**Year 10 IGCSE Programming Tasks**

You must include annotated printout of each of these programs in your assignment.

For each control program that you produce you must provide a fully annotated explanation of the various command settings within the program.

**Task One**

Write a test program that will repeatedly switch on and off all output ports for intervals of 0.2 seconds. This will show if there are any faulty output devices.

**Task Two**

Write a test program that will start when the sensor is triggered and will then repeatedly switch on and off all output ports for intervals of 0.2 seconds.

**Task Three**

Write a test program that will start when the sensor is triggered and will then repeatedly switch on and off all output ports for intervals of 0.2 seconds and then stop the program when the sensor is pressed again.

**Task Four**

Write a test program that will start when the sensor is triggered and will then repeatedly switch on and off all output ports 5 times and then stop.

**Task Five**

Write a test program that will use the buzzer to play the tune of a simple nursery rhyme.

**Task Six**

Write a test program that will start when the sensor is triggered and will then switch on and off each output port in turn before switching on the next.

**Task Seven**

Write a test program that will control the speed of the motor - make it run at full speed for 5 seconds, medium speed for 5 seconds then slowly for 5 seconds.

**Task Eight**

Write two sample programs to illustrate an “open loop” and a “closed loop” program.

**Task Nine**

Finally, write a test program that will demonstrate how good you are at controlling the modelling board.

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