COMPUTING LAB ASSIGNMENT

CSE NITK PORTAL

INSTRUCTOR:
SOURAV KANTI ADDYA

ASSIGNMENT-4

REPORT SUBMITTED BY

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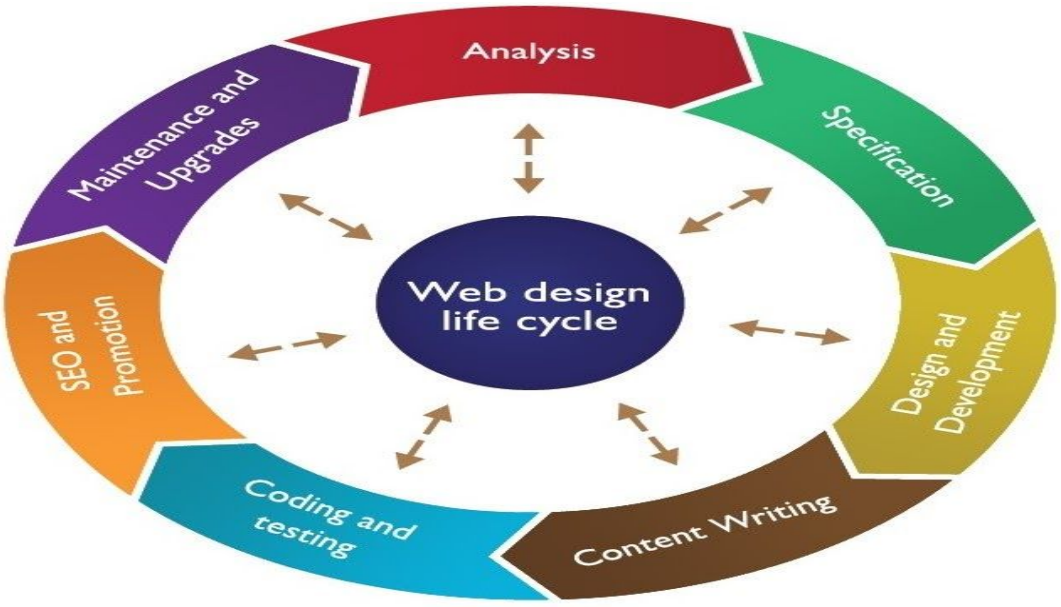
INTRODUCTION

This report presents a detailed analysis on the development of the portal for the department of Computer Science Engineering on National Institute of Technology Karnataka, Surathkal's official website. It is designed in order to make it easy for the students and others accessing the portal.

WEB DESIGN LIFE CYCLE



1. Information and Requirements Analysis

This is the very first yet the most important phase of the website design life cycle. In this phase, the web team has to do proper analysis of the website specifications. The main aim of this analysis is to ensure that the website look and feel is relevant to the target audience who are going to use the website.

Performing the complete analysis of any website project can be time consuming. To gather the full information about the project could include meetings with the customer, email and document sharing, notes, online conversations, website models etc. Results should include a proper work plan, pricing involved, assigned team members, third party software requirements, supporting functional documents and approval on all of them.

2. Specifications

The basic structure, website navigation and all dynamic parts of the website should be outlined in the final specification document.The data collated in the final analysis report should be the introduction of the specifications.The final specification document should include the complete requirements, specifications for each team member.

3. Design and Development

From the final specifications, an approximate time frame can be calculated and should be discussed with the client. Once both parties are satisfied with these, a contract can be signed off. All the initial prototypes and frameworks should be submitted to the customer for approval before proceeding to the next phase of the cycle. At this stage content writing and website navigation should also be finalized by the customer and all the website templates, images and banners should be in store.

4. Content Writing

Website content copy, provided by the customer should be formatted by the web team according to the search engine standards and approved gain by the customer before moving to the next phase of the cycle.

5. Website Coding and Testing

Dynamic work commences. The developer starts work on all the dynamic website features like forms, programming, J query or Ajax slideshows and it is their responsibility to maintain the look and feel of the website as provided by the designers. All database driven functions and coding documentation is a part of this phase as well. Web site testing is a crucial part of this cycle as all programming issues should be fixed by this stage. Documentation outlining this testing should be prepared to be provided with the final deliverable.

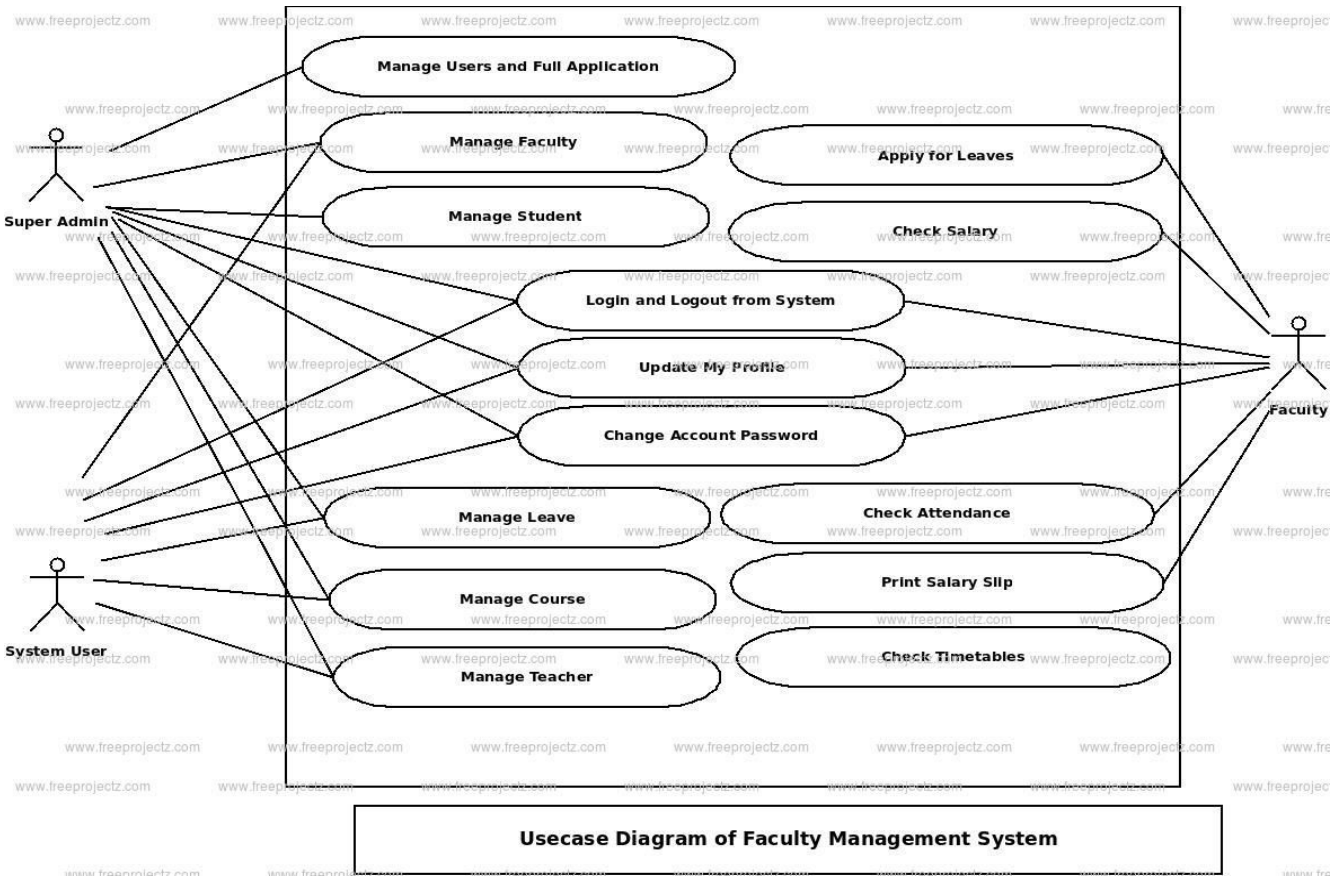
6. SEO and other Promotions

As soon as the website is live, search engine optimisation process begins. Web site indexing to all major search engines, creation of sitemap.xml, robots.txt, keyword analysis, micro blogging, content sharing and Website Blogging should be part of this phase. This should be ongoing as google process takes longer to do the full analysis. Social media integration like Facebook, Twitter etc. should be part of promotions.

7. Maintenance and Upgrades

Maintenance and upgrades of the website are the last phase of the website design life cycle. Website content should be upgraded from time to time. You must always keep an eye on the competitor websites so that you can update your own website accordingly. By using google analytics and webmaster tools, the customer should be able to check the health of the website and number visitors.Your web company should be called if they maintain your website as part of your contract. Those who look after their own websites can do most of the website changes using supporting documents.

UML Diagram



Usecase Diagram of Faculty Management System

TOOLS & TECHNOLOGY

1. HTML :

HTML stands for Hyper Text Markup Language. It is used to design web pages using markup language. HTML is the combination of Hypertext and Markup language. Hypertext defines the link between the web pages. Markup language is used to define the text document within tag which defines the structure of web pages. This language is used to annotate (make notes for the computer) text so that a machine can understand it and manipulate text accordingly. Most markup languages (e.g. HTML) are human readable. Language uses tags to define what manipulation has to be done on the text.

2. CSS :

Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable. CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independent of the HTML that makes up each web page.

CSS is easy to learn and understood but it provides powerful control over the presentation of an HTML document.

3. BOOTSTRAP :

Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites. It solves many problems which we had once, one of which is the cross-browser compatibility issue. Nowadays, the websites are perfect for all the browsers (IE, Firefox and Chrome) and for all sizes of screens (Desktop, Tablets, Phablets, and Phones). All thanks to Bootstrap developers -Mark Otto and Jacob Thornton of Twitter, though it was later declared to be an open-source project.

4. JavaScript :

JavaScript is a lightweight, cross-platform and interpreted scripting language. It is known for the development of web pages JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard

library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

5. PHP :

PHP stands for Hypertext Pre-Processor. PHP is a scripting language used to develop static and dynamic webpages and web applications. Here are a few important things you must know about PHP:

1. PHP is an Interpreted language, hence it doesn't need a compiler.
2. To run and execute PHP code, we need a Web server on which PHP must be installed.
3. PHP is a server side scripting language, which means that PHP is executed on the server and the result is sent to the browser in plain HTML.
4. PHP is open source and free.

6. MySQL :

MySQL tutorial provides basic and advanced concepts of MySQL. Our MySQL tutorial is designed for beginners and professionals.

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license. It is supported by Oracle Company.

Our MySQL tutorial includes all topics of MySQL database that provides for how to manage database and to manipulate data with the help of various SQL queries. These queries are: insert records, update records, delete records, select records, create tables, drop tables, etc. There are also given MySQL interview questions to help you better understand the MySQL database.

Feasibility

The initial steps in carrying out a feasibility analysis for a Web project, based on information obtained interactively from a prospective client, are modelled as a rule-based expert system that draws on empirical formulas to provide a quantitative valuation of the clients replies. The model is centred in the pre-design phase, concerned in particular with ascertaining whether coherent aims, message, audience and services have been identified for the Web project. The model is constructed empirically by means of a knowledge acquisition process. The various data collected from the user are described, as well as the way in which these data are translated into quantitative values that subsequently play a role in the final diagnosis for the Web project.

CONCLUSION

The development of the website helped us in understanding the structure of the website, needs, requirements, and way to fulfill them efficiently, also allowed us to enhance our knowledge and skills in this area.

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