Daniel Riaz

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System Analysis and Design

Title: Custom Rigs

Scope definition- The opportunity for fully customizable PC’s is completely evident. In today’s market with regards to PC building is filled with limitation. A majority of today’s society uses PC’s for everyday use whether at home use or for work purposes. What we want to do at Custom Rigs is give the consumer the option to completely customize their rig for the requirements they need whether video editing or gaming, from internal to external customization and accurate data that shows what consumer is gaining from specific parts and what they are losing. Transaction processing system will be used. The company will be better off with it because the speed of productivity will increase and consistency, while decreasing errors such as wrong parts being chosen that are not compatible with each other. Will take about 4 months to create the system and 2 weeks in every location to install so 7 and ½ months. The limitations may be processing and delivery times due to having to order the parts after the customization is made by the consumer. The design, implementation and installation will cost about 200,000 for the initial contract for the system + 10,000$ monthly for employee salaries that we will have to hire throughout the installation etc.. Total will be about $800,000, There will be a system building team , etc. Total of 8 employees in the team to carry out everything.

Problem Analysis- System improvements are based on customer purchasing data. Over and under stock , delivery time, lack of sales, Waste of product, customer ordering incompatible parts are all issues with the current system. What PC parts are the majority of the consumers adding to their rigs? What is seldom added? System improvements goals is to eliminate the third party when evaluating the processing and delivery times. Keeping a substantial and consistent stock of the parts that are frequently added. E.G. i7 CPU’s, RAM , etc. Custom Rigs housing the stock in our own warehouses will eradicate the time from ordering the parts from the third party to having them deliver it to Custom Rigs, To keep track of overstock and understock we will have the database consistently updated so that we know what's in stock and what's not in stock as well as what parts are being ordered more often that way we are able to order those more frequently.Sales will be increased with the system because rather than an order being placed in person, it will be placed online and in person therefore allowing individuals that aren't close to a CustomRigs store the ability to order one. Incompatible parts being ordered will be cut down because the system goes through a verification process where each part will have to be compatible with the previous one to be able to continue.

Requirement analysis- The system should be able to offer the user the options and customization options for building their PC from the ground up, Starting from the fundamental hardware such as the Motherboard, RAM, CPU, heat sink, GPU , ETC. All while offering insight on how different hardware is needed for the uses they are demanding. The system will also have a compatibility list in which it can determine and only offer the next hardware piece based on the previous one that was chosen, to make sure the PC is flawless and in unity with each other. The system will constantly update the database to notify suppliers on what will need to be ordered, the system will notify suppliers what parts aren't sold or defective, The system will have a feature to help the builders with where the part is located in the warehouse or the estimated time till its delivered by the supplier, Another administration feature will be that the system will be able to prioritize certain PC’s depending on which PC’s have parts that are all located in the warehouse and not waiting for a supplier's delivery, therefore pushing out the easily buildable PC’s out first. A feature to analyze the quality of company's operations is by having the system allow feedback from the customer, As well as a success to failure rate chart that is dependant on how many clients return the PC’s for damages, or other issues and also able to document the time period of when these returns are received (Example: 80% of clients that return their CustomRigs at around the 5 Month period, then we can use that information to find out what parts are similar in those rigs and if they are dieing at a 5 month point, which will help the team test those parts etc. )

Logical Design- System model 