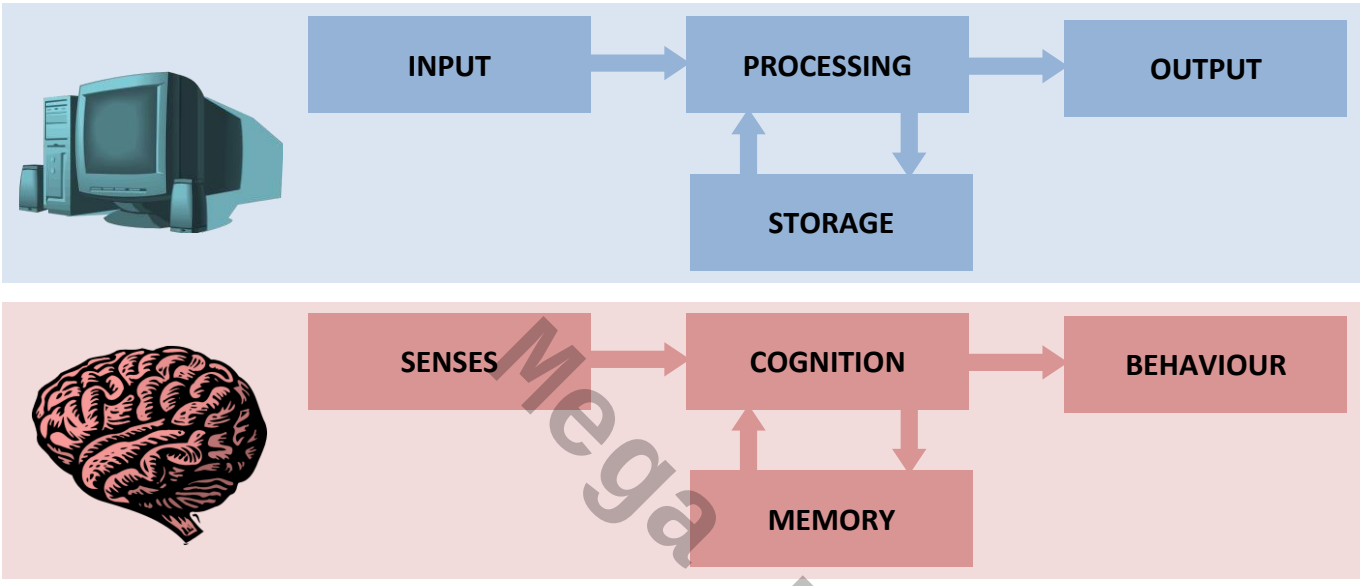
2.2 The Computer Analogy

Strengths and weaknesses of the comparison of our brains to a computer

In the cognitive approach, there are two main assumptions. The first is *information processing*. This involved the pattern of encoding, storing and retrieving data being linear. The second is **the computer analogy**. This assumes that the brain functions similarly to a computer. As with ICT, with the Input > Process > Output system, human information processing assumes a similar system:



However, there are limitations to the assumption. Here are some of the differences between the two:

Computer	Human brain
A computer receives all input (e.g. via a keyboard)	The brain only pays attention to a very small amount of information input
A computer can do the same calculations repeatedly	The brain can only perform certain calculations at different times and speeds
A computer cannot lose information (unless data becomes corrupt or there is damaged loss of data)	The brain can easily misplace information and experience difficulty recalling information
You can choose to delete certain information from a computer permanently	You cannot push something unpleasant deliberately from your mind
A computer is emotionless	Emotions have a strong impact on the way our minds function
A computer only knows as much as the information which has been input	The brain can try to piece together memories and fill in the gaps