Capuchino High School / ROP **Name: _____**
Computer Systems Design I **Date : _____**
Build Your Own Computer **Per.: _____**

From the beginning of this class until the present time, we have worked in class understanding all of the physical components it takes to create an entire computer system. You have also learned there is a big difference in components and that can be installed in a computer system and the options you have when building or upgrading a system. These options will differ depending upon the end user of the system. Some systems are used by many people and therefore must meet many and sometimes competing needs of the users.

In this project, you will be building a system for one person. You will tailor this system based on their needs and desires. When building private systems, you need to be sensitive to the prices that are available on the open market for complete packages. Customers are sometimes willing to pay a little more for a system that is custom built, but not much more than they can buy a stock system from one of the major manufacturers. (Dell, Hewlett-Packard, Gateway, etc.) Based on these parameters, your system needs to fall in to one of these three major price categories. Basic System: $1,000.00, Mid-Range System: $1,500.00 and High End System: $2,000.00.

You will compile components, much like you have done in other assignments, assemble graphics from the Internet and paste them into your document. There are many different components that will go into the systems you build and the type of system you select will determine the features, speed, and capacity of the system.

Tasks:

1. Define Your Client:

Who are you building this system for? What are they going to be doing with their computer? This should identify the person you are building the system for and a short synopsis of their needs. At this point, you will make a determination of the level of the system this person will need. (Basic, Mid-Range, High-End) When you select the type of system you will build, you will also select your budget from above. The synopsis should be at least two paragraphs in length, one paragraph identifying the person and their computer usage and one paragraph with a description of which components you are including in the system and why?

2. Buy Your Components:

Remember your budget. As you get into this project, you will find it difficult to purchase all of the components to provide the system you selected from task 1 for the budget you have. Provide pricing, descriptions and graphics for components you are purchasing.

These are basic components of most computer systems, this list is not all inclusive, but will help organize your purchases.

- Case / Power Supply:
- Motherboard / CPU / RAM
- Permanent Storage (Hard Drives)
- Temporary Storage
- Optical Drives (CD or DVD)
- Peripheral Cards (Video / Sound)
- Keyboard / Mouse
- Operating System

You need to have all of the essential components to boot the system. You can use the list above as a 'check list' to help organize your purchases. You cannot purchase more than two components from any one Internet site.

3. Integration:
Integration of components is essential. Part of your total grade will be based on how well you integrate your components in your system. If you purchase items that cannot function together as a unit, you will waste time and money for your client. Make sure everything can work together. This is the one part of the assignment where you need to pay special attention to detail. If your motherboard calls for a certain type of RAM or hard drives, make sure those are the one's you purchase for your system.

4. Budget:
At the end of your project you are going to list all of your components and their cost. This is where you will total everything you have spent to build your system. Your grade in this section depends on how close you stay to the budget allotted for the type of system you have selected to build. The closer you stay to the agreed upon budget, the more your client will appreciate your efforts.

Conclusion:
This project brings together all of the material covered in the first semester relating to computer hardware. You should be familiar with all of the vocabulary used on the web sites you will use to purchase the components for your system. If you have questions you can find a completed version and the grading rubric for the project on the course web site. You need to have the completed project ready to turn in at the end of period on: _____.