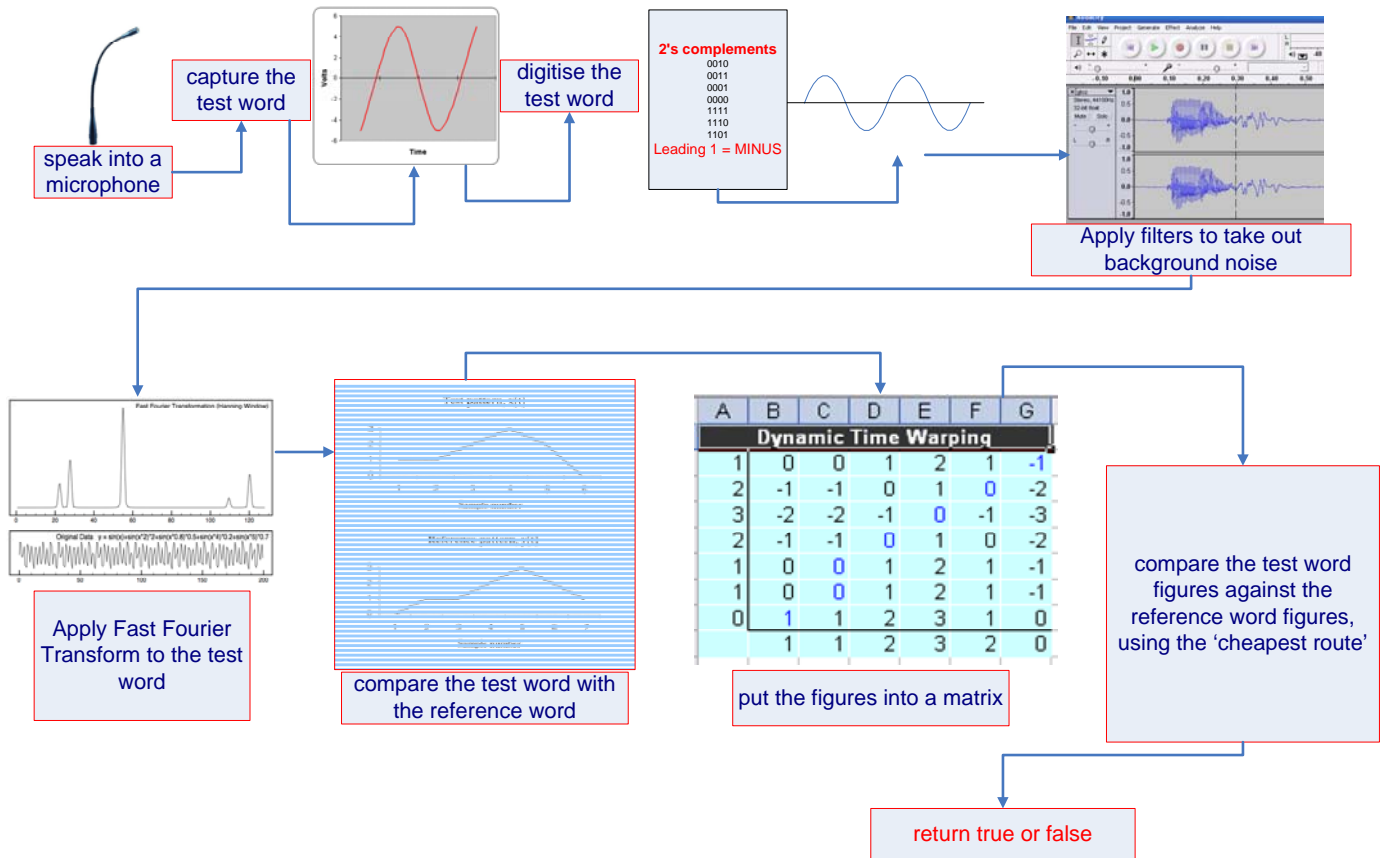


Figure (vii) Word Pattern Matching – Basic concept

Research of Similar Websites

Similar websites have been researched as follows:-

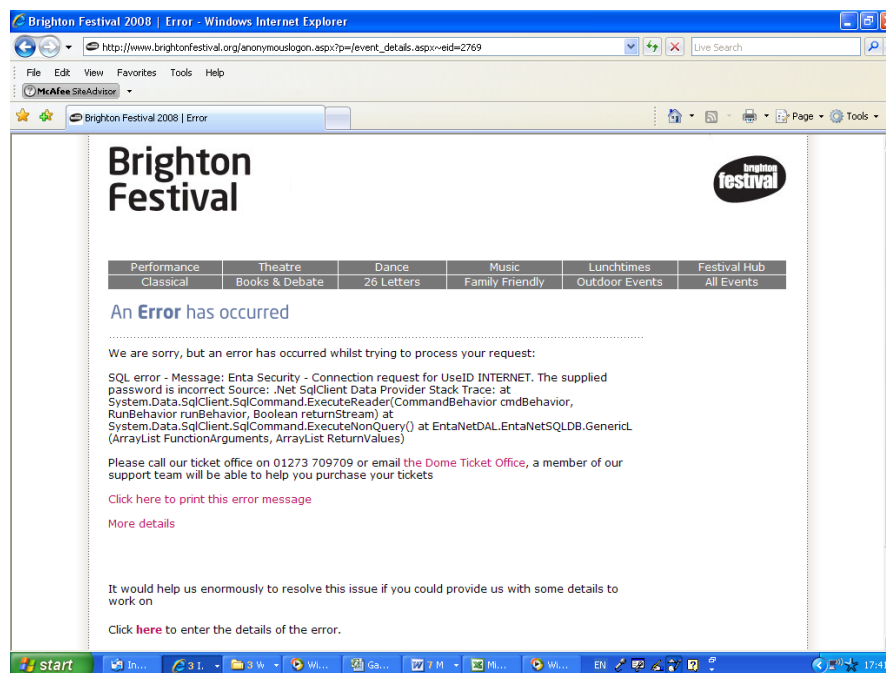
Brighton Festival:

- Brighton has been awarded City status and is considered the most successful, vibrant cultural area of the South Coast of England. It is situated approximately 20 miles east of Durrington. Their website provides:
 - Information on events
 - E-bulletins
 - Shopping basket facility (for theatre tickets)
 - Link to Brighton Festival Fringe Website

Here is a screenshot of their Home page:



However, when testing their website further, it was not working. The tests were run over two days in January 2009, see screenshot below, this error message appeared on most pages.



It is possible that their website needs updating and is currently offline. This highlights the issue of operating a website for a large annual event, and managing a large workload in a short space of time, for example these could be some of the issues experienced:-

- Brighton Festival organizers rely on a website developer to update their site and their pricing structure, then they lose control of their ability to manage their own site
- They have lots of content to put onto the web in a very short time, it becomes not easily manageable.

With a full content management facility, this reliance on the time management of a website developer is waived and the ability to upload as soon as information is available becomes possible.

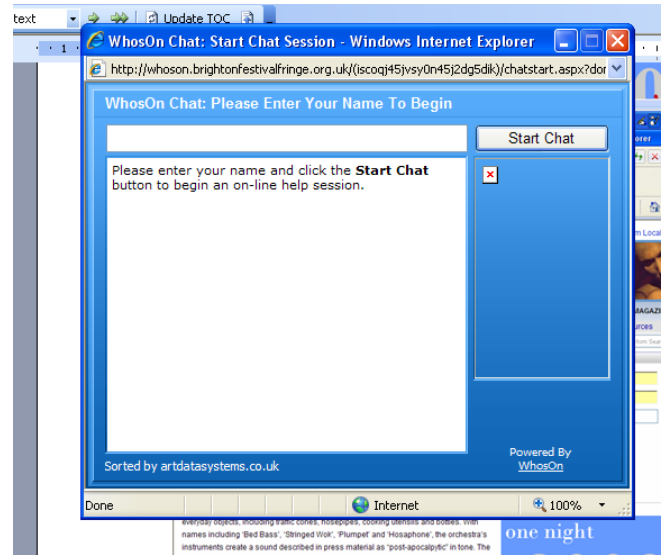
A lot of the links on the Brighton Festival website when clicked take the user to another website and there is no warning that a user is being taken elsewhere. We will avoid this design on our site.

Brighton Festival Fringe Website which is a 'sister' site of the Brighton Festival provides:

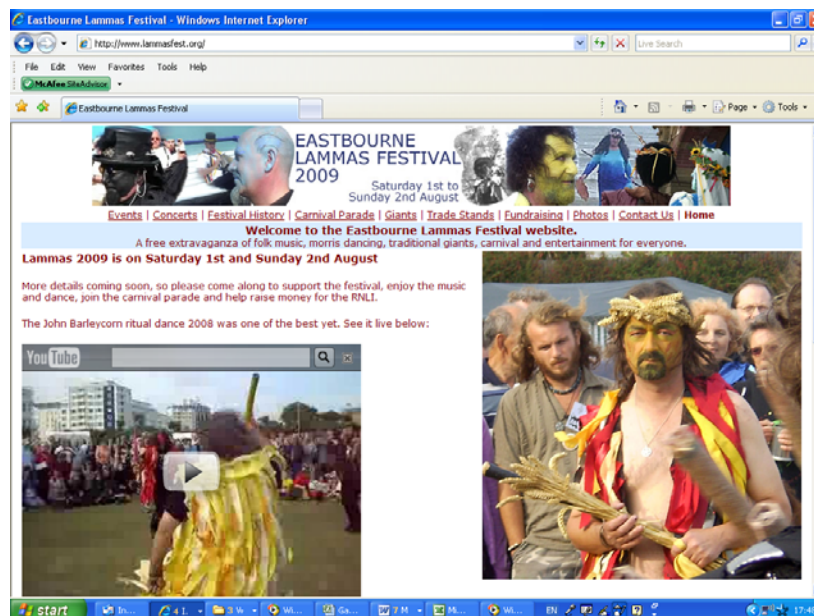
- Login facility
- Event Registration
- Event Information
- Photo Gallery



They also provide a 'Live Help' facility in the form of 'Live Chat' with a member of support staff, however this was not working in January 2009 when the site was tested. Again, this highlights the issue of a seasonal event, and keeping a website up-to-date and current



Eastbourne Festival



This site provides some interesting multimedia rich content in the form of video situated on their homepage which is uploaded to www.YouTube.com, compressed by YouTube.com and then a link created in the website to play the media. This suggests that the site is not as highly technical as our planned site, using compressed video upload via content management facility. However we will use the Eastbourne Festival idea of placing video on the Home Page as this allows users to be aware of video content on the site easily and instantly.

Advertising on their website – here is a PDF file which is a leaflet of the dates and times of events on one side and the advertising on the other. It would be better to

interlace advertising with the event content as users will not be able to separate the two when printing. Also it would be better to offer print in colour, as most printers allow a user to select black and white print / or colour. We could offer both options.



Sponsors profile

It would be better to have the sponsors listed at the bottom of every page with a little logo, together with a page dedicated to sponsors and links to their websites.

Technical Information

Software being used

Notepad++

Notepad is being used to write the Scripting languages, the Programming Languages and the Server Side scripts. The purpose of using Notepad is to provide the developer with a deep understanding of the scripts, how they interact and compile, how they relate to each other, and how they all work together. Notepad ++ is an extension of Notepad

and provides a colour interface which is useful for reading, interpreting, checking and using code.

Adobe:

- Flash
- Photoshop
- Illustrator
- AfterEffects

Flash will provide a sophisticated interface supporting the design of multimedia content. The problem with Flash is that the search engines do not pick up the website information very well, and therefore, searches for particular information may not display our website in the search results of say, Google. The way around this is to provide text only pages, the search engine will then be able to respond to a user, referencing the text in the text only pages. Another way of assisting a search engine with this issue is to operate a 'blog' on the site, where again, the search engine will 'find' the text within the blog and interpret it for use in search requests where matched and provide a link to this website.

Research into Flash suggests that we will compress flash video files and will resize video to 300 x 240 pixels.

Photoshop will be used to manipulate photographic images.

Illustrator and After Effects will be used to provide vector graphics, vector text and animation material for use in Flash.

Scripting Languages

- HTML
- XML
- CSS
- PHP

Html will be used to design pages in conjunction with cascading style sheets (CSS). Xml will be used to display data in its correct format and php will be used as a scripting language to communicate with the webserver.

Programming Languages**Actionscript**

This is the programming language used in Flash. There is a new version, Actionscript 3.0 which is object orientated language and very similar to Java. Actionscript 2.0 and previous versions of Actionscript allow code to be placed in three different areas of the Flash movie, on a movie clip, on the particular timeline frame, and on a graphic or a button. This means that sometimes there is a lot of repetitive code placed in different

areas of the design and for managing a large project, this could be problematic. Actionscript 3.0 does not allow for individual 'event' code attached to a movie clip.

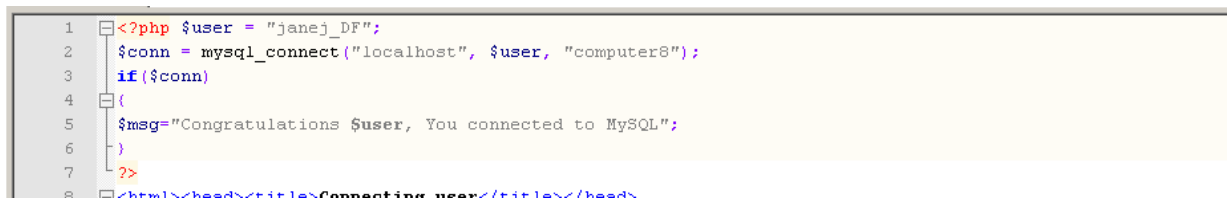
Java

Will be used to write the code on the server, and will be compiled and used with the Java Servlets.

Server side Technologies

mySql

This is the database facility on the server that will hold the various fields of data types, tables and databases. Here is a screenshot of some code in Notepad++ that creates a connection to a database:



```
1 <?php $user = "janej_DF";
2 $conn = mysql_connect("localhost", $user, "computer8");
3 if($conn)
4 {
5 $msg="Congratulations $user, You connected to MySQL";
6 }
7 ?>
8 </html></head></title>Connecting user</title></head>
```

There is an interface called phpMyAdmin which allows a user the create tables and databases and to allocate memory amounts and data types to that data.

Java Servlets

Will be used, these are like little servants that work on the server and provide the ability to connect to different databases for different information using threads, which, when designed with synchronization will provide an accurate and efficient website data management facility with great possibilities of flexibility for current and future design of the website and its supporting features.

Webpace to support Java Servlets

The current website is sitting on a webserver that does not support Java Servlets. This has been checked with the webpace provider and confirmed that it is correct. The screenshot below shows a company that is a supplier of server space to other companies that will support Java servlets. On approaching this company, they appear American based, quoting their fee (\$24 per month) in American Dollars, however they state that a user requires a high level of Linux skills.

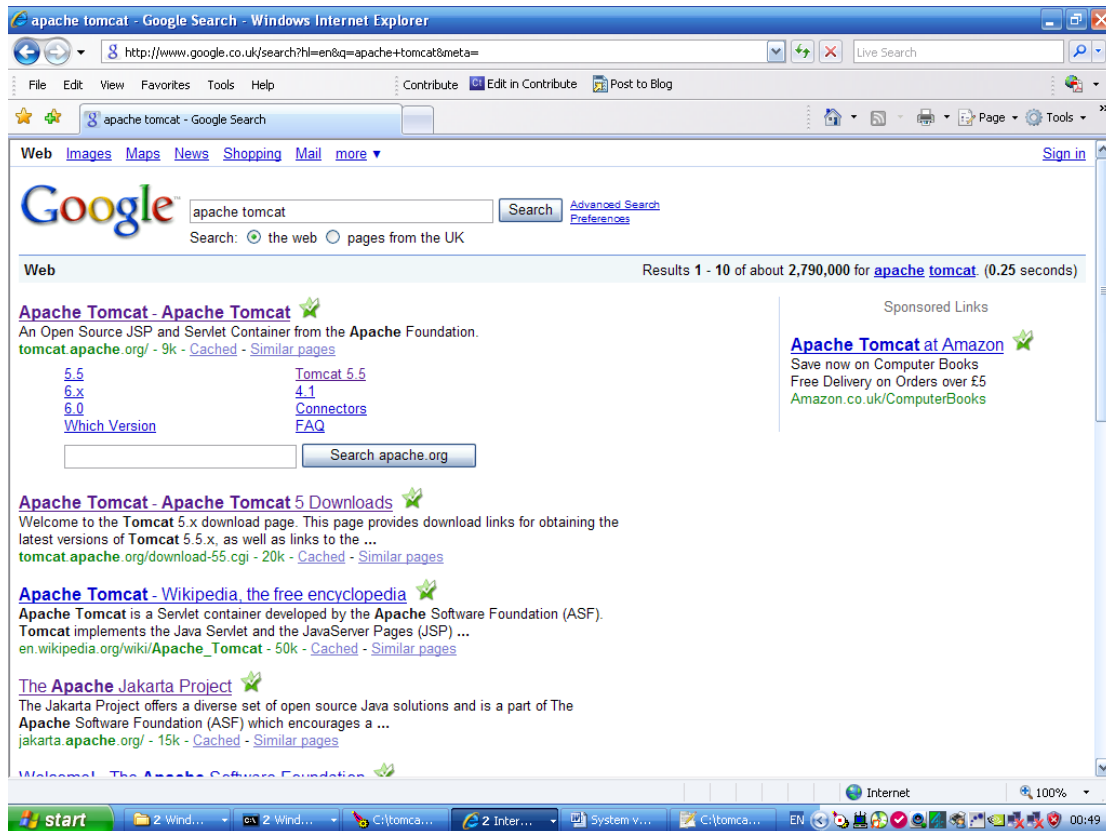


The screenshot below shows the supplier's details (www.hostroute.co.uk) and costs of the server space (£90 per annum). This is the company that we will be using to provide our server space. The company has been emailed and we are awaiting a response confirmation that the space will provide the relevant technical requirement and bandwidth that we need.

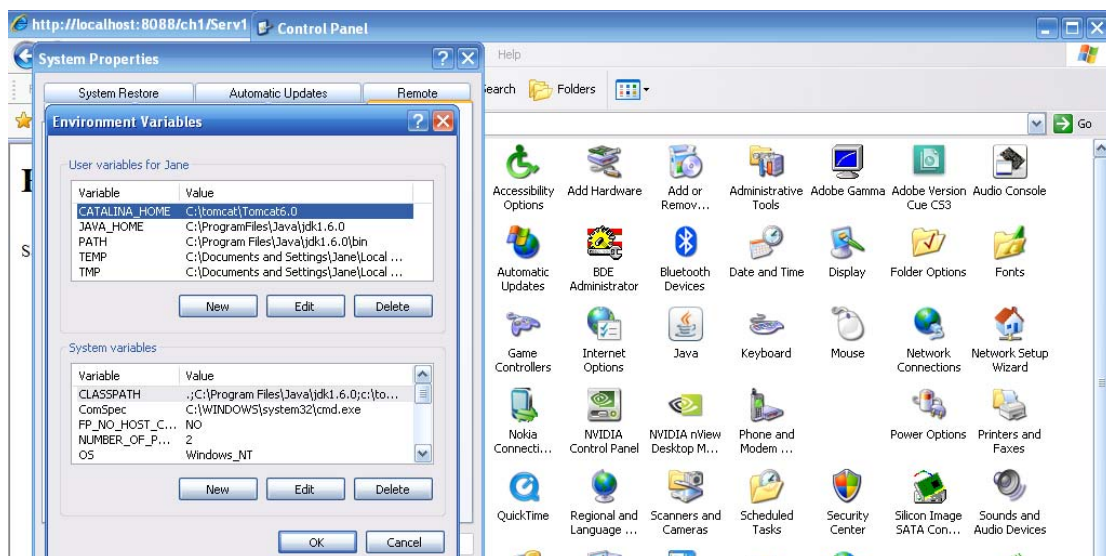


Research of Java Servlets

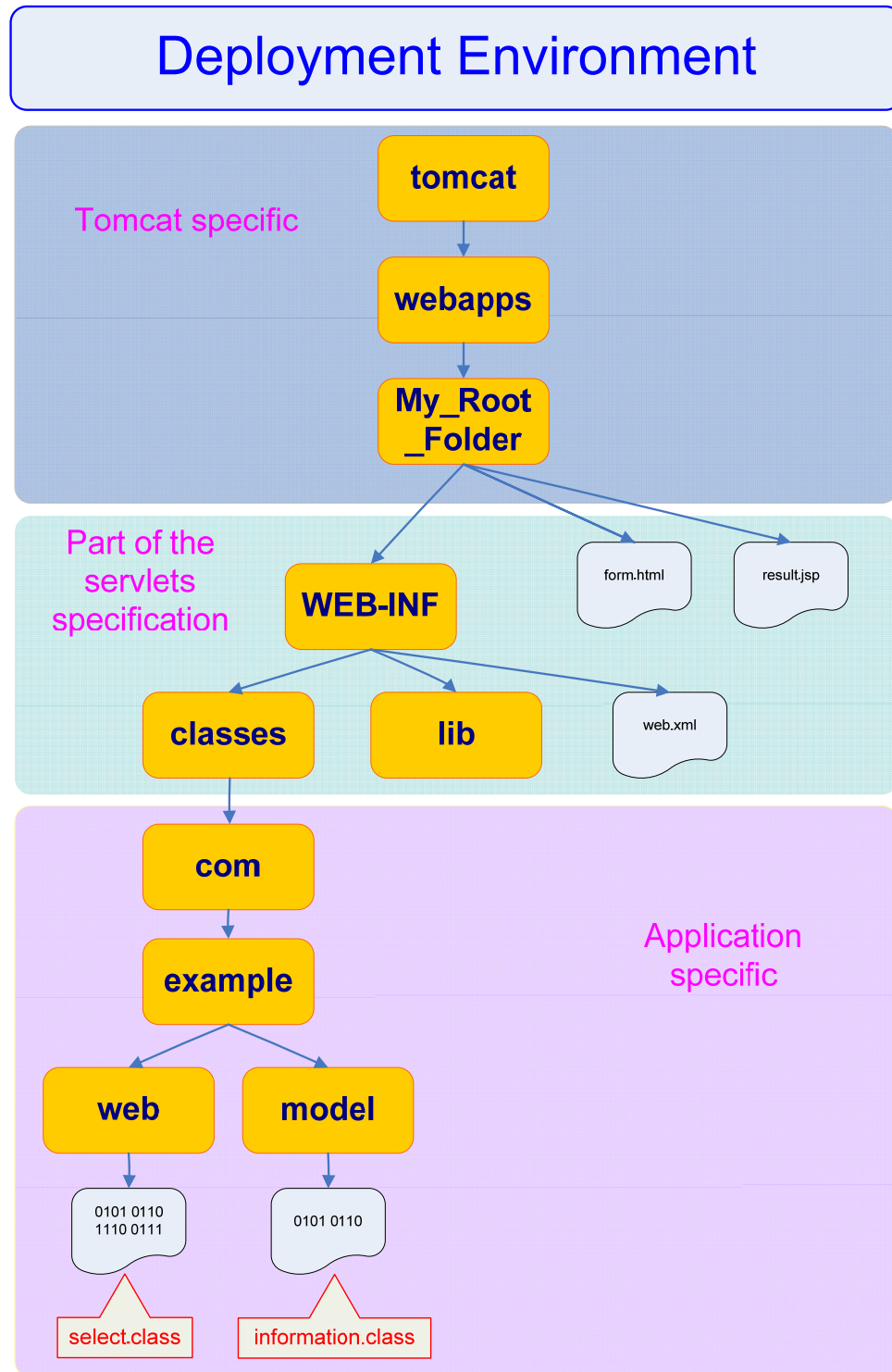
Apache Tomcat was downloaded



Environment Variables were set



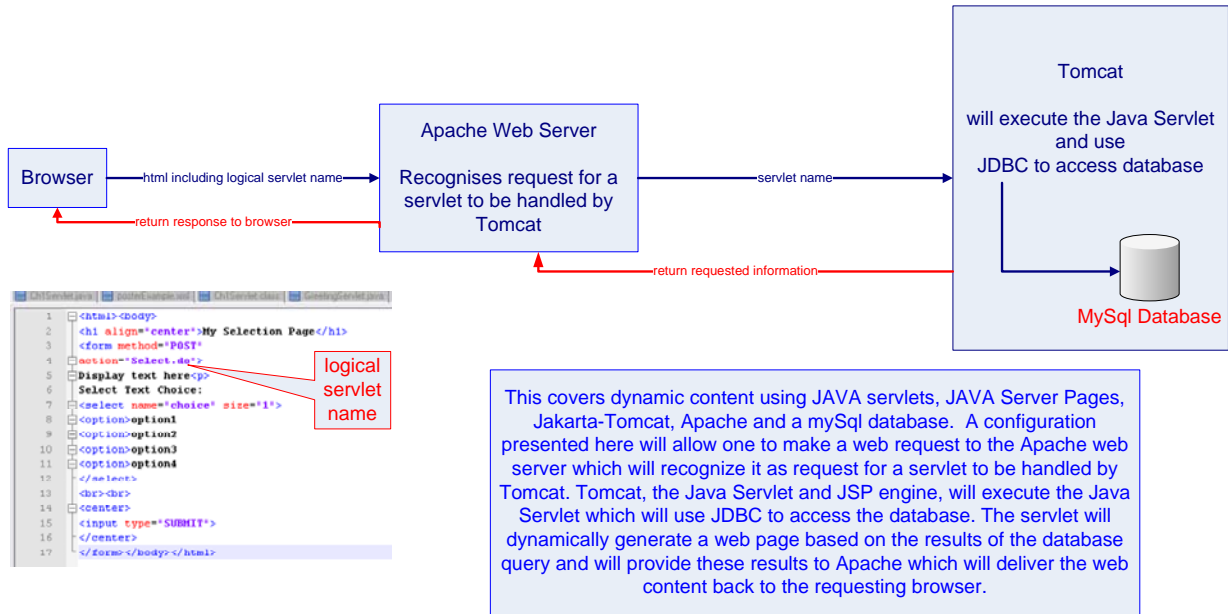
Below is a diagram of the Deployment Environment. A similar Environment is used for the Design Environment.



Here is shown server side technology and how it all links together.

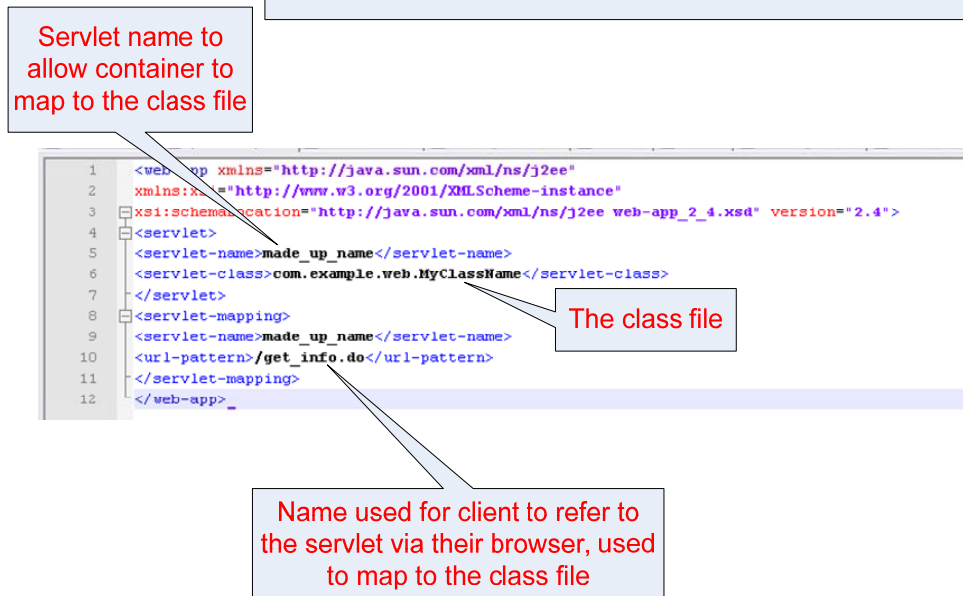
Server side Technologies

Java Servlets, Apache, Tomcat, JSP, JDBC, MySql



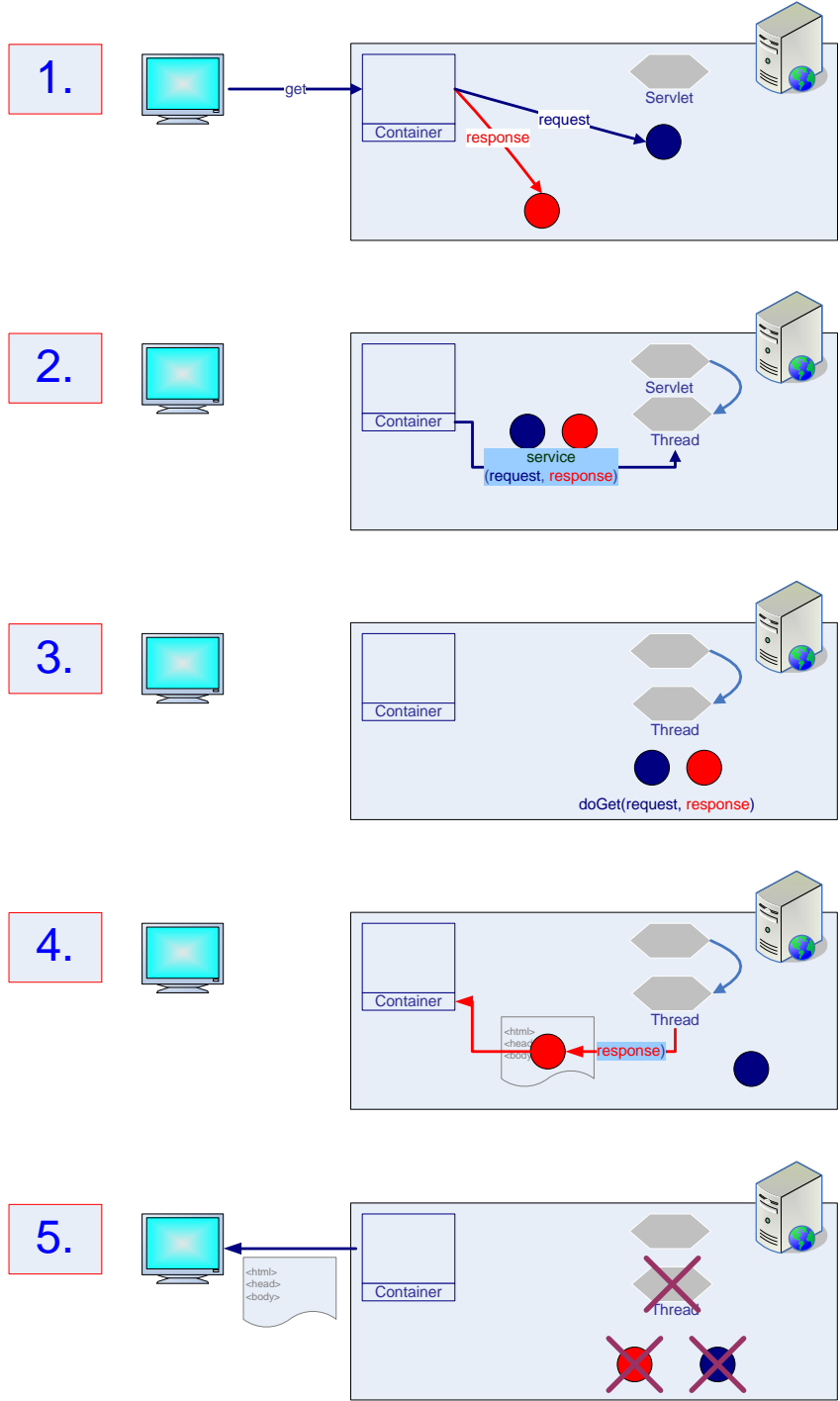
Here is an example of the xml file that maps the servlet's name

DEPLOYMENT DESCRIPTOR



How Tomcat's container works with response and request, the servlet and the thread:

The Container's Role in the Servlet's Life

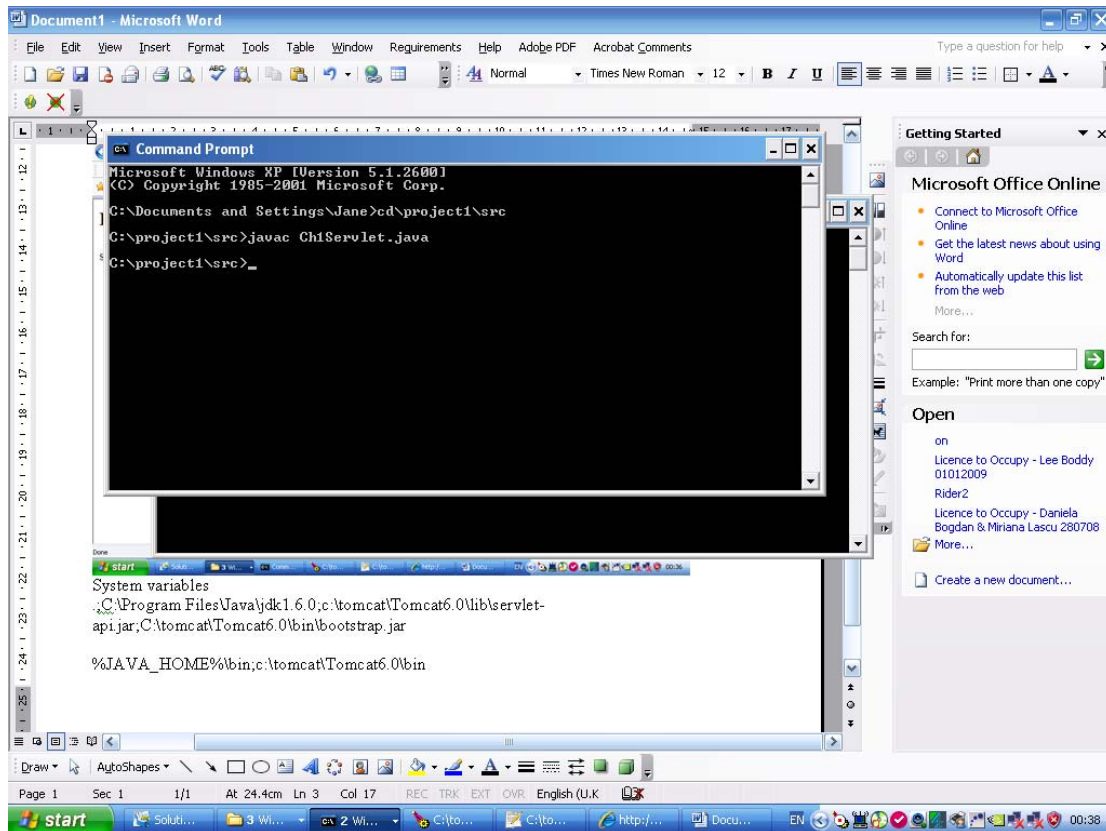


Creating Servlets

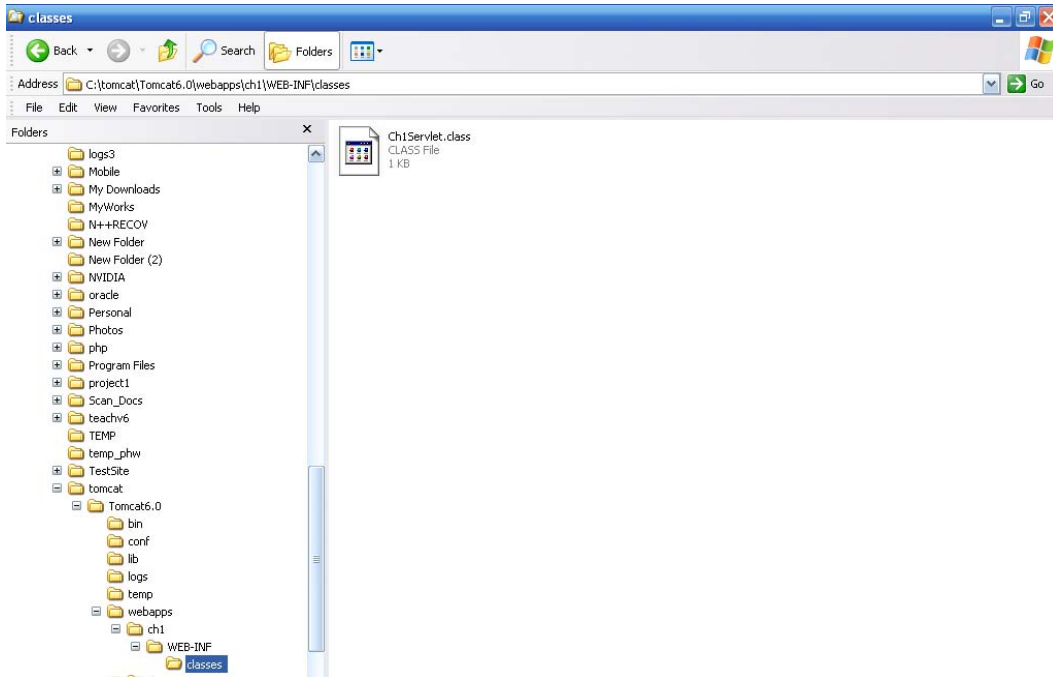
The servlet below is a simple servlet that was created to display the current date and time.



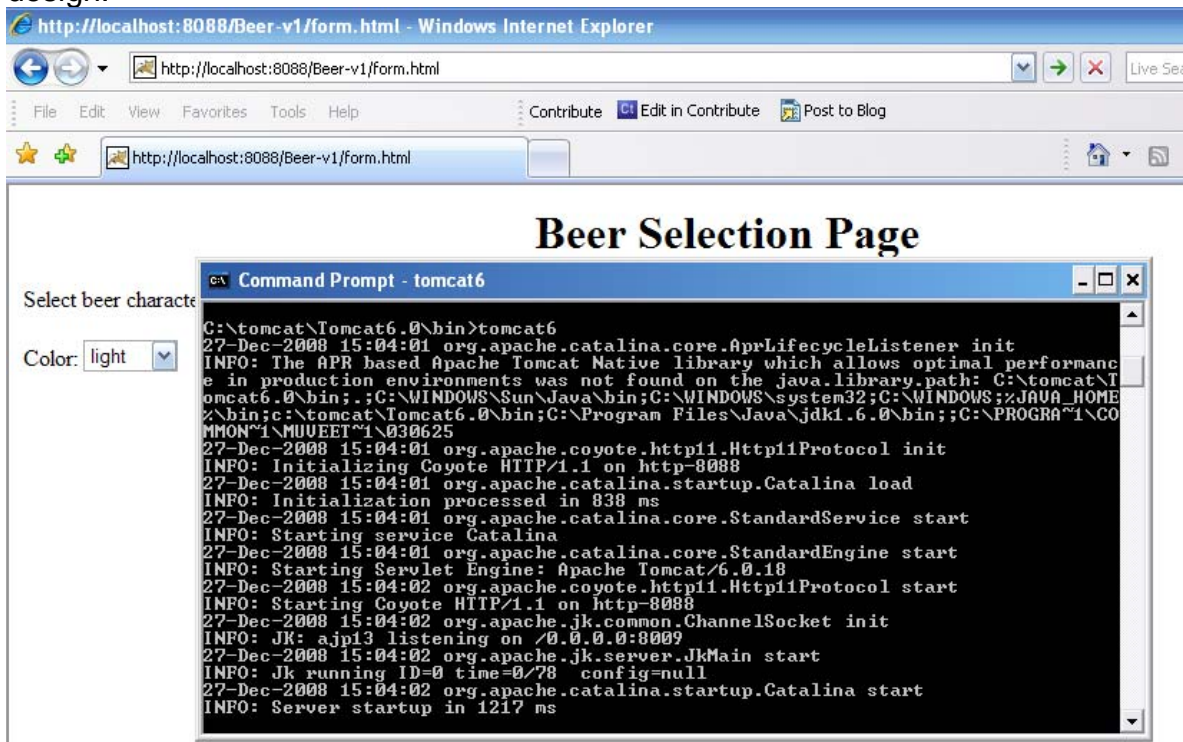
Here is shown the command prompt, navigation to the correct source file, then asking the servlet to compile



Placing the compiled class file from the design area to the deployment area, into the WEB-INF folder:



The servlet below was more complicated. It was written in Notepad++ and compiled using the command prompt window (`javac myFile.java`), then the class file made was copied to the server, and run on the server, using html, jsp and xml as part of the design.



Reference

The following books were referred to during the course of this research:

Bryan Basham, Kathy Sierra & Bert Bates. *Head First Servlets & JSP*. [August 2004] First Edition O'Reilly Media Inc.

Bruce W. Perry. *Java Servlet & JSP Cookbook*. [January 2004] First Edition O'Reilly

Steven Douglas Olson. *Ajax on Java*. O'Reilly [February 2007] First Edition

John Coleman. *Introducing Speech and Language Processing*. [2005] Cambridge University Press

Apache Ant – learning – 3/3/09 accessed
<http://www.sitepoint.com/article/apache-ant-demystified/2/>