



MIDDLE EAST TECHNICAL UNIVERSITY

DEPARTMENT OF
ELECTRICAL AND ELECTRONICS ENGINEERING

EE493 ENGINEERING DESIGN I

Proposal Report

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- 0.1 problem statement, societal impact of the project,
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- 0.8 time plan (Gantt chart),

1 Executive Summary

2 Introduction

3 Team Organization

4 Requirement Analysis

	Having Fun	Competition	Original Solution	Budget	Mechanical Challenges	Complexity	Marketability	Total	Weighted Objectives
Having Fun	0	0,5	0,75	0,8	0,9	0,6	0,8	4,35	0,2
Competition	0,5	0	0,7	0,7	0,5	0,75	0,8	3,95	0,2
Original Solution	0,25	0,3	0	0,6	0,7	0,55	0,8	3,2	0,16
Budget	0,2	0,3	0,4	0	0,2	0,3	0,8	2,2	0,1
Mechanical Challenges	0,1	0,3	0,3	0,8	0	0,3	0,8	2,6	0,12
Complexity	0,4	0,25	0,45	0,7	0,7	0	0,8	3,3	0,16
Marketability	0,2	0,2	0,2	0,2	0,2	0,2	0	1,2	0,06
								20,8	1

Figure 1: Weekly Schedule

	Performance	Marketability	Environmental Effects	Feasibility	Total	Weighted Objectives
Performance	0	1	0,8	0,8	2,6	0,45
Marketability	0	0	0,4	0,35	0,75	0,12
Environmental Effects	0,2	0,6	0	0,5	1,3	0,23
Feasibility	0,2	0,35	0,5	0	1,05	0,2
					5,7	1

Figure 2: Weekly Schedule

	Fast Operation	Robust	Weight Balance	Total	Weighted Objectives	Weighted Objectives
Fast Operation	0	0,55	0,4	0,95	0,32	0,144
Robust	0,45	0	0,5	0,95	0,32	0,144
Weight Balance	0,6	0,5	0	1,1	0,36	0,162
				3	1	0,45

Figure 3: Weekly Schedule

	Cost Efficiency	User Friendly	Total	Weighted Objectives	Weighted Objectives
Cost Efficiency	0	0,6	0,6	0,6	0,072
User Friendly	0,4	0	0,4	0,4	0,048
			1	1	0,12

Figure 4: Weekly Schedule

	Power Consumption	Reversibility Potential	Total	Weighted Objectives	Weighted Objectives
Power Consumption	0	0,95	0,95	0,95	0,2185
Reversibility Potential	0,05	0	0,05	0,05	0,0115
			1	1	0,23

Figure 5: Weekly Schedule

	Having Fun (0.2)	Competition (0.2)	Original Solution (0.16)	Budget (0.1)	Mechanical Challenges (0.12)	Complexity (0.16)	Marketability (0.06)	Total
Balloon	8 1,6	10 2	6 0,96	4 0,4	0 0	2 0,32	6 0,36	5,28
Air Hockey	8 1,6	8 1,6	4 0,64	8 0,8	2 0,24	6 0,96	8 0,48	5,84
Chasing Cars	10 2	8 1,6	8 1,28	6 0,6	6 0,72	8 1,28	10 0,6	7,48
Mapping	4 0,8	4 0,8	8 1,28	2 0,2	8 0,96	0 0	6 0,36	4,04

Figure 6: Weekly Schedule

5 Standards Section

6 Solution Procedure

7 Expected Deliverables

8 Conclusion