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DATA STRUCTURES AND ALGORITHMS

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FAKULTI SAINS KOMPUTER dan SISTEM MAKLUMAT

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Disclaimer

This workbook and its contents are intended solely for the use of Data Structures and Algorithms course to be taught at Fakulti Sains Komputer dan Sistem Maklumat, Universiti Teknologi Malaysia, Skudai. The algorithms and programs in this module have been included for their instructional value. They have been tested but are not guaranteed for any particular purpose. The authors do not offer any warranties or representations nor do they accept any liabilities with respect to their use. The authors reserve the right to revise this publication and make changes from time to time in its content without notice.

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INTRODUCTION

OBJECTIVE

The teaching module for Data Structures and Algorithms is intended to be used as teaching and learning reference as a practical problem-solving class activity.

CONTENT OF THE MODULE

The module consists of three parts: Key concepts, Programming Exercise and Exercise. The objective of Key Concepts material is to be used for class lecture session. The content of the material is in the form of short notes that explain the main concepts of data structure. Programming exercises provide problem solving activities whereby the students apply the data structure concepts effectively in solving problem in C++. Exercises contains various type of questions in order to asses the students knowledge on data structure concepts theoretically and practically. The learning outcomes or objectives for each module are stated at the beginning of every module. Mini project and assignments in this course are to expand and evaluate problem solving skills of the students. The specification of the mini project is included in the Appendix of this module.

The data structure concepts included in this module are: Introduction To Data Structure, Abstract Data Type and Class, Recursive, Algorithm Efficiency, Sorting Techniques, Searching, Link List, Stack, Queue, and Tree.

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CONTENTS