|  |  |
| --- | --- |
| TABLE OF CONTENTS  l. Executive summary | 3 |
| 2. Team Roles | 4 |
| Nejad MY Al-agha | .4 |
| Khaled Abbasi | 4 |
| Nikhal Menon | 5 |
| 3. Introduction | 6 |
| 4. Final design specification | 7 |
| 5. Design implementation | 9 |
| 5.1 Planning | 9 |
| 5.2 implementation on breadboard | 11 |
| ~~5.3 implementation on perfoboard~~ | ~~12~~ |
| 6. Testing Procedure | 13 |
| 6.1 State machine | 13 |
| 6.2 Power supply circuit.. | 14 |
| 6.3 555 timer circuit | 14 |
| 6.4 de-bouncing and clocking circuits | 14 |
| ~~6.5 Analog-Digital Converter circuit~~ | ~~14~~ |
| 7. Team performance | 15 |
| 7.1 Budget | 15 |

8. Commercialization and marketing 18

Appendix A - Minutes of Meetings 19

Appendix B - Schematics of prototype circuit.. 21

Multisim Circuits 21

Breadboard Circuits 23

~~Perfoboard Circuits 25~~

|  |  |
| --- | --- |
| Appendix C - Arduino Code | 27 |
| Ethernet Code | 32 |
| Appendix D - contribution Tables | 34 |