Criterion B: Solution/ Design Overview

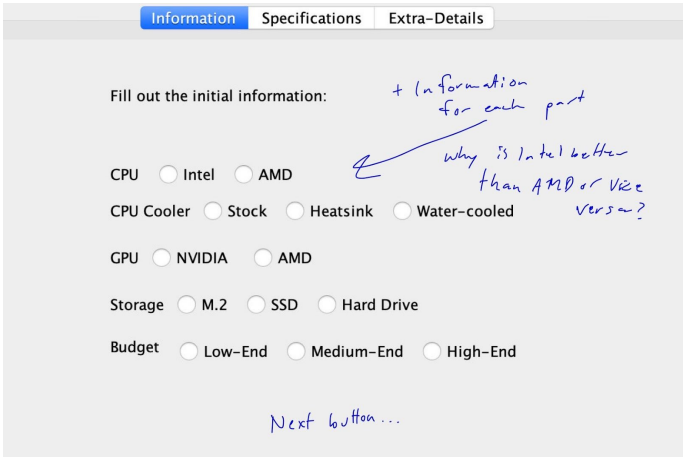
Input and Output:

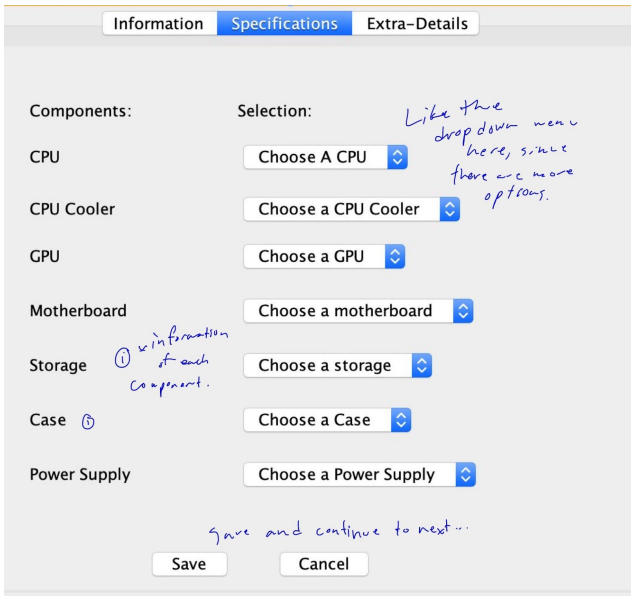
Input	Data Type	Normal Range etc.	Example
CPU Choice	String	Intel - AMD	AMD
CPU Cooler Choice	String	Stock - Heatsink - Water-cooled	Water-cooled
GPU Choice	String	NVIDIA - AMD	NVIDIA
Storage Choice	String	M.2 Drive - SSD - Hard Drive	SSD
Budget Choice	String	Low-end - Medium-end - High-end	Medium-end
CPU Filtered List	CPU Array	AMD- Intel filtered list	AMD Ryzen 7 3700x
CPU Cooler Choice Filtered List	CPU Cooler Array	Water-cooled or heatsink	NZXT Kraken X62
GPU Filtered Choice	GPU Array	NVIDIA - AMD filtered list	NVIDIA RTX 2070
Storage Choice	String	128 GB - 2 TB	1 TB of SSD
Case choice	String	Case list depending on the budget choice	NZXT H510
Power Supply choice	String	650-1000 watts	Corsair RMx 750

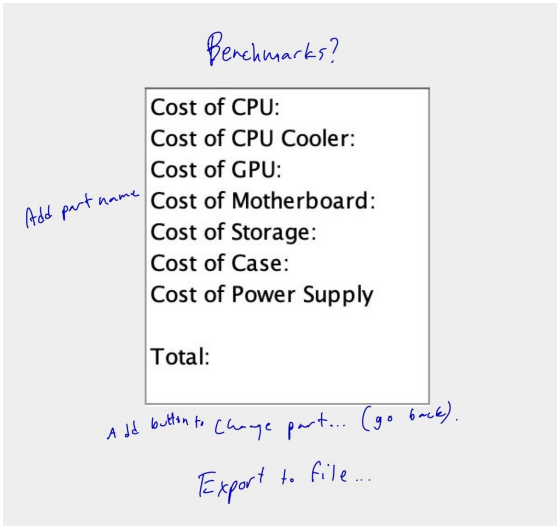
Output	Data Type	Normal Range etc.	Example
CPU Filtered List	CPU Array	AMD or Intel lists of CPU	AMD Ryzen 7 3700x
CPU Cooler Choice Filtered List	CPU Cooler Array	Heatsink or Water-cooled lists of CPU coolers	NZXT Kraken X62
GPU Filtered Choice	GPU Array	NVIDIA or AMD lists of GPU	NVIDIA RTX 2070
Storage Choice	Double	128 GB - 2 TB	1 TB of SSD
Case choice	String	Case 1, Case 2, Case 3.	NZXT H510
Power Supply choice	Double	650-1000 watts	Corsair RMx 750
Benchmark Score	Double	1.0 - 5.0	4.2

Final Prototype:

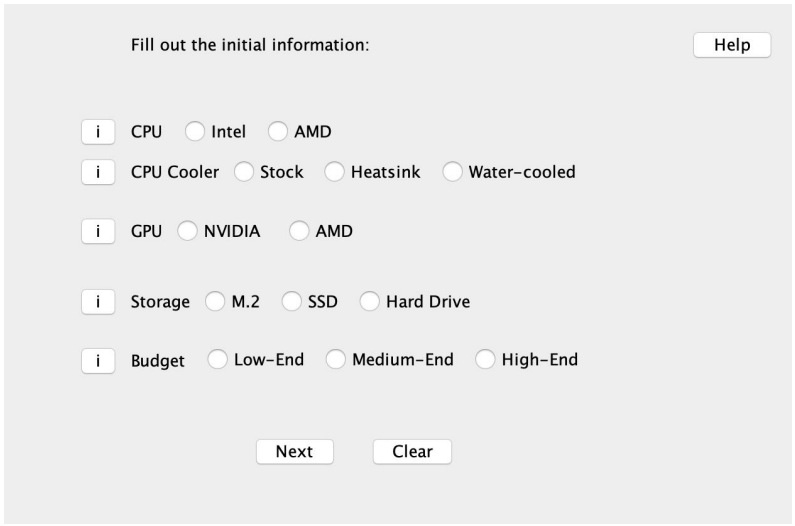
First Prototype (with comments from the client):

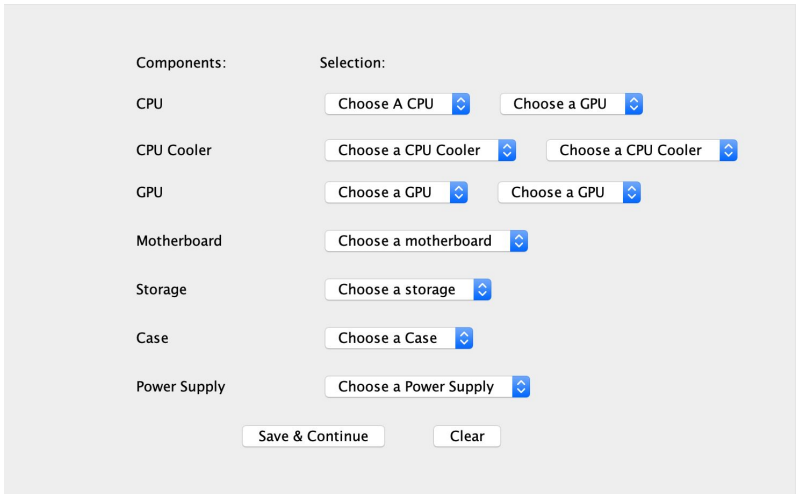


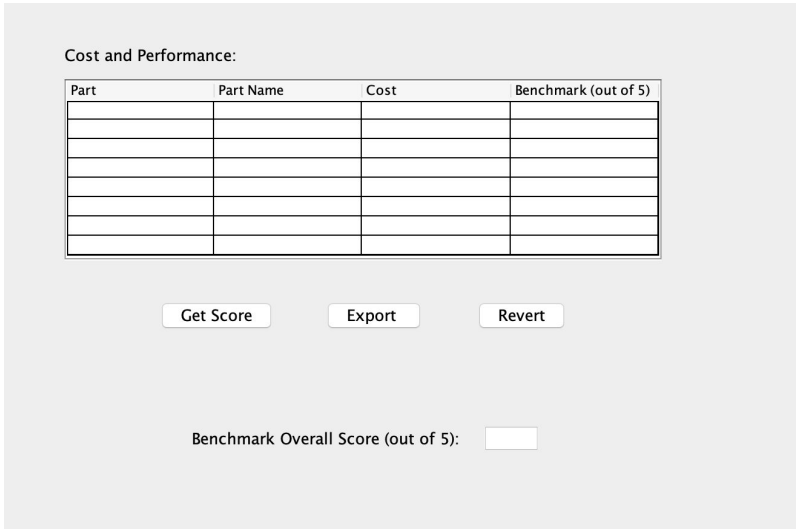


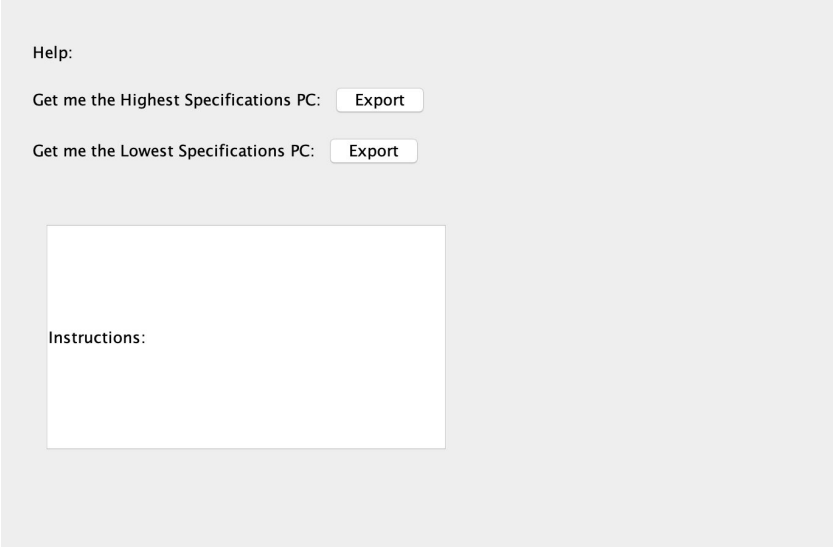


Final Prototype:









Changes:
First tabbed-pane:

- Added “i” (information) button for aesthetic purposes.
- Added the “Next” and “Clear” button to increase user-friendly features.

Second tabbed-pane:

- Added another ComboBox for CPU, CPU Cooler, and GPU. This will make filtering unwanted computer parts much easier.

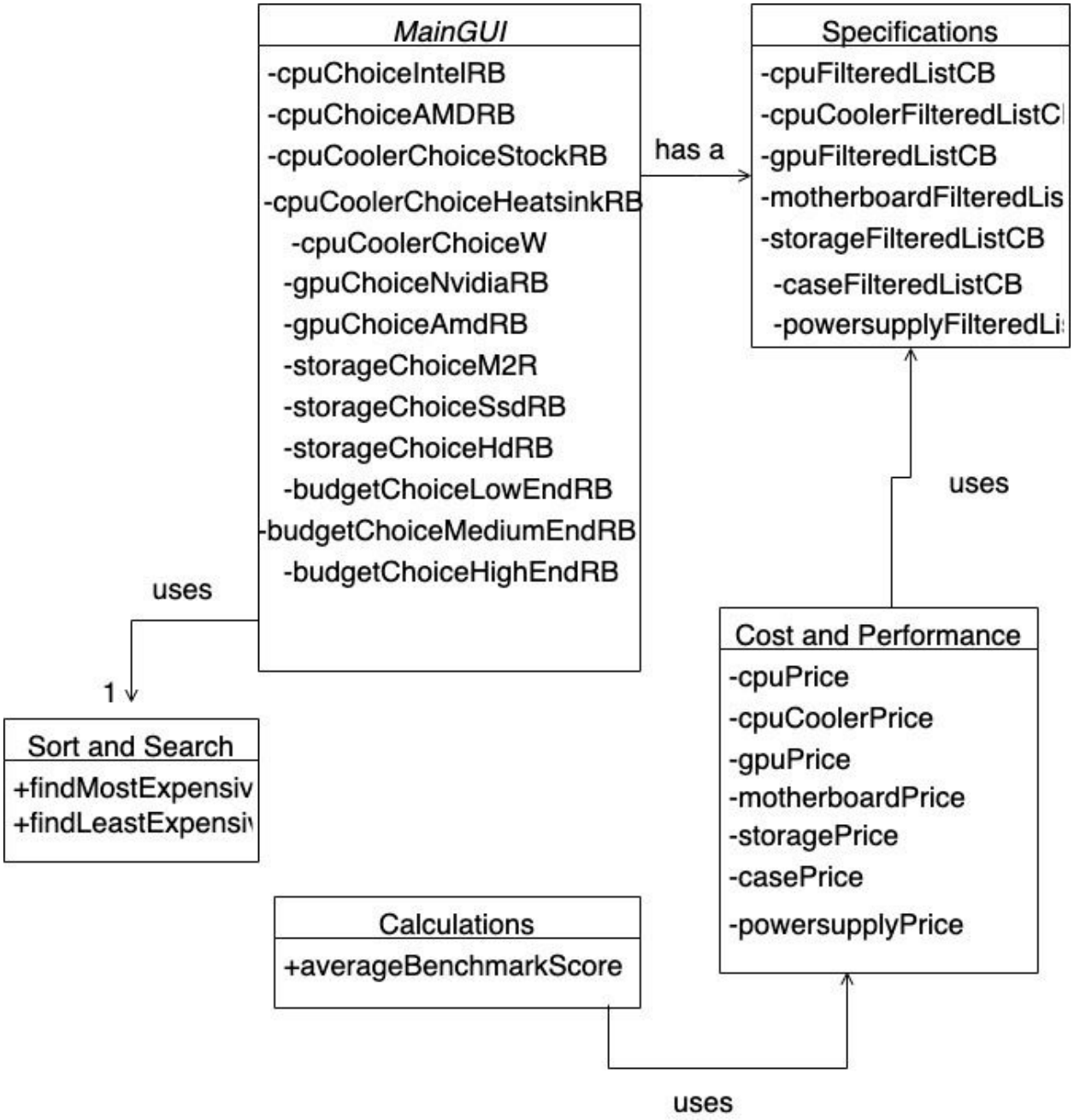
Third tabbed-pane:

- Added a table which will get the following parts from the specification tab and transfer to the table, it will also display the cost of it and performance of it
- Added “Export” button which will allow the user to export the following list to a document.
- Added “Get Score” button which will show the overall benchmark of the whole computer ranging from 1-5.

Added a new “Help” tabbed pane, the fourth tabbed-pane:

- Will get the highest and lowest spec computer with a click of a button
- Includes instructions on how to work this program.

Class Diagrams:



Chronological Development Plan:

Coding of GUI:

- Make sure all the variables have names - 3 minutes
- Make the “save” button in the information tab a “hide” button as well - 10 minutes
- Incorporate the cost and benchmarks into each part - 1 hour and 30 minutes
- Make the get and set of “save and continue” button for the parts so that it shows up in the table - 1 hour
- Make the “get score” button calculate the average benchmark of all the parts - 5 minutes
- Make the “get total” button to calculate the total amount of the computer compared to the chosen budget - 10 minutes
- Make the “export” button actually, export the parts and costs of the computer - 1 hour 20 minutes
- Make the “clear” buttons clear all the information chosen in each tab. I.E Information Tab, Specifications Tab and Cost and Performance Tab. - 30 minutes
- Calculates the benchmark average score ranging from 1.0 to 5.0 - 10 minutes
- Make two buttons that either get the highest or lowest spec pc - 30 minutes

Testing Plan:
With my program, I have controlled the number of inputs by the user to limit the potential errors that will come up. For example, in my Information Tab, I only made 2 choices available for CPU for Intel or AMD so the user must pick one or the other to continue with the program.

Words: 54

Input	Normal	Border
(Information tab) CPU, CPU Cooler, GPU, Storage, Budget Choices	Ex: Intel Heatsink	No input An error message, no input.

(Specification tab) Choose a CPU, CPU cooler, GPU, Motherboard, Storage, Case, Power Supply	Ex: Intel Core i9-9900k Processor, AMD Radeon RX 5700 XT, etc.	No input An error message, no input