*CONTENTS*

## CONTENTS


| CHAPTER NO | TITLE | PAGE NO |
|---|---|---|
| | **ABSTRACT** | |
| **1** | **INTRODUCTION** | 1 |
| **2** | **SYSTEM STUDY** | 2 |
| | 2.1 EXISTING SYSTEM | 2 |
| | 2.2 PROPOSED SYSTEM | 3 |
| **3** | **SYSTEM REQUIREMENTS** | 4 |
| | 3.1 HARDWARE REQUIREMENTS | 4 |
| | 3.2 SOFTWARE REQUIREMENTS | 4 |
| **4** | **PROJECT DESCRIPTION** | 5 |
| | 4.1 PROJECT DESCRIPTION | 5 |
| | 4.2 MODULES | 5 |
| | 4.3 MODULE DESCRIPTION | 6 |
| | 4.3.1 BLUETOOTH MODULE | 6 |
| | 4.3.2 MICROCONTROLLE | 6 |
| | 4.3.3 RELAY MODULE | 6 |
| **5** | **SYSTEM DESIGN** | 7 |
| | 5.1 DATAFLOW | 7 |
| | 5.1.1 USER INTERFACE | 7 |
| | 5.1.2 BLUETOOTH COMMUNICATION | 7 |
| | 5.1.3 CONTROL DEVICE | 8 |
| | 5.1.4 STATUS UPDATE | 8 |
| | 5.1.5 USER INTERFACE UPDATE | 9 |
| | 5.2 SYSTEM FLOW DIAGRAM | 9 |
| | 5.3 CIRCUIT DIAGRAM | 10 |
| **6** | **SOFTWARE DESCRIPTION** | 11 |
| | 6.1 ARDUINO IDE | 11 |
| | 6.2 GUI-APPLICATION | 11 |
| | 6.3 MANAGE CODE | 12 |
| | 6.4 MANAGE DATA | 13 |
| | 6.5 COMMON LANGUAGE SPECIFICATION | 14 |
| | 6.6 LANGUAGE SUPPORTED BY ARDUINO IDE | 14 |

| | | |
|---|---|---|
| | 6.7 ARCHITECTURE OF ARDUINO IDE | 15 |
| | 6.7.1 FRONT-END | 15 |
| | 6.7.2 BACK-END | 15 |
| **7** | **SYSTEM TESTING** | 16 |
| | 7.1 SYSTEM TESTING | 16 |
| **8** | **SYSTEM IMPLEMENTATION** | 17 |
| | 8.1 SYSTEM IMPLEMENTATION | 17 |
| **9** | **SYSTEM MAINTENANCE** | 18 |
| | 9.1 SYSTEM MAINTENANCE | 18 |
| **10** | **CONCLUSION &FUTURE ENHANCEMENT** | 19 |
| | 10.1 CONCLUSION | 19 |
| | 10.2 FUTURE ENHANCEMENTS | 19 |
| **11** | **APPENDIX** | 20 |
| | 11.1 SOURCE CODING | 20 |
| | 11.2 CREATING USER INTERFACE | 23 |
| | 11.3 OUTPUT SCREENSHOTS | 25 |
| **12** | **REFERENCES** | 27 |