### TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Particulars</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Declaration by The Candidate</td>
<td>II</td>
</tr>
<tr>
<td>II.</td>
<td>Certificate of Supervisor</td>
<td>III</td>
</tr>
<tr>
<td>III.</td>
<td>Acknowledgement</td>
<td>IV</td>
</tr>
<tr>
<td>IV.</td>
<td>Abstract</td>
<td>V-VI</td>
</tr>
<tr>
<td>V.</td>
<td>Table of Contents</td>
<td>VII-IX</td>
</tr>
<tr>
<td>VI.</td>
<td>List of Figures</td>
<td>X-XI</td>
</tr>
<tr>
<td>VII.</td>
<td>List of Tables</td>
<td>XII</td>
</tr>
</tbody>
</table>

**CHAPTER –1**

1.1 Introduction 1

1.2 Problem on Hand 19

1.3 Research Objectives 23

1.4 Scope of research work 25

1.5 Hypothesis 26

**CHAPTER-2** Review of Literature 36-70

**CHAPTER-3** Research Methodology 71-88

**CHAPTER-4** Literature Survey 89-97

**CHAPTER-5** Technical Specification 98-141

5.1 Introduction to the system 101

5.1.1 Design and Implementation Constraints 102

5.1.2 Assumptions and Dependencies 104

5.2 System Features 104

5.2.1 Resource Management 108

5.2.2 Collaboration 113

5.2.3 Autosuggestion 118

5.2.4 Email Alerts and Escalations 120

5.2.5 Reports 123

5.3 Security of the system 126
5.3.1 Role based security 126
5.3.2 Multi-Level security 128
5.4 External Interface requirement 132
  5.4.1 User Interface 132
  5.4.2 Hardware Interface 132
  5.4.3 Software Interface 133

CHAPTER-6 Analytical study of features and functions 142-161
  6.1 Role based management system 143
    6.1.1 web role 144
    6.1.2 worker role 144
  6.2 Key features of project management software 147
    6.2.1 Project Planning and Execution 148
    6.2.2 Project Testing 149
    6.2.3 Project Release 149
    6.2.4 Project Administration 150
  6.3 System plan and execution details 157
    6.3.1 Limits of the hardware 157
    6.3.2 Input and output collaboration 158
    6.3.3 Consistency requirement 158
    6.3.4 Security and precautionary measures 158

CHAPTER-7 Graphical view of features and functions 169-202
  7.1 Project Estimation 170
    7.1.1 External Inputs 170
    7.1.2 External Output files 171
    7.1.3 External Queries 171
    7.1.4 Internal Logical files 171
    7.1.5 External Interface Files 172
7.2 External Boundary Requirements 178
  7.2.1 Client Interface 178
  7.2.2 Announcement Boundary 179
  7.2.3 Operation of development Requirements 180
  7.2.4 Databases and system 185

7.3 Software Testing 190
  7.3.1 Test Cases 190
  7.3.2 Test Plan 192
  7.3.3 Bug Fixing 196
  7.3.4 Change Request 197

7.4 Deployment and Maintenance 197
  7.4.1 Installation and un-installation 197
  7.4.2 User Assistance 199
  7.4.3 Collaborate with the project via email 201

CHAPTER-8 Mapping requirements with features 203-244
  8.1 Dynamic numerical requirements 211
    8.1.1 Logical database requirements 211
    8.1.2 Design Specification 211
    8.1.3 Code Specification 212
  8.2 Function Point Analysis 223
    8.2.1 Data Function 223
    8.2.2 Transactional Functions 223

CHAPTER-9 Mapping requirements with the functions 245-247

CHAPTER-10 Data collection and graphs 248-249

CHAPTER-11 Summary and Conclusion 250-254
  11.1 Summary and Conclusion 250
  11.2 Recommendations 252
11.3 Future scope 253
11.4 Limitation of research work 254

REFERENCES I-XV
BIBLIOGRAPHY XVI