Fetch – Decode – Execute Cycle

Within your group, take it in turns to visit the ‘main memory’ and fetch the next instruction. You need to decode the instruction (make sure you know what you have to do), which may include retrieving data from memory. You then need to execute the instruction and store the result on your group’s piece of paper.

Your program counter points to the next instruction and should start at 16

Main memory

|  |  |
| --- | --- |
| 00000 | Rectangle |
| 00001 | Circle |
| 00010 | Square |
| 00011 | Equilateral triangle |
| 00100 | Two dots and a curved line to make a smiley face. |
| 00101 | Spiral |
| 00110 | Star |
| 00111 | Two dots and a curved line to make a sad face. |
| 01000 | Horizontal line |
| 01001 | Cross |
| 01010 | Tick |
| 01011 | Vertical line |
| 01100 | Flower |
| 01101 | Draw a wiggly line boarder round the whole page |
| 01110 | Draw a diagonal line from the top left corner of the page to the bottom right of the page |
| 01111 | Draw a diagonal line from the top right corner of the page to the bottom left of the page |
| 10000 | Draw a large version of the shape from memory location 00010 in the middle of your paper. |
| 10001 | Split the shape from memory location 00010 in half vertically down the centre. |
| 10010 | Draw another line that splits the shape from memory location 00010 in half horizontally.  |
| 10011 | In the centre of the bottom left quarter draw a shape from memory location 00011. The shape should fill most of the quarter. |
| 10100 | In the top right hand quarter draw the shape from memory location 00001. The shape should fill most of the quarter. |
| 10101 | Add a black dot in the centre of the shape in the top right hand quarter. |
| 10110 | In the bottom right hand quarter draw the large shape from memory location 01010. The shape should fill most of the quarter. |
| 10111 | In the top left hand quarter draw the shape from memory location 00100. The shape should fill most of the quarter. |

Result



Design and basic instructions taken from http://www.primaryresources.co.uk/english/pinst.htm