University of Technology, Jamaica

Faculty of Engineering and Computing

School of Computing and Information Technology

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Title:

Introduction to Human Computer Interaction Group Project

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Tutorial Day/Time: Wednesday 8:00 a.m. – 10:00 a.m.

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Scenario

You have been asked as a part of an Design team to develop a UTech, Jamaica Virtual Campus Tool as a programmable interface design using principles within usability engineering to support its Human Computer Interface design i.e. from mapping the system requirement, designing the usable system interfaces and end user acceptance testing.

The team needs to operate as an Agile Development team from the start of the project to produce the most appropriate design case given the problem domain and context.

The motivation of this project is driven by the fact that UTECH, Ja is seeking to improve its customer experience by inviting prospective students as well returning students to benefit from an understanding of what is happening in and around the campus as well as to engage in the student teaching and learning experiences of the campus as well as the social experiences around the campus.

The project is an exploratory one for which a programmable interface design would be required and tested. It means that the entire class group would need to be broken down into smaller working groups with responsibilities for working out the project deliverable and injecting levels of creativity and factual relevance with coming up with a final design.

Introduction

The aim of this project is to create a virtual reality tour of UTech, Jamaica campus. This tool would be available primarily to all new students, along with returning students who might not be familiar with the school's surroundings in its entirety. The task of building the virtual tour was divided among the members of the group; namely the project requirements, the sequence of the interface design styles and their components and testing the user interface. The campus has representations of the various buildings and walkways that combined provides a real life like experience replicating what would happen if you were actually walking on the grounds of the university.

For this project Lapentor, an online tool, was used to create the virtual tour. Along with this, the team used WordPress, a free, open-source website designing tool to create an UTech website equipped to give persons with the information they need to effectively manoeuvre the campus.

Project Requirements

The members of the group were assigned with the task of creating a programmable, usable and interactive user interface design that provides information about the campus in a very engaging and comfortable manner. The team had to decide what the requirements of the project would entail based on the purpose of the project. Lapentor allowed for an ease of use when navigating the interface with the use of: control bar (with icons), menu and audio. This tool was chosen as it allows for cross platforms that require access to the internet in order to use the Virtual Campus Tool and it can be viewed on any device (smartphone, tablet or laptop). With the use of panoramic photos in the interface, the realistic look was achieved as this allowed the user to feel like they were physically walking on the campus.

Text and audio was integrated into the virtual tour as a means of providing more engagement with the users. Details of the various buildings were displayed in text boxes. To move from point to point, a target icon was used to show in what direction the user would see another view of the virtual tour. In the background, the school song was heard playing as you use the tool as a greeting. The members of the group made an effort to make this virtual tool similar to an actual tour guide including an audio assistant who welcomed the viewers at the start of the tour.

Functional requirements of the systems

- Hosting and Domain

  Hosting and Domain server for www.utechtour.xyz was purchased from www.GoDaddy.com which then was configured and setup to enable the tour to be visible by the users worldwide

- Navigation

  Users should be able to easily locate and use the navigation, text box and audio assistant buttons.

- Interaction

  Users should be able to hear an audio assistant at every photo along with on screen text describing what is being shown.

- Additional functionality

  The website should likewise be easy to use and provides helpful information to new and returning students.

- The tour should allow users to be able to move from one place to another easily and they should also be able to go back.

- The tour should allow the users to pause and play the audio at any point in time.

- The tour should only allow the users to view the tour not create/modify/delete any aspects of the tour.

- The tour should provide support for user interactivity with static objects. By interacting with these objects, the user should be able to get information on various campus items, for example building names.

Non-Functional requirements of the systems

- Usability

  The speed of the website should allow for a seamless and natural navigation. This adds in creating a more real life like experience for the users.

- Reliability

  The interfaces should display the content with minimal obstruction.

- Portability

  The user should be able to view the tour on any device that can connect to the internet.

- Responsiveness

  The website and the tour should support interaction and respond to clicks (from a mouse) and touches (on the screen of a phone or tablet) in a timely manner. There should be no delays when the action has been initiated.

- Scalability

  The tour should allow users to zoom in and out to how far they choose. It should also be adaptable to all screen sizes and display the information accordingly.

Project Design

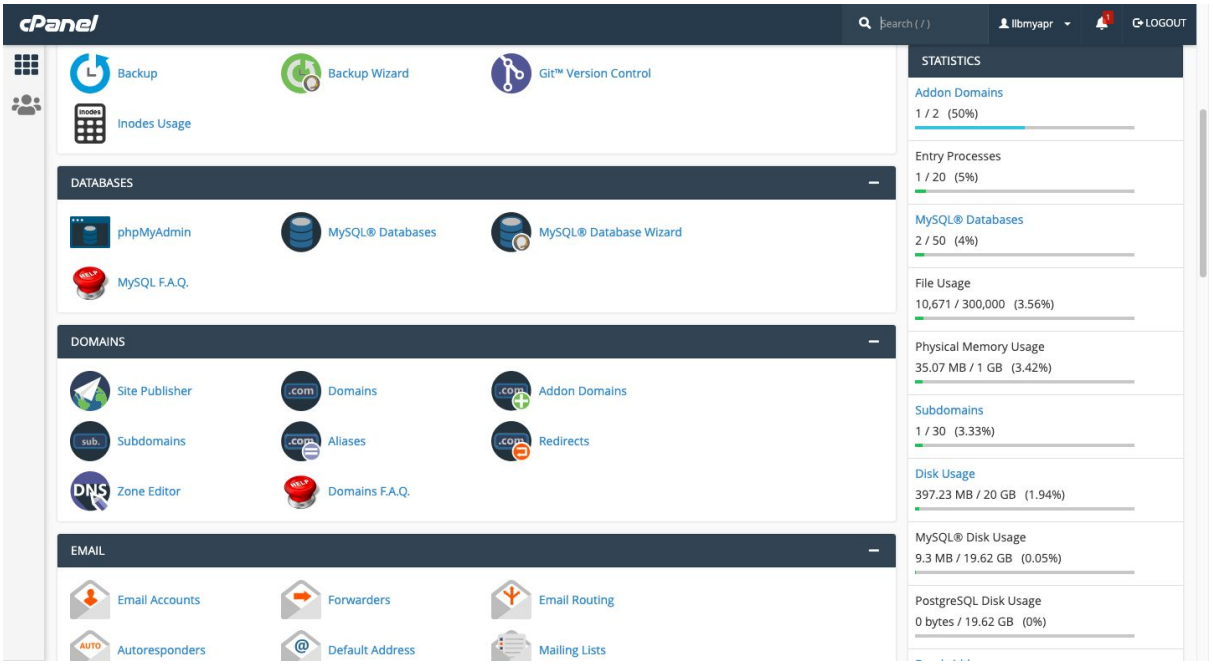
For this project, various design styles were throughout the design process. These design styles include: panoramic 360 degree view, audio assistant, transitions and text. The use of panoramic photos provided the ability for users to look around the area mimicking what they would do in reality if touring the physical campus. An audio assistant aids in providing a more enjoyable experience while using the tool. This also helps users that may have a difficulty viewing the text on the screen or are more drawn to hearing the tour rather than reading the details of the various photos. Transitions used in this virtual campus tour gave the feel of the user walking from point A to point B as they would in reality. Lastly, the text displayed on the screen aided in providing more information about the photos, giving the users options whether they wanted to read the details of the surroundings or if they want to hear the audio assistant.

Group Member Contribution

Group Member(s)	Roles / Contributions
Alecia Bailey	● Created the timelapse video ● Gathered photos and videos ● Worked on the virtual tour ● Testing the virtual tour
Jeffrey Lynch	● Setting up hosting and server ● Configuring wordpress onto the website ● Designing and coding wordpress website.
Shannon Henry	● Gathered information to be displayed on virtual tour and worked on making the virtual tour
Kareem Steen	● Creating and detailing the project document
Geovanni Skyers	● Gathered images ● Configuring server ● Testing website

Screenshots

Domain Server back end:



UtechTour Backend/Dir File: