ENB350 Real-Time Computer-Based Systems Assignment

Testing Station – Driver and Data logger

DEMONSTRATION (15%)

Group number:

Student Name	Student ID	Obtained	Out of
			15
			15
			15
			15

Mark	< 40%	40-50%	50-60%	60-75%	75-85%	>85%
Device driver functionality (4)	Fewer than half	More than half of the required functions have been implemented successfully	Most of the functions are working	Most of the functions are working but there are some errors	Almost all functions working together correctly	All requirements met and all functions working together correctly
Application program functionality (8)	Fewer than half	More than half of the required functions have been implemented successfully	Most of the functions are working	Most of the functions are working but there are some errors	Almost all functions working together correctly	All requirements met and all functions working together correctly
Overall impression (3)	Poor effort, very little practical outcome	Some effort, little to show	Satisfactory effort, not a lot to show	Good effort, satisfactory demonstration	Very good effort, good demonstration	Excellent effort and excellent demonstration

Requirements Check

a) Driver functions that work correctly (tick) [Evidence provided through application; other evidence should be in the report]
   a. Raise or lower the platform that holds the piece
   b. Extend or retract the ejector
   c. Bring the platform to its initial position
   d. Enable or disable movements
   e. Sense a work piece in place or not
   f. Return a colour and material measurement
   g. Return a height measurement
   h. Are values correct

b) Application program operations that work correctly (tick)
   a. Starting and stopping the station using a push button or push buttons
   b. Using an LED to show started / stopped status
   c. Operating the testing station continuously after starting without user intervention
   d. Obtaining colour, material measurements
   e. Obtaining height, measurements
   f. Applying a calibration procedure for height using pieces of known height in millimetres
   g. Applying upper and lower thresholds on the height to accept or reject a piece
   h. Keeping a count of work pieces – by accept/reject decision, by colour and by material
   i. Keeping track of time and displaying calendar time
   j. Calculating the throughput (pieces processed per unit time)
   k. Displaying information using the LCD touch screen display in a real-time, user friendly manner

Comments: