CourseControl

Creating a Web Course Creation And Management WordPress Plugin

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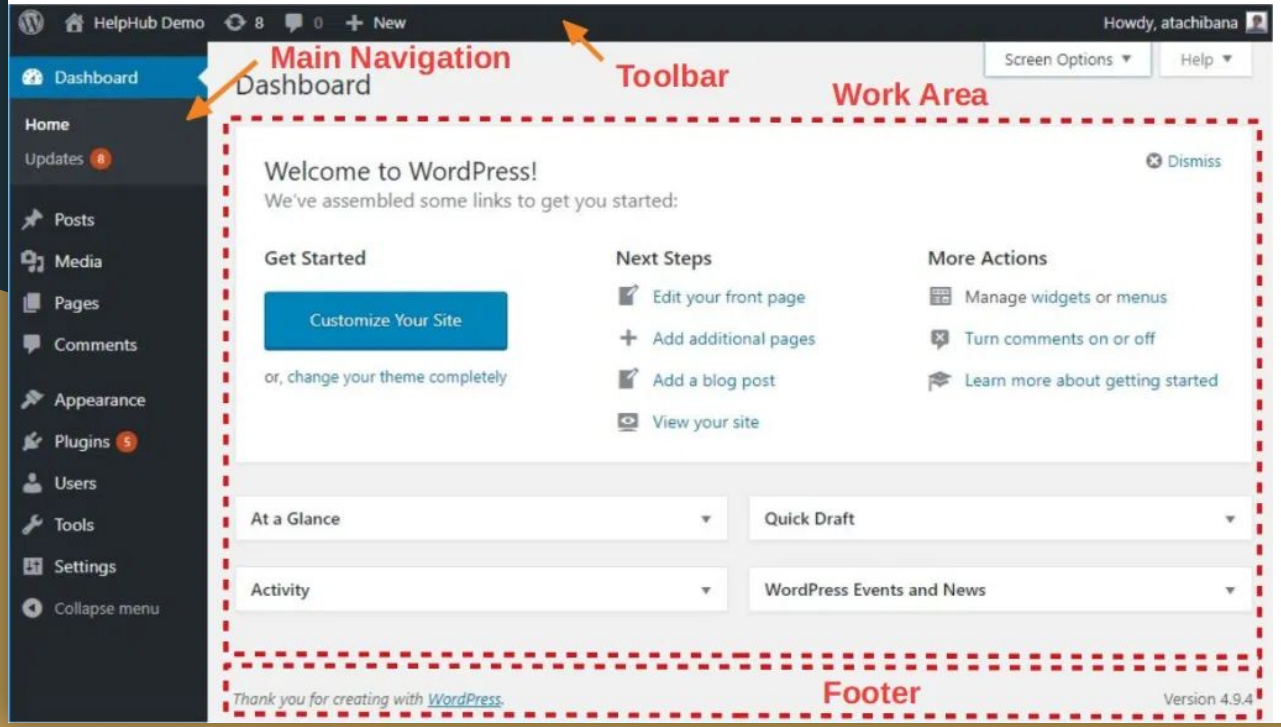
What is WordPress and Plugins?

- WordPress is a web management system that accounts for over 40% of websites with a market share of nearly 65% [2]
- Free, open-source, based in PHP, connects to a MySQL or MariaDB database
- New functionalities can be added with ‘plugins’ which tie into the API to execute code

WordPress Backend and API



- Backend consists of navigation and work areas
- Plugins connect to API through Hooks which activate on event firing..

Image 1: Common backend layout

Source: Adapted from [2]

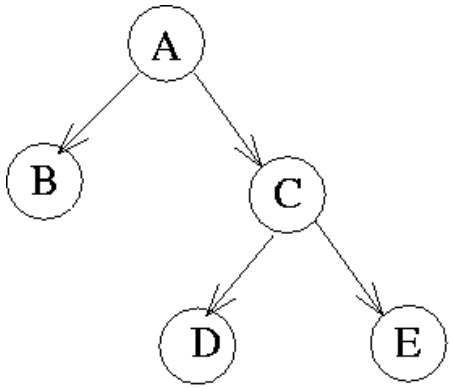
Learning Management Systems

- Online Learning Management Systems allow for the creation and distribution of web courses
- Commercial options such as D2L, as well as a number of WordPress plugin options
- Few free and open-source options
- Client wanted something to fill this niche and also offer ability to test ideas
- Typical structure is Courses containing Modules, and Modules containing Lessons

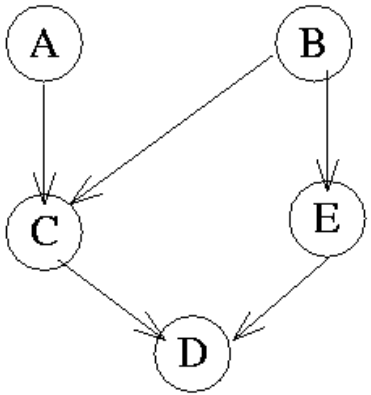
CourseControl

- Free and open-source
- Allows for the basic management of web courses [1]
- Easy filtering and navigation of data items
- intended for hobbyists, teachers, and subject experts

Directed Acyclic Graph Structure



Tree



DAG but not a tree.

- Forms a connection between nodes
- Allows for multiple connections
- Lowest level is Lessons, middle is Modules, and top is Courses.

Source: Adapted from [3]

Development and Testing

- Initial setup of development environment
- Taxonomies vs meta data
- Meta boxes and saving
- Filtering
- Unit testing on Raspberry Pi

Future Work

- Code refactor
- Submission to WordPress Plugin Directory
- Quizzes
- Link to Woocommerce

Questions

References

[1] https://github.com/IsNOTJeremy/CourseControl

[2] https://wordpress.org/support/article/administration-screens/

[3] http://lcm.csa.iisc.ernet.in/dsa/node168.html