Worksheet 2: Characteristics of the CPU

**Task 1**

1. The performance of a CPU is dictated and dependent on a number of factors. Complete the table below, stating how each of the factors mentioned affects the performance of a CPU.

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| --- | --- |
| **Factor** | **How this affects performance** |
| Clock speed | The clock speed affects the performance because it is the amount of processes the CPU can achieve |
| Cache Size | The cache size is the amount of memory the CPU can access without going to the RAM. |
| Number of cores | The number of cores affects the CPU because if it has more than 1 core, it will divide the calculations between them. The more cores, the faster the CPU will be. |

1. The CPU is split into two major parts. These are the Arithmetic Logic Unit (ALU) and the Control Unit.
2. Describe the purpose of the ALU

An ALU, or arithmetic logic unit, is a part of the CPU that carries out arithmetic or logic operations

1. Describe the purpose of the Control Unit

The purpose of the control unit is to control what the CPU does. It will decide wether to get something from the RAM or the cache.

**\*-Task 2**

1. Below are three devices that use embedded systems. Complete the table below the pictures and state how these devices use embedded systems

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