Criterion B: Analysis

Proposed solution:

My interview with the client, Aliya Mahdi, allowed me to understand what solution she needed. She described a website as the most effective solution, although she did consider a database to hold the information, and stated that a form of file-storage system and a calendar were necessary, along with a contact page.

Requirement specification

IT system requirements

- Hardware: A computer with a Windows operating system and CPU of an Intel Core Pentium or higher (or equivalent). Basic storage of at least 2GB on the computer with another 2GB backup storage on USB. The computer must also have basic graphical capabilities which means it should have a basic Intel or AMD graphics card(most probably an integrated one)
- Software: A web browser(Google Chrome) that supports the Repl.it coding and hosting platform and a photo-editing software(Adobe Photoshop)

System interaction

- In order for both hardware and software to mesh properly, the web browser will have to run fast enough to support the Repl.it coding and hosting platform, which means that the computer will need to be able to run the web browser at an appropriate speed, on a variety of web browsers, not solely Google Chrome. Additionally, edited photos will need to be saved in png format to allow for quick load times. The hyperlinks will need to function properly by sending the user to the correct links.

Input/output requirements

Input requirements

- The input required for this IT solution will be information from the client about the business, specifically contact and course information. Additionally, photos will need to be provided to be displayed as will the important files that need to be stored.

Output requirements

- The output that this IT solution will provide will be the information that will be displayed online in an accessible format. The information will include photos and the information will be organized into various pages that will be uniform and aesthetically pleasing, while guiding the user around the site.

Processing

- The processes for the creation of this website are writing individual HTML elements, using HTML code to organize the HTML elements, applying CSS code to design and transform the HTML elements, writing JavaScript code to add animations and important functionality to the website, and downloading and adding CSS to images to allow them to be displayed and have effects like rollover and fade/brighten. Additionally, there are the processes that will be a part of the website, such as hyperlinks taking the user to the correct page, the contact form taking in information and sending it as an email to my client, the images properly displaying rollover effects, the calendar showing current events according to my client's

concerns, and the file storage system, which hosts files through Repl.it but allows users to access them and open them on their own device.

Security

- The method by which the product will be kept secure from others is that the files and calendar accessibility will be kept to the client's email, so that only the client with their username and password will be able to change or add/remove files or events on the calendar. The code is kept away from the website on a secure code hosting platform that cannot be accessed without a username and password. Images are saved in png and jpg format to prevent accessing of layers.

Specific performance criteria

a) Website that is accessible online
b) Calendar functionality for events
c) File storage functionality
d) Contact page that provides contact details and a contact form
e) Pages that contain course information in an accessible manner
f) A cohesive and aesthetically pleasing design and colour palette
g) Useful links to other websites that function properly

Justification of chosen solution

The product that Aliya considered the best choice was a website. While other solutions were considered, such as creating a flipbook or creating a database to store information and resources, a website was deemed the best overall. A flipbook could contain useful information and resources but would not be as interactive and available to students. Similarly, a database would be able to effectively store resources and information, but the interactivity that is made possible in a website that is online and has several different pages with features that directly fulfill the SPCs, like showing the dates of the class, cannot be understated. For these reasons a website was deemed the most appropriate solution.

My client has hardware and software that are capable of accessing, editing, and managing the IT solution. Specifically, these are a computer device with a Wi-Fi connection, the Windows operating system, and a browser capable of accessing Repl.it. Repl.it and the Chrome browser are free and available online, and both my client and I have access to a computer device with the appropriate computing power and Wi-Fi connection.

The time constraints on this project allow for adequate time to complete the IT solution. I am familiar with programming in HTML and CSS, languages I will use to create the website on Repl.it. As for the content of the website, I will be using information that my client has made available to me in a text document. Additionally, I will use images online and take some pictures of my client's location.

Financially, the only consideration is a custom domain name, which my client has agreed will be something they invest in. This will allow them to have their website easily searchable by a search engine. The security and privacy implications like image formats and security of code have been taken into account and secured with passwords. I will be able to teach my client how to edit the calendar, but my client can also find internet tutorials. Finally, my client's IT solution can be made available online through the Repl.it code hosting platform and subsequently website hosting.

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