APPENDIX A of TASK 1: Template

Algorithm 1

**Algorithm to convert a binary number into decimal**

Step 1. Read binary number and call it BIN

Step 2. Take the leftmost digit of BIN, call it DIGIT…

…

Step 7. If ….. go to Step …., else ……..

Step 8.

….

…

Step … END

**Testing Algorithm 1 for 101110**

Step 1. BIN=101110

Step 2. DIGIT=1

…

....

Output: “the binary number 101110 is 46 in decimal”

END

**Testing Algorithm 1 for 11000**

Step 1. BIN=11000

Step 2. DIGIT=1

…

Output: “the binary number 11000 is 24 in decimal”

END

**Explanation of Algorithm 1**

Algorithm 1 takes each digit on the binary number, one by one, and calculates …..<explanation of calculations done at each stage> …and when we get to the end of the number we stop and output the decimal value that has been kept labelled as ……

Algorithm 2:

**Algorithm to convert a decimal number into binary**

Step 1. Read decimal number and call it DEC

Step 2. Divide DEC by … and keep the …. and call it …

…

Step … write this number to the right of all the digits in …

…

Step 7. If ….. go to Step …., else ……..

Step 8.

….

…

Step … END

**Testing Algorithm 2 for 25**

Step 1. DEC=25

Step 2. 25/…

…

....

Output: “the decimal number 25 is 11001 in binary”

END

**Testing Algorithm 2 for 40**

Step 1. DEC=40

Step 2. 40/…

…

....

Output: “the decimal number 40 is 101000 in binary”

END

**Explanation of Algorithm 2**

Algorithm 2 divides the decimal number by … consecutively and …..<explanation of calculations done at each stage> …. ……

We stop the calculation when ….. and output the binary value that has been kept labelled as …… "