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TCSS 445

Project Proposal Rev 2

PC Builder – Requirements

1- Application Introduction/Description

This document represents the initial, informal business requirements for an online pc building information system. The client will able to view and save computer components, create a modifiable pc build, and see compatibility between related components. This database application will be used to store and manage data on the user and their builds.

2- Data

This system will store data of:

User: username, email, first name, last name

CPU: name, core count, core clock, boost clock, TDP, price

CPU Cooler: name, fan rpm, radiator size, price

Motherboard: name, socket, form factor, memory slots, price

Memory: name, speed, modules, price

Storage: name, capacity, price/gb, type, cache, form factor, interface, price

Video Card: name, chipset, core clock, length, price

Case: name, type, external 5.25" bays, internal 3.5" bays, price

Power Supply: name, form factor, efficiency rating, wattage, price

Monitor: name, screen size, resolution, refresh rate, response time, price

Keyboard: name, switch type, connection type, price

Mouse: name, connection type, max dpi, price

OS: name, type, mode, price

PC Build: CPU, CPU Cooler, Motherboard, Memory, Storage, Video Card, Case, Case Fan, Power Supply, Monitor, Keyboard, Mouse, OS

3- <u>Scenarios</u>

This system's main audience are pc builders. Here are the key functions usable by the builders:

<u>Create a User</u>

The user is able to create an account by filling in their desired username, email, first name, and last name.

<u>Delete a User</u>

The user is able to delete their account and all associated PC builds.

<u>Create a PC Build</u>

The user is able to create a PC build.

<u>Add Multiple GPUs to a Build</u>

The user is able to add multiple GPUs to their PC build.

<u>Add Multiple Memory to a Build</u>

The user is able to add multiple memory to their PC build.

<u>Add Multiple Storage to a Build</u>

The user is able to add multiple storage to their PC build.

<u>Add Multiple Monitors to a Build</u>

The user is able to add multiple monitors to their PC build.

<u>Delete a PC Build</u>

The user is able to delete their saved builds.

4- **Analytical queries**

Analytical queries:

1- View all supported components in a category.
2- View all supported components in a category within a price range.
3- View all builds from a user.
4- View all builds from a user within a price range.
5- View all motherboards that are compatible with a certain CPU
6- View all CPUs that are compatible with a certain motherboard

5- **Business logic**

User builds are able to have the same build name if the builds are from different users. Builds by a user must be named differently from previous builds made by that same user.