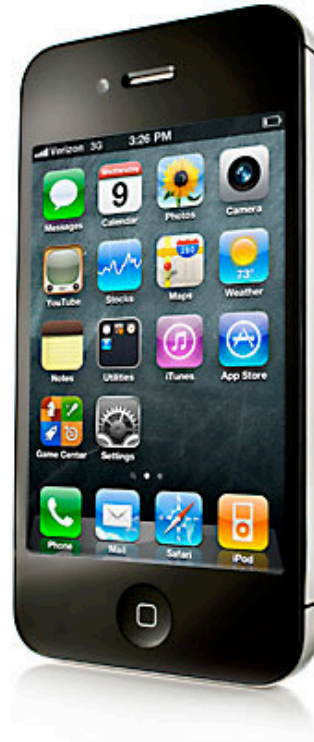


TAG Web Challenge 2012

Documentation



Theme: Guts of the Computer: Building a
Computer in 9 Easy Steps

Team Name: NC Devs

School: North Cobb High School

Faculty Advisor: Mrs. Shattles

Guts of the Computer: Building a Computer in 9 Easy Steps

Project Specifics

Name of the project	Guts of the Computer: Building a Computer in 9 Easy Steps
Name of the team	NC Devs
Name of the school	North Cobb High School
Names of the students	Erik Garcia David McFall Wyatt Shaffer Nik Thompson
Faculty Advisor	Pamela Shattles pamela.shattles@cobbk12.org 678-360-6294

Overview of Guts of the Computer

This website is meant to educate its users about the many different parts of a computer and provide them with simple to follow instructions for building a computer of their own.

Planning Phase

Audience

This project's audience includes anyone at high school education level or above (this includes college students and parents) who would like to learn about computers and how to build them. This audience is intelligent enough to be able to understand our more in-depth instructions and have the disposable income necessary to purchase parts.

Learning Objectives

The audience will be able to first learn the main components of a computer, how they work, and which kinds would be best for them to purchase. Using this information they will be able to plan out their system. They then learn how to assemble these parts into a working computer.

Benefits

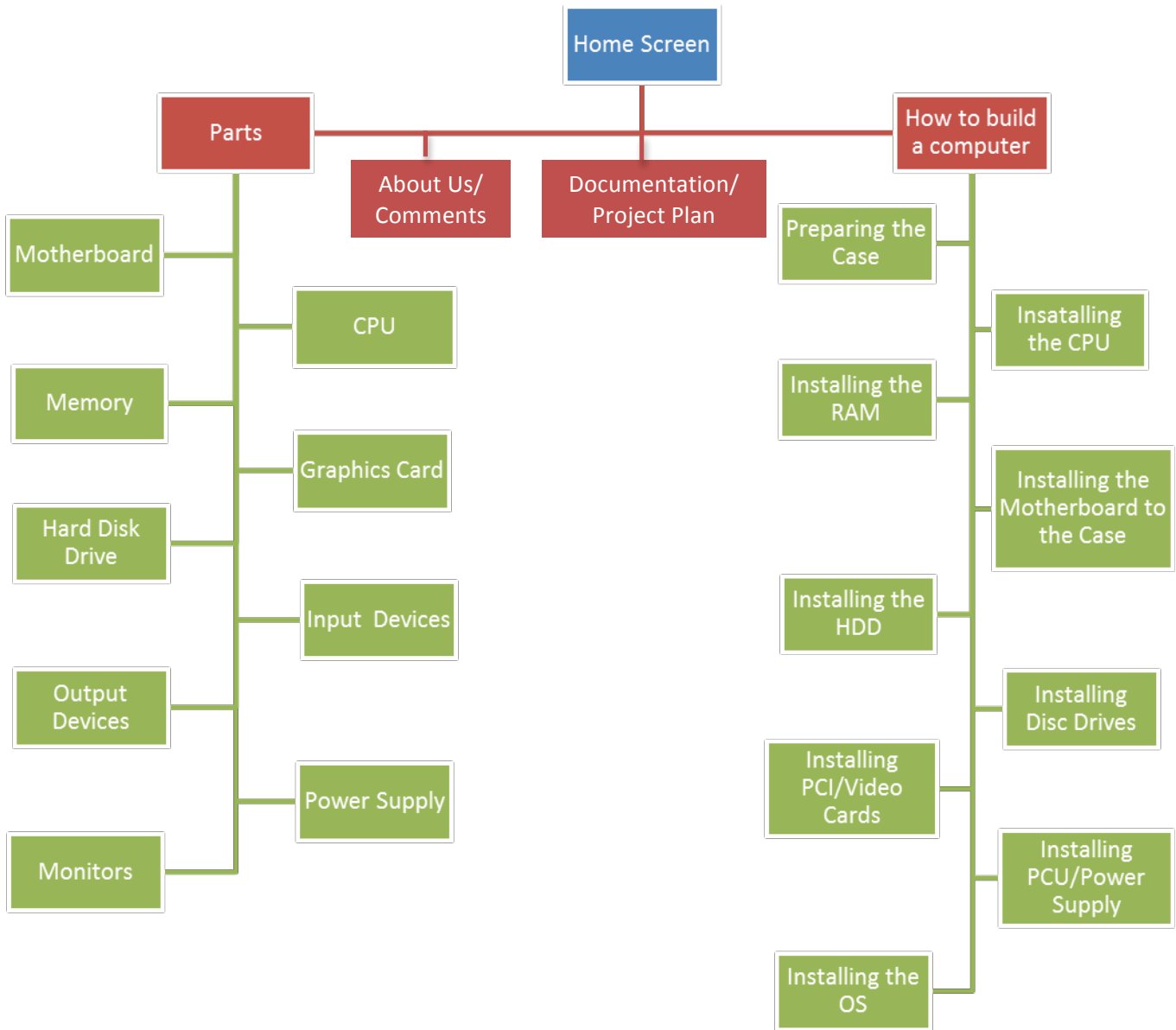
Users of this site will learn the components of a computer, how a computer operates, how to wisely shop for computer parts, and how to construct a computer of their own. With this knowledge, they will save a lot of money, as home built computers are often much less expensive than a prebuilt computer of similar specifications. They will also be more prepared to handle technological malfunctions on their own.

Construction Phase

Functional Design

The website contains two main features: one to teach the parts of a computer and one to teach how to build a computer. These two parts create the content component of the app, and can both be accessed from the home page. The component section of the site is split into different parts to provide an easy to understand overview of each part. The instructions for building a computer are split into easy to digest steps and include pictures to help the user understand. A search bar is another feature that allows for the user to easily find any topic in the app using a key word. By using the search bar, returning or advanced users can find what they need or where they left off last faster than manually searching through each page. At the bottom of the homepage there is a link to a comment form which allows users to submit feedback directly to our developer email. There is also a search function present on every page that allows users to seek out specific terms anywhere on the site.

Functional diagram



Navigation overview

The user is first greeted with the website's title and a brief description of its purpose, followed by two large buttons that lead off to the site's main functions, with links to the comments and credits at the bottom. After reading the main overview the next natural course of action is to click on the top button, leading to the components segment of the site, which is split up

into several other tabs. They can either chose a specific part they don't know about or start from the top and navigate between the pages using the arrows at the top of each page. They are educated about the different parts of the computer, which readies them for the assembly segment. They can return to the home menu via the top-left corner of any page and continue on to the assembly instructions directly below the components button. The instructions include nine steps which the user can chose from a menu or begin from step one. Navigation is the same as it was for the components. Finally, the user can voice questions or comments using the comments form that is linked at the bottom of the page. Also, a search bar is always present on the site, allowing returning or advanced users to find material relevant to them quickly and efficiently.

Mobile Website Design

Since we designed this as a mobile site from the start, we made sure to design it to be as comfortable and familiar to mobile users as possible. The user interface uses similar backgrounds and buttons as standard iOS applications and the information is grouped so that it is easy to read on a mobile device. It was difficult to get some of the formatting right since we were using Dreamweaver to code the site, and the previews are not the same resolution as a mobile device's screen. Thus we had to continually check our test phone to ensure the designs worked well.

Testing Phase

Testing Methodology

We tested our website many times over the course of development. The first and most simple of tests were done by the members of our group: when someone finished a particular part of the site, the others would check for any possible coding errors or spelling/grammar mishaps. After we had the core of our site complete, we sent it to our advisor for advice and made corrections accordingly. Finally, we let some of our peers test the site and give feedback.

Testing Results

Our testing helped find and fix several errors on various pages throughout the site. Common errors were in links not going to correct pages, pictures not showing up, and the search not functioning correctly. Also, we found that our original instructions were too technical and unnecessary for many people, so we rewrote the site to be more amateur friendly. These mistakes along with errors in spelling and grammar were all found in testing and fixed to create our final design.

Implementation Phase

Written Instructions

When you initially load the site, take the time to read through the first paragraph to understand what you'll be accomplishing on the site, and then click on the first button on the page, titled "The Parts of the Computer". You will be redirected to another menu where you can choose from several different components of a computer. Choose "Motherboard" and begin reading. It may be helpful to also be looking at an online computer parts store such as Newegg to begin planning what parts you'd like to buy. To continue through the components pages, choose the arrow-shaped button in the top right corner of the page. Keep mind how each part functions in relation to others. As you finish reading the monitor page you should have the basis of your computer planned out. When you have acquired the parts, return to the home menu by pressing the icon in the top left of the page and choose the next button, "How to Build a Computer". Follow the instructions and use the pictures as references to assemble a computer out of the parts you purchased. Use the arrows on the top right to navigate the same as you did in the previous section. If you successfully follow the instructions, you should have a functioning computer as you finish the final step. However, if things do not work out the way you planned, you can leave us a message by navigating back to the home menu and choosing "Comments" at the bottom of the main page. Also, if at any point you'd like to look up a specific topic

without navigating through the menus, you can take advantage of the search bar at the top of each page.

Marketing Plan

Our marketing plan would involve using social networking sites and advertising around our school. Using sites like Facebook and Twitter, we would spark interest in the site. Also, by making fan pages, we would enable people to keep track of content updates and new features that we may add. We could also utilize our school's computing club to gather interest in the site. We could make posters that recommend it and hang them around our school and town.

Production

We have our website hosted on a domain by Yahoo, through which it will be listed on search engines. By using search engine optimization we will increase our presence, allowing people to find us more easily. We will also recommend the site to people with the desire to learn about computers and their parts, which could extend our reach beyond our school.

Monitoring/Maintenance Plan

Through the Yahoo Control Panel will we be able to see how many hits the site gets and a graph of traffic. The Control Panel also allows us to see where our site is on Google for certain search queries. Maintenance and monitoring will be handled by Yahoo to ensure that the site is up and running at all times. The site's feedback page allows users to send us notices of any errors they encounter.

Future changes that we'd like to incorporate include video tutorials, a troubleshooting forum, and an increased browser compatibility.

Budget & Development Tools

To minimize the costs, we used Adobe Dreamweaver which was already installed on our school computers and some home computers. We also chose it because it was easy to use and we already had training in Dreamweaver so we were familiar with the UI. We used Adobe Photoshop

to resize and edit images for the same reasons. We also used Filezilla to transfer of our html documents to our domain.

Lessons Learned

We formed our group only a month before the deadline, which forced us to work a lot faster than we would have liked, cutting out things we had originally planned, so it'd be better to get together earlier. We also should have spent more time making our layout less generic, though it's not a complete loss. We learned that designing a website for a mobile device is very different than making one for a standard browser.

What suggestions do you have to make this program better?

This is our first time participating in the competition, and having no prior experience we do not have many suggestions. It would be nice to have a more specific topic and more resources to help participants complete their sites.