

THE FINAL YEAR PROJECT REPORT  
ADVANCED DIPLOMA IN MECHANICAL ENGINEERING  
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I T.M SHAH ALAM

PROJECT TITLE  
PROGRAMMING SOLUTIONS FOR MACHINING

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## PREFACE

We have carried out the preliminary stage of the project entitled 'The Programming Solution for Machining' successfully but there is still room for improvement.

The calculation of the tool life for various tool materials under a particular machining conditions have been computerised and this is given in the Section I program. Here we have used the BASIC language. We have also computerised the calculation of the total operation time and total parts per hour for the milling operation. Here we have used the program written by Mr. J.E Nicks in his book 'Basic Programming for Manufacturing' as the guideline. This is given in the Section II program.

Attempts have been made to use the calculated tool life in determining the actual total parts per hour produced in a particular milling operations but we are inevitably deterred by insufficient data available in Malaysia. This can be done if there are common data available for both the calculation of tool life in the Section I program and the total parts per hour produced in the Section II program. Thus, we are compelled to assume that a tool will generally have a tool life of an hour in the Section II program but this is far from the truth. Nevertheless, a simple modification can be made to update this program when the relevant data have been found and subsequently the total parts per hour is now known as the total parts per tool life. Both the Section I and Section II program listing are not attached together with this report and they can be obtained from our project advisor Mr. M.

Yusuff Mohd.

We have also written several NC programs for both the CNC model milling machine and the actual NC (milling and turning) machines. For these programs, we have used the language so called the NC programming language. These programs instruct the machines to cut the work piece into the required shapes and we have produced a few products as the samples for this project.

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