

**Universiti Teknologi MARA**

**Development of Web-based Tutorial for Data  
Structure Using Animation**

**SyahdatulHikmah Binti Mohammad Jafri**

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## **DECLARATION**

I certify that this thesis and the research to which it refers are the product of my own and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

**MAY 27,2007-05-27**

**SYAHDATULHIKMAH MOHAMMAD JAFRI**

**2005614680**

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## **Abstract**

Web-based learning tools provide integrated environments of various technologies to support diverse educators' and learners' needs via the Internet. Data Structure is one of the core or elective subjects for the students taking Diploma in Computer Science, and Bachelor in Computer Science. In order to gain more understanding of this course, that is Data Structure, students will always go and refer to overseas university's websites. However, the contents of those websites sometimes do not cover or fit with the UiTM's syllabus. In Malaysia, there is also no Data Structure website that teaches the student especially with an animation. So, this Data Structure Web-Based Tutorial Using Animation is significant for the user especially the students to give a clear understanding for them to learn Data Structure by referring to the visualization tool besides to develop a self-tutoring environment. In this project, we use prototyping as a benchmark for us to evaluate the project, which later will be used to develop the final version of the project. For the data collection, we did some interviews, observations as well as referring to the published materials and the existing Data Structure learning tools. We discussed the findings from this study in relation to basic usability issues that must be attended to when designing this web-based learning tool. For the design stage, there are two sections, which are the content design and the interface design. We also reported on students' perceptions of whether the tools have positively or negatively affected their learning in the course and their recommendations. The target of this project is to produce a prototype of a Data Structure Web-Based Tutorial Using Animation for the users to learn, feel enjoy with and understand the fundamental of Data Structure.