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DIPLOMA REPORT

S/W TOOL TO TEACH MATHS IN  
A SECONDARY SCHOOL

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# S/W TOOL TO TEACH MATHS IN A SECONDARY SCHOOL

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## INTRODUCTION

The original idea was born by the Computer Studies Department of the Higher Technical Institute as a final year project towards the Computer Studies Diploma award, and will be concerned with the development of a Mathematics teaching/ learning package.

The package will include teaching material concerning the syllabus taught in Cypriot Secondary schools, concentrating in the concepts of Algebra and Trigonometry.

As we all know, mathematics can be a very boring subject especially for someone that does not like it very much. Therefore, our purpose is to teach students, as pleasantly as possible, the subjects of algebra and trigonometry.

While running, the system supports three modes:

- (a) Exploration and Training mode
- (b) Information Database mode
- (c) Test mode.

The first mode has the format of an interactive tutorial which presents the information to be taught to the student using both text and graphics. The teaching material is presented in an increasing level of difficulty.

The second mode converts the system into an information system the system will keep track on covered material and performance. In addition reports in forms of tables as well as graphical charts of login dates and users activities and performance will be made available to see both to the teacher and the students.

The third mode tests the knowledge acquired by the students using tests selected for each subject to be solved using multiple choice questions. The student has to choose among four given answers and as soon as he/she exits the test a performance report is generated. The report informs the user of the achieved score as well as the number of correct answers given and the percentage of success. The marking scheme of each test depends on the number of exercises existing in the test. In addition, the system provides the student with a solutions options where the selected test exercises solutions are solved in detail and presented.

In addition, the system provides a help facility, security measures such as passwords and user groups as well as other utilities such as user password maintenance, backup and restore of the system files. The student will also have the ability to find ( by scrolling ) in the Glossary option, a mathematics term or any mathematics theorem ( glossary concerning the material covered in this system ).

It is our belief that with the help of this package students will be engaged and filled with more enthusiasm and willingness as far as learning mathematics is concerned and teachers will have a useful and powerful teaching tool to help them with their work.

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