TABLE OF CONTENT

Acknowledgement	i
Abstract	ii
List of Figures	iii
1. Introduction	1
1.1. Project Description	2
1.2. Tool Review	3
1.2.1 Firebase	3
1.2.2 Jave	5
1.3. Existing Systems	7
1.4. Proposed System	9
1.5. Objectives	11
1.6. Purpose, Scope and Applicability	11
1.6.1. Purpose	11
1.6.2. Scope	13
1.6.3. Applicability	15
1.7. Overview	18
2. System Analysis and Requirements	21
2.1. Problem Definition	21
2.2. Requirements Specification	21

2.3. Block Diagram	23
2.4. System Requirements	23
2.4.1. User Characteristics	23
2.4.2. Software and Hardware Requirements	25
2.4.2.1 Hardware Requirements	25
2.4.2.2 Software Requirements	26
2.4.3. Constraints	28
2.5. Conceptual Models	31
2.5.1. Data Flow Diagram	31
3. System Design	32
3.1. System Architecture	32
3.1.1 Presentation Layer	32
3.1.2 Application Layer	32
3.1.3 Data Layer	33
3.1.4 Simulation Layer	33
3.2. Module Design	33
3.3. System Configurations	34
3.3.1 Interface and Procedural Design	35
3.3.2 User Interface Design	36
3.3.3 Application Flow	38

4. Implementation	39
4.1. Coding Standards	39
5. Testing	57
6. Conclusion	59
7. References	61