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Module 3: Project Requirements (Part II)

Project Title: EZPC Builder Website

A1. User Interviews

User #1 Description: I have interviewed a 20 year old undergraduate female attending Montclair State University. She majors in computer science which is perfect for my website as she could provide some input from a person who has fairly good computer skills. This person also built a personal gaming computer for herself in late 2017. I asked her questions about her experience building computers and how difficult it is to build a computer. She mentioned websites like PCPartPicker that are used to generate the total price and show the compatibility between each part. Discussion about this website was important for me to understand what my website can improve on that websites like PCPartPicker don't have.

User #1 Interview:

- Have you ever built a personal computer or a computer for someone else?
 - Yes I have, I built myself a desktop computer that I use to play games and do schoolwork.
- How did you figure out your computer part setup? What websites did you go to?
 - Initially, I did quite a bit of research when looking for the specific parts I wanted for my computer. I used websites such as Twitter and Youtube to find more information. When I found all the parts I needed and googled through Amazon or Newegg to find the prices. I used the website PCPartPicker to check if my parts were compatible all together.
- Did you know about PCPartPicker before you began your research for parts?
 - Yes I did.
- Did you have any knowledge about various computer parts before you began your journey in building your computer? How long did it take you to learn?
 - Yes I did and also it took me a couple days to get a general idea.
- What is the purpose of PCPartPicker's compatibility feature?
 - It basically showed whether the parts I had selected for my computer were compatible and didn't have any issues. It wasn't too specific.
- Was there anything that you wished that PCPartPicker had shown or provided more about their compatibility?

- On PCPartPicker, they only provide a compatibility box and wattage accumulated when selecting certain parts. It may have been nice if they added some graphs or percentages to explain exactly how compatible the parts are to each other.
- Do you think that PCPartPicker should be used by anyone that doesn't have an idea about computer parts and assembling computers?
 - No I don't think so.
- How come?
 - Because PCPartPicker doesn't provide enough information on their website about the parts. Their interface is quite nice to use but it will still be confusing for anyone without computer knowledge.
- What type of information would you have wanted to see from them?
 - For certain products like memory or storage, it would be nice to see a small explanation or scale to show why I would need certain amounts of gigabytes in memory and storage to get an easy idea of how much I need.

User #2 Description: I have interviewed an 18 year old undergraduate female attending Rutgers University. This student does not major in anything and is currently undecided. She owns a laptop such as a Macbook and likes to browse and listen to music on it daily. This person knows a little bit about computer parts but not enough to be able to build her own computer on her own. She keeps up-to-date with Apple products and new releases. However, since she likes to customize and hold unique things that serve a purpose to her as well as use electronics on a daily, she would be a great fit to determine readability, interactivity, and simplicity for my website.

User #2 Interview:

- Have you ever built a personal computer or a computer for someone else?
 - No I have not.
- How do you feel about a website that helps build a custom computer for you? Would you do it?
 - It sounds nice to be able to build a custom computer but I feel like I would get lost or confused.
- What would make you confused about it?
 - Well these computer parts have specific details to them and I wouldn't understand which ones to choose for myself.
- Would it help if there was a way for you to answer a question like in psychology tests to get a recommendation on which part best fits your needs?
 - Most definitely yeah!
- When browsing to purchase electronics, which stores do you usually go to?

- I usually go to stores like Apple to browse different phones and laptops. They make it very simple to browse their products and select what I want to purchase.
- Do you ever check the description of the product and the parts that it has?
 - Yes I do.
- What do those descriptions usually have?
 - In terms of iPhones, it usually provides simplified percentages and text to describe how much faster it is than its previous models which is nice.
- What if we added descriptions about what each computer component does?
 - I think it would definitely help.
- For a lot of computer builders, they would have to assemble the parts on their own. Would you want to assemble your computer parts by yourself?
 - I don't know for sure. I would like to try but it would also be nice if there was an option to have it already built.

A2. Initial Tasks

Probable tasks based on user interviews:

- Design an interactable computer building website with a very simplified layout so that the average customer will understand the steps they need to follow to build their own computer.
- When the user selects components, we want to show them how compatible their components are between each other such as compatibility score.
- For memory and storage, show a scale on the average number of gigabytes most customers purchase and give a brief description of who would buy more and who would buy less gigabytes.
- When building a computer, when a customer chooses a CPU, then when he chooses motherboards and graphics cards, show them ONLY the ones that are compatible with that CPU to avoid uncertainty and confusion.
- Provide a way for a customer to answer a question to get a recommendation for which part they should choose.
- Provide customers with the option to have their computers pre-built and shipped to them so it can help save them time.
- Show customers the purpose of each component with brief descriptions as well as more details about the specific component they are looking for.

B1. User Discussions

User #1 Discussion: This user is the first person I have interviewed to formulate my tasks about my EZPC Builder website. When I explained about the compatibility score based on what she said to me about how there needed to provide more explanation to compatibility, she thought it was a great idea! When I brought up the idea about memory and storage, she liked but she believed that the idea could spread to various other computer components. She said that if I had a CPU or a GPU, I can show a graph to show how powerful those components are out of all the inventory components my website will hold (Like if the CPU was average, weak, or strong). Since she also had computer experience, she believed that it would deter her from using my website if she just wanted to browse for a single specific part. I proposed that there could be a store section where she can view parts on her own without going through the computer building interface. She also stated how websites like PCPartPicker didn't provide accurate pricing and provided links to websites such as Amazon and Newegg that she potentially felt worried buying from since scamming with computer components was a frequent thing. I explained that my website will hold inventory of their computer products and an easy and secure place to checkout.

User #2 Discussion: This user is the second person I have interviewed to formulate my tasks about my EZPC Builder website. Based on my interview with her, I formulated tasks such as designing an interactive computer building interface with buttons to press and select different components similar to PCPartPicker. I told her that for each component that the user goes through in my website, they will be given a brief description of what the component does and also possibly provide pictures and analogies to real world things to give her an idea. She said that it would definitely help as long as the descriptions are simplified and easy to understand. She also said that she wouldn't know how much to trust my website based on the information I provide about the components. She felt that it just wouldn't be enough and proposed that there could be a section where people post reviews, questions, and comments about the components that she selects so that she can read what other people have experienced. She also said that the idea of answering questions to get recommendations is a good idea, but there needs to be some visualizations while answering those questions as well as an option for where they can message an assistant to help them with the question.

B2. Revised Tasks

Revised tasks based on discussions (ordered based on importance):

- Design an interactable computer building interface for where user can visualize the computer components that they need to look for.
- Design a questionnaire format (similar to psychology tests) where the user will be asked various questions about what he plans on using this computer for. The questions answered will convert into recommended parts that the user should get.
- During the questionnaire, in case the user gets confused with the question, he can message a customer service agent that can help answer their concerns.
- Design a store page for users who do not want to build an entire system with the computer building interface and the questionnaire interface.
- Automatically cancel out computer parts that are not compatible with the current parts you have selected to avoid confusion.
- Provide a comment section for each computer part and a review system where people get to vote up or down out of five stars to give an idea of how good that computer part is to future buyers. Users tagged as 'Verified' or 'Computer Expert' will have their comments moved to the top.
- Describe the purpose of the computer parts (eg. purpose of CPU, GPU, Memory) with simplified descriptions, analogies, comparisons to real world objects or situations for a very simple and easy understanding.
- Show a visualized graph of how strong or weak (big or small in memory) the component is out of all the inventory components sold on the website.
- Provide additional descriptions and details such as the year released and the company that created the component.
- Provide the user with an option to save their computer builds by creating a build list (similar to Amazon) or saving your build into a PDF.
- Provide users with the option of having their custom computer parts already pre-built for them for their convenience. This can be provided in the hassle-free checkout process.
- Provide users searching for specific computer parts with a list of available parts, how many parts, and the last part purchased time and date.

B3. Revised Users

After the interviews and discussions held between the two users, I have come to the conclusion that my user group might need some slight adjustment. I believe that my new user group would be anyone that has some slight understanding about technology and about computers. The reason I believe this is because I would want my website to be informative but I also believe that the information I provide, even when simplified, will still not convince someone that is completely clueless about computers to get one on their own without assistance. But someone that has purchased a new phone or laptop in the past by themselves with limited knowledge about computers will most definitely feel comfortable using this website. So the age requirement would be between 13 to 60 years of age. The user group also still has to understand English as well as live in the United States. Website will still not support any other businesses as of this moment.

C1. Literature Synopsis

Article #1: In the article, “*The importance of product reviews and how to get them*” written by Pamela Hazelton, talks about the reason why many ecommerce stores like Amazon, Walmart, and Target allow users to rate and put reviews on certain products that they list. Websites like Amazon will provide a big example for my website since my website will still act as an ecommerce store as well. She explains that by allowing this, users searching for specific products will most likely come across my website since they can use reviews from other people to justify whether a product is good or bad. She also says that the benefit of reviews is that it allows customers to feel more confident in purchasing the product they are looking at. This definitely will help me with my website as I don’t only want to only inform my customers through the information I provide about the product but as well as experiences of other users using the product.

- <https://woocommerce.com/posts/get-more-product-reviews/>

Article #2: In this research article, “*Generating Product Description from User Reviews*” written by Slava Novgorodov, Ido Guy, Guy Elad, and Kira Radinsky all talk about the how there are many products being sold and listened on e-commerce website and also say how some of these products that are listed, always lack a proper product description. They state that time could be saved by allowing user reviews to take over the product description and the top candidate for the user reviews could be listed as the verified description of the product. I really liked the idea of this, especially how this correlates to my idea of implementing comment section for user reviews. I believe that if I implement a functionality where there is a user who is verified or a computer expert, it will have their review appended to the top for that specific computer part on

the website and help users browsing for parts to get the best idea about the product they are looking at.

- <https://dl.acm.org/doi/10.1145/3308558.3313532>

Article #3: In this research article, “*Applying The Technology Acceptance And Service Quality Models To Live Customer Support Chat For E-Commerce Websites*” written by Ahmed Elmorshidy, talks about the importance of live customer support chat seen in many websites rather than the utilization of e-mail based or phone-based customer support. He explains that with the new modern day and age, customers require answers much more immediately. If we do not provide these types of answers immediately, then we are at risk of losing customer interest. This really relates to my websites as I would want to provide an internet-based customer support chat where when a customer is stuck on a certain question on the questionnaire interface when answering their questions or about a certain computer part, that a customer service agent is able to respond to them immediately.

- <https://www.clutejournals.com/index.php/JABR/article/view/7659>

Article #4: In this article, “*How Accurate is PCPartPicker to Check Compatibility?*” written by Build-Gaming-Computers.com talks about the accuracy that PCPartPicker website holds. The article generally speaks good about their compatibility features between computers parts but the issues that they explain is that the compatibility isn’t super accurate all the time. Some of the issues brought up was about case sizing and being able to fit all the parts inside. PCPartPicker will check sizing for most parts but sometimes things like CPU cooler size and Computer case sizing could be overlooked. Also estimated wattage is only an estimate and isn’t the exact wattage requested by certain computer parts. These issues with compatibility from PCPartPicker most definitely will help with developing a stronger compatibility interface for my EZPC Builder website.

- <https://www.build-gaming-computers.com/how-accurate-is-pcpartpicker.html>