

HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF A GYMNASTICS EXERCISE UNIT

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EXERCISE UNIT

by

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**Project report
submitted to**

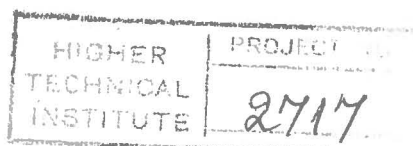
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SUMMARY

The aim of this project report was to design a Gymnastics Exercise Unit. To accomplish this, a certain procedure was followed.

First, a need was identified and several objectives and constraints were stated. Then, a creativity phase followed, during which a number of ideas were generated, each one being a solution to the problem. The next stage was to select one of the ideas, which should be the solution to the problem. For the selection, a benefit analysis was used. After the selection, an optimization phase followed. During this phase, the specifications of the selected solution were listed, the material for the construction was selected and calculations were performed. The last step was an estimation of the cost of solution. At the end, manufacturing drawings were attached, as well as all parts to be bought.

INTRODUCTION

This project will be dealing with the design of a gymnastics exercise unit. The target is to design a unit which can be used at home and perform on it all the major exercises.