IT314 Software Engineering Team 7

High Level Design Document

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Overview

This is the high level design document for the Website of DA-IICT's Campus Magazine 'Entelechy'. The first part gives a brief description of the project topic. The second part is the overview of the design of the software. The third part is the system components which contain the database table and the detailed description of the modules.

Target Audience

Software Developers

Document Revision History

Version	Author(s)	Description	Reviewer(s)	Date
1.0	• Primary Authors: Sonu, Surabhi • Database Tables made by: Akash, Manjeet	High Level Design Document v1.0	Sandeep	05 March, 2013
2.0	Sumit, Akash	High Level Design Document v2.0 Evolution 2 and 3 design details added	Sonu, Surabhi	15 March, 2013

Table of Contents

1. Introduction 4

1.1 Purpose 4

1.2 Document Overview 4

1.3 Scope 4

2. Design Overview 4

2.1 Approach 4

3. System Components 5

3.1 Database Tables 5

3.2 Description of Modules 9

4. References 10

1. Introduction

1.1 Purpose

The purpose of this document is to provide a brief description of the design for the Website of DA-IICT's Campus Magazine 'Entelechy'.

Its main purpose is to –

- Provide high level design of the system.
- Document to show how the various components would be implemented.
- Provide a definite roadmap for developers to code the software.

1.2 Document Overview

This document contains brief design of the system – brief description of modules and database tables.

1.3 Scope

This document contains the design of the planned implementation of software. Logic design for every module is documented here. Hence the developers can code directly by referring to this document with minimal effort of debugging and testing.

2. Design Overview

2.1 Approach

The Project aims to equip the current website with following enhanced capabilities which are as listed below:

- In the present structure, the categories and tags must be added independently for each edition. We will modify this such that each new edition will inherit the previous edition's categories by default and new categories can also be added.
- Archival system is inefficient – the articles are stored on the basis of their edition instead of subject or categories. The articles will be stored more efficiently in archives and linked.
- We plan to make a bulletin board to display small posts and news snippets.
- Recommendation system – to allow the system to recommend an article to reader based on the kind of articles the reader has read before based on his choice in categories, author etc.

- Proper and more robust 'like' and 'comment' functionality on individual articles and profiles.
- Twitter integration based on hash tags of tweets (one-click share and recommendations).
- New improved UI designs and themes.
- User profiles for all registered user – which has there bio and the recent articles written by them (if any).
- Table Of Contents which dynamically displays all section wise posts

Since we've concluded to follow 'Evolutionary model' as our project model throughout the development of our software, we anticipate to provide the deliverables in the following approaches:

1. Core Structure: WordPress 3.5, upon which we intend to build our new Entelechy website.
2. Increment 1: Structure Modification, i.e. we will create a new taxonomy for Edition, so as to make the categories and tags separate from Editions. Bulletin Module will be implemented as a new custom post type. Implementation of the two older Entelechy websites data on the new system.
3. Increment 2: UI Design, i.e. by enhancing the current design of website and make it more user-friendly and in terms of looks and feel. All the features of the front-end like Twitter feed, Table of Contents, 'Like' feature and Different page layouts for 'Freeze Frame' & 'Point-Counterpoint'.
4. Increment 3: We will build User Profiles, Recommendation System, Restrict user registration using DA-IICT Webmail Email-ID and Notification System.

3. System Components

3.1 Database Tables

Table 1 : wp_posts

Name	Type	Comment	Nullable	Unique
ID	Bigint	None	No	Yes
post_date	Datetime	None	No	No
post_date_gmt	Datetime	None	No	No
post_content	Longtext	None	No	No
post_title	Text	None	No	No
post_excerpt	Text	None	No	No
post_status	Varchar	None	No	No
comment_status	Varchar	None	No	No
ping_status	Varchar	None	No	No

post_password	Varchar	None	No	No
post_name	Varchar	None	No	No
to_ping	Text	None	No	No
Pinged	Text	None	No	No
post_modified	Datetime	None	No	No
post_modified_gmt	Datetime	None	No	No
post_content_filtered	Text	None	No	No
post_parent	Bigint	None	No	No
Guid	Varchar	None	No	No
menu_order	Int	None	No	No
post_type	Varchar	None	No	No
post_mime_type	Varchar	None	No	No
comment_count	Bigint	None	No	No
post_author	Bigint	None	No	No

Table 2 : wp_postmeta

Name	Type	Comment	Nullable	Unique
meta_id	Bigint	None	No	Yes
post_id	Bigint	None	No	No
meta_key	Varchar	None	No	No
meta_value	Longtext	None	No	No

Table 3: wp_comments

Name	Type	Comment	Primary Key	Nullable	Unique
comment_ID	Bigint	None	Yes	No	Yes
comment_author	Tinytext	None	No	No	No
comment_author email	Varchar	None	No	No	No
comment_author_url	Varchar	None	No	No	No
comment_author_IP	Varchar	None	No	No	No
comment_date	Datetime	None	No	No	No
comment_date_gmt	Datetime	None	No	No	No
comment_content	Text	None	No	No	No
comment_karma	Int	None	No	No	No
comment_approved	Varchar	None	No	No	No
comment_agent	Varchar	None	No	No	No
comment_type	Varchar	None	No	No	No
comment_parent	Bigint	None	No	No	No
user_id	Bigint	None	No	No	No

Table 4 : wp_commentmeta

Name	Type	Comment	Nullable	Unique
meta_id	Bigint	None	No	Yes
meta_key	Bigint	None	No	No
meta_value	Longtext	None	No	No
Comment_id	Bigint	None	No	No

Table 5 : wp_users

Name	Type	Comment	Nullable	Unique
ID	Bigint	None	No	Yes
user_login	Varchar	None	No	No
user_pass	Varchar	None	No	No
user_nicename	Varchar	None	No	No
user_email	Varchar	None	No	No
user_url	Varchar	None	No	No
user_registered	Datetime	None	No	No
user_activation_key	Varchar	None	No	No
user_status	Int	None	No	No
display_name	Varchar	None	No	No

Table 6: wp_usermeta

Name	Type	Comment	Nullable	Unique
umeta_id	Bigint	None	No	Yes
meta_key	Varchar	None	No	No
meta_value	Longtext	None	No	No
User_id	Bigint	None	No	No

Table 7: wp_terms

Name	Type	Comment	Nullable	Unique
term_id	Bigint	None	No	Yes
Name	Varchar	None	No	No
Slug	Varchar	None	No	No
term_group	Bigint	None	No	No

Table 8: wp_links

Name	Type	Comment	Nullable	Unique
link_id	Bigint	None	No	Yes
link_url	Varchar	None	No	No
link_name	Varchar	None	No	No
link_image	Varchar	None	No	No
link_target	Varchar	None	No	No
link_description	Varchar	None	No	No
link_visible	Varchar	None	No	No
link_owner	Bigint	None	No	No
link_rating	Int	None	No	No
link_updated	Datetime	None	No	No
link_rel	Varchar	None	No	No
link_notes	Mediumtext	None	No	No
link_rss	Varchar	None	No	No

Table 9: wp_term_texonomy

Name	Type	Comment	Nullable	Unique
term_taxonomy_id	Bigint	None	No	Yes
Taxonomy	Varchar	None	No	No
Description	Longtext	None	No	No
Parent	Bigint	None	No	No
Count	Bigint	None	No	No
Term_id	Bigint	None	No	No

Table 10: wp_term_relationships

Name	Type	Comment	Nullable	Unique
Object_id	Bigint	None	No	Yes
term_taxonomy_id	Bigint	None	No	Yes
term_order	Int	None	No	No

Table 11: wp_options

Name	Type	Comment	Nullable	Unique
option_id	Bigint	None	No	Yes
blog_id	Int	None	No	No
option_name	Varchar	None	No	No
option_value	Longtext	None	No	No
Autoload	Varchar	None	No	No

3.2 Description of Modules

3.2.1 Registration Module: This module restricts the user to register with her/his DA-IICT webmail ID only. If the entered email is non DA-IICT webmail id, the user is given an error instructing to register with webmail-id. The username entered needs to be unique. Error is given when the username entered is already registered. Password must contain atleast 6 characters. Error is given when entered password has less than 6 characters.

3.2.2 Edition Module: This module will create a new 'Edition' separate for categories and tags.

3.2.3 Bulletin Board Module: This module will create a separate post type – 'Bulletin' which will be small posts or news snippets. Like all other posts/articles, it will also have direct upload system.

3.2.4 Like Button Module: This module will enable all registered users to 'like' all the posts – articles and bulletins.

3.2.5 Twitter Module: This module will fetch tweets from Twitter.com with hash-tags, handle or keywords 'DA-IICT', 'DAIICT' or any other word or phrase which the website admin

3.2.6 User Profiles: This module will deliver user profiles feature for all the registered users and will have their bio and the recent articles written by them (if any).

3.2.7 Table of Contents: This module will display a dynamic page which will have all the section wise articles of a particular edition

3.2.8 Recommendation Module: This module will provide recommendation to readers of articles based on popularity of posts.

3.2.9 Archival Module: This module will provide users a more robust archival feature. Users will be able to search for posts belonging on a particular edition or a particular category or a combination of both.

3.2.10 Notification System: This will notify the authors of the posts whenever someone comments on his/her articles.

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4. References

Sandeep Mertia, et. al., Software Requirements Specification v1.0, Team 7, IT314 Software Engineering, Winter 2012-13, DA-IICT

Sandeep Mertia, et. al., Project Plan v2.0, Team 7, IT314 Software Engineering, Winter 2012-13, DA-IICT