**Part 1: Tour of the Parts of a Computer System**

1. **Motherboard**: This component is a printed circuit board which houses a lot of components and allows them to communicate with each other.

**The Hard disk drive/solid-state drive**: This component stores the user's data (files, programs, etc.)

**Random Access Memory**: This is the primary memory device of the computer that stores instructions for programs that are being run.

**Power Supply Unit**: This component is responsible for providing power to the entire computer and the components inside of the computer.

**Central Processing Unit**: This processor functions as the computer's brain. It consists of the Datapath and the control unit for performing computations and fetch and execute functions.

1. These components interact with each other over the motherboard where data is shared between them through a bus.
2. RAM is a random access memory which is a volatile memory device for storing programs being run on the computer. Storage devices like the HDD are non-volatile and are used for storing more permanent programs of larger sizes.
3. These factors (speed, capacity, and memory) can determine the level of efficiency of a computer system in terms of how quickly data is processed and how much energy is dissipated in the system. If the wrong kind of memory device with the wrong type of capacity and speed for its role functions in the computer system, this can lead to high heat dissipation and slow processing due to slow reading and writing.
4. This kind of processing unit will be advantageous when high graphics like that in heavy games are to be processed. It can also be advantageous when performing AI processing tasks due to its tensors which provide multiple cores for processing.
5. This will affect the amount of power supplied to the components of the computer. If the power rating is lower, it means not a lot of power can be supplied by that Power Unit, meaning the components in the computer will not be able to function at their optimum.
6. I would prefer a Solid-State Drive. This is because a solid-state drive is manufactured with no moving parts, meaning there's a lower risk of mechanical damage. This also means that the retrieval and writing time to the drive is a lot faster than that of the hard disk drive with multiple moving parts.
7. Computer systems generally produce heat from not just the processor but also other components. This heat is because of the power being consumed and the work being done by the components. This heat can lead to reduced performance due to thermal throttling, which causes the GPUs and CPUs to reduce their performance. By providing cooling systems, these components can function at optimal performance for longer periods and hence will be a lot more efficient.

**Part 2: Assessing the Power Consumption of Your Computer**

1. Approximately 17 hours a day. I sleep for about 5 hours and I spend approximately another 2 hours away from my computer eating, bathing, and doing other stuff.
2. [Code in other files]
3. At every point I use my computer, I render some kind of graphical content. This is mostly PDF documents or watching YouTube videos. I do not simulate AI on my PC on a regular basis. For this reason, I dedicate about 13 hours to the rendering of graphical content.
4. [Code in other files]
5. [Code in other files]
6. [Code in other files]
7. The major insight I have got from this activity is that the individual components of a computer can be analyzed to get better insight as to how much energy is consumed by a computer. I have also learn how energy is classified in order to get an appropriate cost for a large amount of energy consumed.

**My Laptop Specifications**

A screenshot of a computer

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A screenshot of a computer program

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