Compute System Concept

A computer is a system of hardware devices organized according to the following system functions.

- Input
- Processing
- Output
- Storage
- Control

1) **Input:**
   Input refers to the process of entering data or information into a computer system using input devices such as a keyboard, mouse, or scanner. The input data can be in the form of text, numbers, images, or any other type of information that needs to be recorded in a digital format.

2) **Processing:**
   Process refers to the operations performed by the computer to manipulate or analyze the input data. This includes executing software applications, performing calculations, sorting and filtering data, and running programs. It refers to processing in CPU on the data, as per the given instructions.

3) **Output:**
   Output refers to the result of the processed data that is presented to the user in a usable format. This can be in the form of text, images, graphs, charts, or any other format that is meaningful to the user.

4) **Storage:**
   The storage function of a computer system takes place in the storage circuits of the computer's primary storage unit, or memory, and in secondary storage devices such as magnetic disk and tape units. These devices store data and program instructions needed for processing.

5) **Control:**
   The control unit of the CPU is the control component of a computer system. Its circuits interpret computer program instructions and transmit directions to the other components of the computer system.

The characteristics of the computer system are as follows

1) **Speed:**
   A computer works with much higher speed and accuracy compared to humans while performing mathematical calculations. Computers can process millions (1,000,000) of instructions per second. The time taken by computers for their operations is microseconds and nanoseconds.
2) **Accuracy:**
   Computers perform calculations with 100% accuracy. Errors may occur due to data inconsistency or inaccuracy.
3) **Diligence:**

A computer can perform millions of tasks or calculations with the same consistency and accuracy. It doesn't feel any fatigue or lack of concentration. Its memory also makes it superior to that of human beings.

4) **Versatility:**
   Versatility refers to the capability of a computer to perform different kinds of works with same accuracy and efficiency.
5) **Reliability:**
   A computer is reliable as it gives consistent results for a similar set of data i.e., if we give same set of input any number of times, we will get the same result.
6) **Automation:**
   Computer performs all the tasks automatically i.e. it performs tasks without manual intervention

#capabilities:

1. It can perform repetitive tasks with the same speed and accuracy.
2. It is capable of performing different types of tasks in different areas with minimum Changes
3. It can perform almost all work, just the user must provide proper hardware and Software.
4. It is possible to use and implement in dangerous places, where it is difficult to involve humans.
5. the computer is capable to produce 100% accurate outputs.

 # Limitations:

1. A computer is a non-intelligent machine. It cannot think and give the right decisions as a human being
2. It cannot operate without a battery or electricity
3. failure in devices or wrong information by users make it unreliable
4. It can not memorize and recall as needed only stores data in secondary memory:
5. It requires instructions to perform a task.
6. It cannot perform any task by itself.