

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF RUNNING SHOE SELECTION USING
CASE BASED REASONING**

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ABSTRACT

Selecting a suitable running shoe is important for runners in order to improve their performance as well as to prevent injuries. However, runners faced difficulties when it comes to selecting a suitable running shoe for them because there are many criteria to be considered in selecting running shoe. Case based reasoning can be used to adapt and combine old solutions to solve new problems, where in problem solving, the goal of case based reasoning is to build a solution to a new case based on the adaptation of solutions to past cases. It can propose solutions from incomplete problem statement make it the process of solving the problems become easier and faster. The old solutions that were the running shoe for certain criteria can be used in order to solve new problems where some criteria have been added. The objective of this research gained from the understanding of the problem statement. This research intends to provide a suitable running shoe based on the criterion chosen. In this research, cases are constructed based on the empirical data analysis performed by studying about the running shoe, criterion that is important in selecting a running shoe. The result of the criterion selected by using case based reasoning is clear and easier for runners to choose their running shoe. Finally, a prototype with interactive graphical user interface (GUI) was developed.

TABLE OF CONTENTS

CONTENT	PAGE
DECLARATION	i
APPROVAL	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF APPENDICES	

CHAPTER 1: INTRODUCTION

1.1	Introduction	1
1.2	Research Background	1
1.3	Problem Statement	4
1.4	Research Scope	5
1.5	Significance Of Research	5

CHAPTER 2: LITERATURE REVIEW

2.1	Runners and running shoe	7
2.2	How to choose a running shoe	9
	2.2.1 Mid-stance	11
2.3	Shoe anatomy	13
2.4	The importance of choosing a suitable running shoe	14

CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

This chapter focuses on the basic overview of the research background and rationale for the research project. Besides, this chapter will cover the problem background, problem statement, project objective and significant of the project.

1.1 RESEARCH BACKGROUND

No matter what the sport is, shoes are one of the most important pieces of sporting equipment one can have. The wrong type of shoes can put someone at disadvantages, while conversely, the right type of shoe can give the wearer a much-needed edge. Having the proper traction, the freedom of mobility or the right support can directly impact how well someone does at their chosen sport. The Nike shoe company had an advertising campaign in the '90s that coined the slogan, "It must be the shoes," and they were not joking; the right shoes can make all the difference. (Lydiard, 2000)

Running is another sport that users need to wear the proper shoes for in order to perform well and prevent injury. When racing on a circular track, track runners stay on the shortest path and cut the corners tightly so as not to give up any advantage.