**My CPU**

Cut out the 3 programs and work through them on the A3 sheet. Put them in memory one at a time. What does each program do?

**Keywords**: Decode, execute, HDD, memory, fetch, RAM, instruction, clock, program counter, bus, accumulator, hertz, CPU, peripheral, assembly language, machine code.

**What do the programs do?**

A ……………………………………………………………………………………………………………………………………………….

B ……………………………………………………………………………………………………………………………………………….

C ……………………………………………………………………………………………………………………………………………….

**What is the equivalent of the HDD in this paper computer?**

…………………………………………………………………………………………………………………………………………………….

**With practice what was your best speed (in Hz)?** …………………………………………………………………….

**Challenge**: write a program to add two numbers up.

**Harder challenge**: improve the program so that numbers >99 are not accepted. Hint an error code will need to be invented.

**Program A**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 00  901 | 01  313 | 02  113 | 03  113 | 04  902 | 05  000 | 06 |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 |

**Program B**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 00  901 | 01  211 | 02  704 | 03  600 | 04  000 | 05 | 06 |
| 07 | 08 | 09 | 10 | 11  007 | 12 | 13 |

**Program C**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 00  901 | 01  210 | 02  707 | 03  801 | 04  511 | 05  902 | 06  609 |
| 07  512 | 08  902 | 09  000 | 10  002 | 11  666 | 12  131 | 13 |