

DECLARATION

Certified that this project report "**Employee Tracking System Using Handheld Devices**" is the bonafide work of "Adeeba Mumtaz and Mahnoor Mobin", who carried out the project work under my supervision.

Signature of Supervisor

Mr. Faisal Imran

Dedication

We dedicate this project to our

Loving Parents

Whatever we are is the result of their love, kindness and prayers.

May God bless them the best of everything in this world and in here after.

ACKNOWLEDGEMENT

I have been lucky enough to get the support from “Our Family” who provided us with the resources to take this project and improve our qualifications. They have always remained a great source of motivation for us.

Special thanks to “Mr. Faisal Imran”, our supervisor who remained a source of guidance during the project of this study. He provided continuous advice on the contents of this report and the project. Without his guidance and collateral, we would not have been able to achieve the desired results.

Last but not the least we would like to thank “Our Friends & Class Mates” who helped us a lot during this project, appreciated us and gave courage to complete this Project.

ABSTRACT

This report contains a detailed description of the processes and undergoing's of the project. The main concept and motivation behind the project is to secure your employee by tracking location. Our tracking system can help companies to ensure the security of those employees who are in fields. The goals set to be achieved and the milestones accomplished throughout the whole process. A detailed explanation of what steps were carried to achieve what now is fully functional software that helps companies in the real time working time on the field. Employer have web portal with Google map.

Google maps show the marker where employer can see the locations of employee on maps with time. Our system manages the track where employee can move and our system save the location with every move using GPS. This System is for the financial benefits of the company by using our project a company can save its fuel expenses as well as time. By using this tracking system a company would be able to maintain a record and hence employee will not be able to waste their time in their personal work during office hours, so basically we are targeting marketing employees of any organization.

This system can track the employee location at any employee are more secure now than before due to this application. Employer can track the previous locations. By using this employer can easily manage their employees' locations and monitor them. App which we develop will be install in every employee's phone and as soon as the smart phone will be connected to the internet all the stored location coordinates will be send to the server and employer can monitor these location from a web browser.

Table of Contents

1 Introduction

1.1	Purpose.....	2
1.2	Scope.....	2
1.2.1	Application.....	3
1.2.2	Web Site.....	3
1.3	Definitions, Acronyms, and Abbreviations.....	3
1.4	General Description	3
1.4.1	Build Up Good Relationship with Your Employees	4
1.5	Literature Review.....	4
1.6	Product Perspective.....	4
1.6.1	Product Functions	4
1.7	System Users.....	5
1.8	General Constraints.....	5
	The general project constraints includes.....	5
1.9	Assumptions and Dependencies.....	6
1.10	The Process Model.....	6
1.10.1	Agile process model.....	6
1.10.2	Why Agile Process Model	7
2	System Requirements.....	9
2.1	Interface Requirements	9
2.2	Functional Requirements	9
2.2.1	Functional Requirement #1: Authentication of Application by employer	10
2.2.2	Functional Requirement #2: Authentication of Web Site	10
2.2.3	Functional Requirement #3: Track employee by employer	11
2.2.4	Functional Requirement #4: Employee Destination	11
2.2.5	Functional Requirement#5: Add Employee.....	12
2.2.6	Functional Requirement #6: Edit Employee	12
2.2.7	Functional Requirement#7: Delete Employee	13
2.2.8	Functional Requirement#8: Search Record on Web site	13
2.3	Use Cases	13
2.3.1	Use Case #1: Employer Login from Application.....	14
2.3.2	Use Case #2: Add Employee from Application.....	15

2.3.3	Use Case #3: Employer Login from Web	16
2.3.4	Use Case #4: Monitor current location	17
2.3.5	Use Case #5: Edit Employee from Website.....	18
2.3.6	Use Case #6: Monitor Time	19
2.3.7	Use Case #7: Monitor Previous location.....	20
2.3.8	Use Case #8: Update Location on Map.....	21
2.4	Non-Functional Requirements	22
2.5	Resource Requirements.....	22
2.6	Database Requirements.....	22
3	System Design	24
3.1	Design Approach	24
3.2	Design Constraints	24
3.3	Interface Design	24
3.4	Data Flow Diagrams (DFD).....	24
3.4.1	Level 0 DF	25
3.4.2	Level 1 DFD employer	25
3.4.3	Level 1 DFD employee	26
3.5	Sequence Diagrams.....	27
3.6	Activity Diagrams	29
4	System Implementation.....	36
4.1	Strategy for implementation.....	36
4.2	Tools Used	36
4.3	Background Study and Algorithms.....	37
4.4	Methodologies.....	37
4.4.1	Divide and conquer Methodology:	37
4.5	System Architecture.....	38
4.5.1	Data Layer.....	38
4.5.2	Application Layer	38
4.5.3	Presentation Layer.....	38
5	System Testing.....	41
5.1	Objective of Testing.....	41
5.2	Test Strategy	41
5.2.1	Component testing	41
5.2.2	Unit testing.....	42

5.2.3	Integrated testing.....	42
5.2.4	System testing	42
5.3	Test Cases	43
6	Conclusion	50
6.1	Project Deliverables	50
6.2	Learning	50
6.3	Future Enhancements.....	51
6.3.1	Update in Data of System:	51
6.3.2	Update Functionality of System:.....	51

LIST OF FIGURES

Figure 1: Agile Process Model.....	6
Figure 2:Use Case Employer Login from Application.....	14
Figure 3: Use Case Add Employee.....	15
Figure 4: Use Case Employer login from Web	16
Figure 5: Use case Monitor current location	17
Figure 6: Use Case Edit Employee.....	18
Figure 7: Use Case Monitor Time.....	19
Figure 8: Use Case Monitor Previous location	20
Figure 9: Use Case Update Location	21
Figure 10: level 0 DFD	25
Figure 11: level 1 DFD employer.....	25
Figure 12: level 1 DFD employee	26
Figure 13: Sequence Diagram for Employee.....	27
Figure 14: Sequence Diagram for Employer	28
Figure 15: Activity Diagram Login	29
Figure 16: Add Employee	30
Figure 17: Edit Employee	31
Figure 18: Activity Diagram Employee Location	32
Figure 19: Activity Diagram Monitor Previous location.....	33
Figure 20: Activity Diagram Update Location	34
Figure 21: ETS Tools of Implementation	37
Figure 22: Architecture Diagram.....	39
Figure 23: Learnt In Development Process	51

LIST OF TABLES

Table 1 Test Case Login	43
Table 2 Test case Web Login.....	44
Table 3 Test Case markattendance.....	45
Table 4 Test Case Update Location	46
Table 5 Test Case Notification Bar.....	47
Table 6 Test Case Search Employee on Web	48