

**A**

**PROJECT REPORT**

**ON**

**Sensor Based Smart Coupon Distribution And  
Tracking System**

**Prepared By:**

**Miki Patel(110050131030)  
Alisha Vyas(110050131024)  
Dhara Shah(110050131054)  
Karan Patel(110050131102)**

**Guided By:  
Prof. Sonu Choudhary**



**BITS edu campus**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

## INDEX

| <b>Sr No.</b> |     | <b>SUBJECT</b>                                       | <b>PAGE NO.</b> |
|---------------|-----|--|-----------------|
| <b>a.</b>     |     | <b>LIST OF FIGURES</b>                               | v               |
| <b>b.</b>     |     | <b>LIST OF ABBREVIATIONS</b>                         | vii             |
| <b>c.</b>     |     | <b>CERTIFICATE FROM INSTITUTE</b>                    | xiv             |
| <b>d.</b>     |     | <b>ACKNOWLEDGEMENT</b>                               | xv              |
| <b>e.</b>     |     | <b>COMPLETION CERTIFICATE</b>                        | xvi             |
| <b>f.</b>     |     | <b>PLAGIARISM CHECK CERTIFICATE</b>                  | xvii            |
| <b>g.</b>     |     | <b>ORIGINALITY CERTIFICATE</b>                       | xviii           |
| <b>1</b>      |     | <b>CHAPTER 1</b>                                     | 1               |
|               | 1.1 | PROBLEM SUMMARY                                      | 1               |
|               | 1.2 | AIM AND OBJECTIVE                                    | 1               |
|               | 1.3 | BRIEF LITERATURE REVIEW AND PRIOR ART SEARCH         | 2               |
|               | 1.4 | PLAN OF WORK   | 2               |
|               |     | 1.4.1 PROJECT PLAN                                   | 2               |
|               |     | 1.4.2 ROLES AND RESPONSIBILITIES                     | 3               |
|               | 1.5 | MATERIALS AND TOOLS REQUIRED                         | 5               |
|               |     |  |                 |
| <b>2</b>      |     | <b>CHAPTER 2</b>                                     | 9               |
|               | 2.1 | CANVASES   | 9               |
|               |     | 2.1.1 IDEATION CANVAS                                | 9               |
|               |     | 2.1.2 OBSERVATION MATRIX                             | 9               |
|               |     | 2.1.3 IDEA FUNNEL CANVAS                             | 10              |
|               | 2.2 | METHODOLOGY  | 11              |
|               |     | 2.2.1 PROJECT DEVELOPMENT APPROACH AND JUSTIFICATION | 11              |
|               | 2.3 | SYSTEM ANALYSIS                                      | 13              |
|               |     | 2.3.1 ANALYSIS OF CURRENT SYSTEM                     | 13              |

|          |      |       |   |    |
|----------|------|-------|---|----|
|          |      | 2.3.2 | PROBLEMS AND WEAKNESSES OF CURRENT SYSTEM | 13 |
|          |      | 2.3.3 | REQUIREMENTS OF NEW SYSTEM                | 13 |
|          |      | 2.3.4 | USER REQUIREMENTS                         | 13 |
|          |      | 2.3.5 | SYSTEM REQUIREMENTS                       | 14 |
|          |      | 2.3.6 | HARDWARE AND SOFTWARE REQUIREMENTS        | 14 |
|          | 2.4  |       | FEATURES OF NEW SYSTEM                    | 14 |
|          | 2.5  |       | SYSTEM DESIGN                             | 15 |
|          |      | 2.5.1 | DATA MODELLING                            | 15 |
|          | 2.6  |       | ER DIAGRAM                                | 17 |
|          | 2.7  |       | USECASE DIAGRAM                           | 18 |
|          | 2.8  |       | CLASS DIAGRAM                             | 26 |
|          | 2.9  |       | SEQUENCE DIAGRAM                          | 27 |
|          | 2.10 |       | ACTIVITY                                  | 33 |
|          |      |       |   |    |
| <b>3</b> |      |       | <b>CHAPTER 3</b>                          | 42 |
|          | 3.1  |       | SYSTEM ARCHITECTURE                       | 42 |
|          | 3.2  |       | CODING STANDARDS                          | 45 |
|          | 3.3  |       | SCREENSHOTS                               | 50 |
|          | 3.4  |       | TESTING PLAN                              | 50 |
|          | 3.5  |       | TESTING STRATEGY                          | 62 |
|          | 3.6  |       | TESTING METHODS                           | 64 |
|          |      | 3.6.1 | ACCEPTANCE TESTING                        | 65 |
|          |      | 3.6.2 | FEATURE LEVEL TESTING                     | 65 |
|          |      | 3.6.3 | CONFIGURATION AND COMPATIBILITY TESTING   | 67 |
|          | 3.7  |       | TEST CASES                                | 68 |
|          |      |       |   |    |
| <b>4</b> |      |       | <b>CHAPTER 4</b>                          | 70 |

|           |     |  |   |    |
|-----------|-----|--|---|----|
|           | 4.1 |  | SUMMARY OF PROJECT WORK                       | 70 |
|           | 4.2 |  | ADVANTAGES                                    | 70 |
|           | 4.3 |  | USEFULNESS WITH RESPECT TO EXISTING SOLUTIONS | 71 |
|           | 4.4 |  | SCOPE   | 71 |
|           | 4.5 |  | UNIQUE FEATURES OF OUR SYSTEM                 | 72 |
|           | 4.6 |  | FUTURE ENHANCEMENT                            | 72 |
| <b>h.</b> |     |  | <b>REFERENCES</b>                             | 74 |
| <b>i.</b> |     |  | <b>APPENDIX</b>                               | 75 |