Employee Performance Evaluation and Task Monitor

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This Project report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

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Fall-2018

Letter of Approval

This **Project** titled "**Employee Performance Evaluation and Task Monitor**", submitted by **Minhaz Khan Shawon**, **151-35-1065** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc in Software Engineering and approved as to its style and contents.

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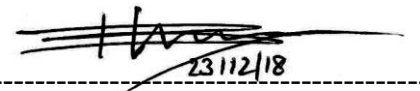

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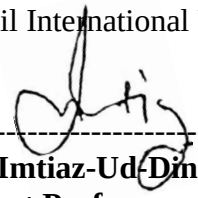

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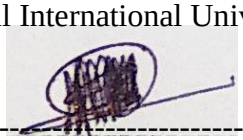

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Declaration

I hereby declare that, this project report submitted to the Daffodil International University, is a record of an original work done by me under the supervision of Mr. Asif Khan Shakir lecturer at the department of Software Engineering, Daffodil International University.

I also declare that neither the project nor the records in this document has been submitted or will submit to any other university or institute for the award of any degree or diploma.

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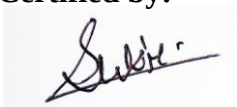

……..

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Acknowledgement

I acquaint my thankfulness and gratefulness to almighty God for His blessing that makes me possible to complete the final year project successfully.

Aside from the endeavor of me, the success of any work depends on the guidelines of many others. I take this chance to express my thankfulness to the people who have been helping me to the successful completion of this project. I would like to thank Mr. Asif Khan Shakir, project supervisor, I can't be thankful enough for his tremendous support and help. Without his guidelines and motivations in this project I would not have done it successfully.

I would like to show my thankfulness to Professor Dr. Touhid Bhuiyan the Head of Department of Software Engineering, for his kind help to finish our project and also to other faculty member and the staff of Software Engineering department of Daffodil International University.

Dedication

At first I dedicate this work to Almighty Allah for His blessing that makes me possible to complete this successfully. Almighty Allah gave me the power and confidence to done my project and this document. I also dedicate this work to my parents who always love me and pray for me and I also dedicate this work to my university and its people who always support me most.

Abstract

The profitability of a company depends on the performance of the employees. To monitor the tasks of an employee, task monitoring system is very important. There is many systems existing for monitoring task but there is much complexity in these systems. The task monitoring system should be easy to learn and easy to use and also very effectual and worth full to monitor the tasks and employees for the betterment of any organization. I wanted to develop such a system that will be useful and worth full. I developed a system that is user friendly and easy to maintain. I found that the system is easier than other systems.

The “Employee performance evaluation and task monitoring” project is divided into four parts. Part one is user get registered into the system. Part two is manager create and assigns the tasks to the employees. Part three is employees get tasks and update task progress. Part four is manager gets all outcomes and results.

Table of Contents

Letter of Approval ..... **ii**
Declaration ..... **iii**
Acknowledgement ..... **iv**
Dedication ..... **v**
Abstract ..... **vi**
Table of Contents ..... **vii**
List of Tables ..... **viii**
List of Figures ..... **ix**
Chapter 1 (Introduction) **11**
1.1 Project Overview 11
1.2 The Purpose of the Project 11
1.3 Stakeholder 12
1.4 Purposed System Model 12
1.5 Project Schedule 12
Chapter 2 (Software Requirement specification) **13**
2.1 Functional Requirement 13
2.2 Performance Requirement 14
2.3 Dependability Requirement 14
2.4 Maintainability and Supportability Requirement 15
2.5 Security Requirement 15
2.6 Usability and Human-Interaction Requirement 15
2.7 Look and Feel Requirement 16
2.8 Legal Requirement 16
Chapter 3 (System Analysis) **17**
3.1 System Use Case 17
3.2 Use Case Description 17
3.3 Activity Diagram 22
Chapter 4 (System Design Specification) **27**
4.1 Sequence Diagram 27
4.2 Class Diagram 31
4.3 Entity Relationship Diagram 32
4.4 Development Tools and Technology 32

Chapter 5 (System Testing) **33**
5.1 Testing Features 33
5.2 Testing Strategies 33
5.3 Testing Schedule 34
5.4 Test Cases 34
Chapter 6 (User Manual) **38**
6.1 User Manual (Manager) 38
6.2 User Manual (Employee) 39
Chapter 7 (Project Summary) **41**
7.1 Repository Link 41
7.2 Obstacles and Achievements 41
7.3 Future Scope 41
Conclusion **42**
Appendices **43**
Reference **44**

List of Tables

Table 1: Functional requirements 13
Table 2: Use Case Description (Registration) 17
Table 3: Use Case Description (Login) 18
Table 4: Use Case Description (Assign Task) 18
Table 5: Use Case Description (View Task Details) 19
Table 6: Use Case Description (Update Task Status) 19
Table 7: Use Case Description (Update Task) 20
Table 8: Use Case Description (Delete Task) 20
Table 9: Use Case Description (View Employee) 21
Table 10: Use Case Description (Delete Employee) 21
Table 11: Testing Schedule Table 34
Table 12: Test Case Table 1 35
Table 13: Test Case Table 2 36
Table 14: Test Case Table 3 36
Table 15: Test Case Table 4 37

List of Figures

Figure 1 :Block Diagram of Employee Performance and Task monitor 12
Figure 2 : Gantt chart for Employee Performance and Task monitor 12
Figure 3: System Use Case Diagram 17
Figure 4: Activity Diagram for Registration 22
Figure 5: Activity Diagram for Login 22
Figure 6: Activity Diagram for Assign Task 23
Figure 7: Activity Diagram for Update Task Status 23
Figure 8: Activity Diagram for View Task Details 24
Figure 9: Activity Diagram for Update Task 24
Figure 10: Activity Diagram for Delete Task 25
Figure 11: Activity Diagram for Delete Task 25
Figure 12: Activity Diagram for Delete Task 26
Figure 13: System Login 27
Figure 14: System Registration 27
Figure 15: View Task Details 28
Figure 16: View Employee 28
Figure 17: Delete Employee 29
Figure 18: Assign Task 29
Figure 19: Delete Task 30
Figure 20: Update Task 30
Figure 21: Update Task Status 31
Figure 22: Class Diagram for the System 31
Figure 23: ER Diagram 32
Figure 24: State Transition Diagram 34
Figure 25: State Transition Diagram 35

Chapter 1

Introduction

1.1 Project Overview

The “Employee performance evaluation and task monitoring system” help the manager to monitor their employees and their assign tasks and also help to evaluate the performance of the employees.

1.2 The Purpose of the Project

Employee performance evaluation and task monitoring system helps to create task and assign task to the employee. This System gives a scope for manager to assign task and monitor the task without wasting time. The manager can decide which employee will do the task and can evaluate performance by the task submission on time.

1.2.1 Project Background

Many organizations have realized that keeping employee data and task record is harder to maintain and monitor so there is many task manager in the industry to monitor the task, so I have this idea to develop such a system that will help managers to manage and assign task to their employee and keep monitoring the task progress which is very simple user friendly and easy to understand and use and will do the job perfectly.

1.2.2 Beneficiaries and Benefits

This system is user friendly and easy accesses to data as well as services such as task management, project management and employee tracking, employee performance evaluation. The employee have direct interaction with this system through a password protected user account therefore proposed system is secured. This system is accessible from any location as long as internet connectivity is available Without an employee monitoring system, it’s a complex job for the department to keep track of each and every employee and even harder for a project manager to assign tasks to the project team.

1.2.3 Goals of the Project

This system brings an easy way for maintaining the details of employee task project details and update work progress in any organization. It helps a manager to control the project, task and employee.

1.3 Stakeholders

The Stakeholders of the system will be limited to the following:

1. Manager
2. Employee

1.4 Proposed System Model (block diagram)

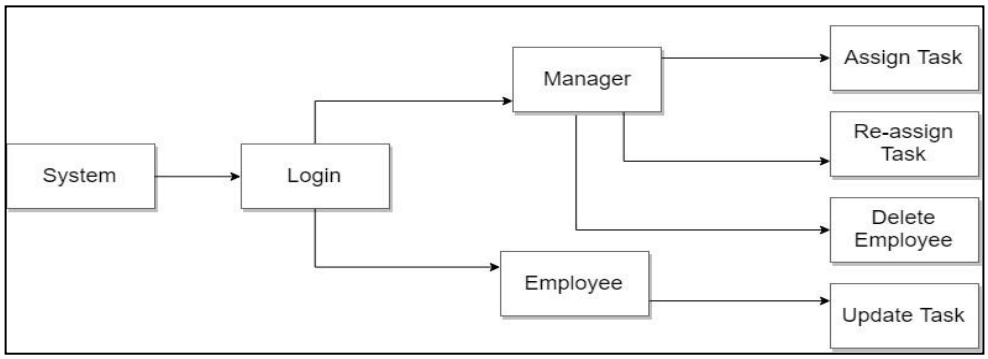


Figure 1 : Block Diagram of Employee Performance and Task monitor

1.5 Project Schedule

1.5.1 Gantt Chart

Task/Date	Start date	End date	Status	July	August	September	October	November
Proposal	**08-07-2018**	**10-07-2018**	**Complete**					
Requirements	**23-07-2018**	**01-08-2018**	**Complete**					
Design	**01-08-2018**	**06-09-2018**	**Complete**					
Implementation	**09-09-2018**	**30-10-2018**	**Complete**					
Testing	**10-11-2018**	**22-11-2018**	**Complete**					
Documentation	**22-11-2018**	**30-11-2018**	**Complete**					

Figure 2 : Gantt chart for Employee Performance and Task monitor

Chapter 2

Software Requirement Specification

2.1. Functional Requirements (FR)

Table 1: Functional requirements

FR ID	FR Name	Description	Priority
FR1	Registration	The module will provide registration form	High
FR2	Login(Manager)	The module will provide the reports of all the logged in users	High
FR3	Login(Employee)	The module will provide the reports of all the logged in users	High
FR4	Add Task	The module will provide the report for the adding task details to the employee	Medium
FR5	Edit/Remove Task	The module will provide the edit/remove task form	Medium
FR7	Update Task	The module will provide the task to update	Medium
FR6	Employee List	The module will provide the employee list	Low
FR8	Delete Employee	The module will remove the employee	Low

2.2. Performance Requirements

2.2.1. Speed and Latency Requirements

1. Data should update in database within 1 second.
2. Query should bring result within 2 second.
3. UI design should load within 5 second.
4. Validation error should show within 1 second.

2.2.2. Precision or Accuracy Requirements

1. After login the index should show the accurate data for the specific user.
2. The time and date should accurate on the task forms.
3. The registration form should provide accurate data to store in database.
4. The user should get the accurate data which is assigned to them.

2.2.3. Capacity Requirements

1. Not more than 10000 users to be registered.
2. Not more than 100 users should login at the same time.

2.3. Dependability Requirements

2.3.1. Reliability Requirements

1. The User registration should register a new user and update database with given input.
2. The Task Assign form should assign a task with given input.
3. Log in should perform when the correct user name and password is given.
4. The Delete form should delete a user and update the database.
5. The Task Progress should show the value when individual

updates given.

2.3.2. Availability Requirements

1. The system should available 24 hours a day and 7 days a week.
2. The system should perform activities immediately upon user request.
3. The system should run in any web browser.

2.4. Maintainability and Supportability Requirements

2.4.1. Maintenance Requirements

1. Modify the system when the software environment changes.
2. Fix bug when the system is corrupted.
3. Fix accidental data mistakes by user.

2.4.2. Supportability Requirements

1. Provide documentation for user guidance.

2.5. Security Requirements

2.5.1. Access Requirements

1. Only registered user can login to the system.
2. Only user holding the role of "Manager" can assign a task, modify event, view employee list and delete employee**.**

2.6. Usability and Human-Interaction Requirements

2.6.1. Ease of Use Requirements

1. The system UI should user friendly.
2. The system should operate easy task management.
3. The new user should learn the system.
4. The system maintenance should not complex.

2.6.2. Understandability and Politeness Requirements

1. Any user should understand the system.
2. Non technical parson should operate also.

2.6.3. Accessibility Requirements

1. The system should accessible from any other devices.
2. User should access their account within a request.

2.7. Look and Feel Requirement

2.7.1. Style Requirements

1. The task monitor should look like a calendar where the tasks will be assigned.

2.8. Legal Requirements

2.8.1. Standards Requirements

1. The employee should register their account with company email id.
2. The manager should assign task within the company privacy and policy.

Chapter 3

System Analysis

3.1. System Use case

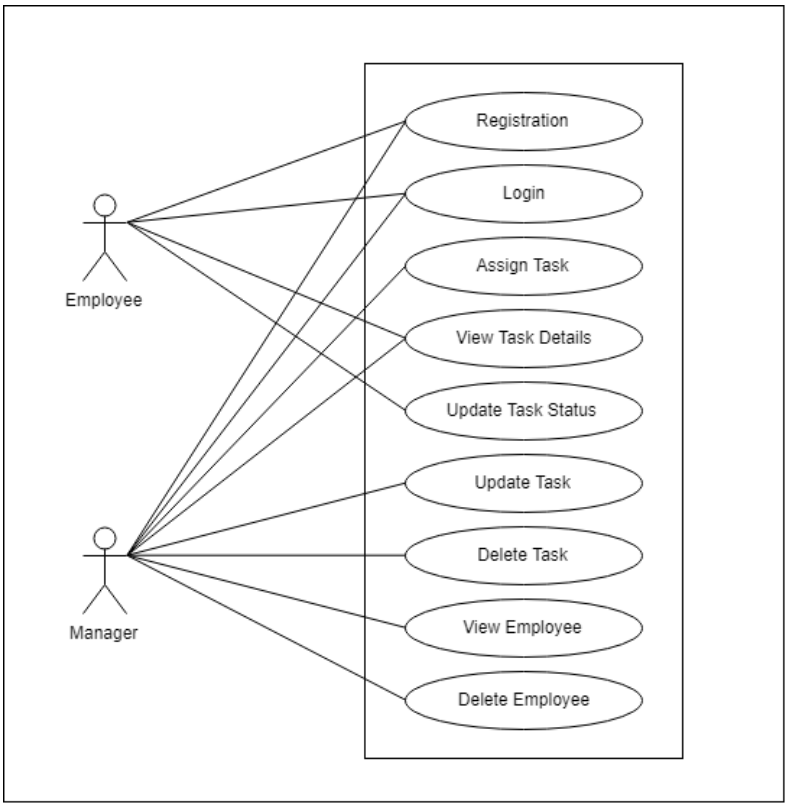


Figure 3: System Use Case Diagram

3.2. Use Case Description

Table 2: Use Case Description (Registration)

Use Case Name	Enter Relevant Data to Registration
Scenario	Employee register account
Actor	Employee
Pre-condition	The system has supported with a Database to store Data
Post-condition	Personal information is stored
Flow of events	The employee enters information data
Exception condition	Employee enters wrong inputs

Table 3: Use Case Description (Login)

Use Case Name	Enter Relevant Data to Login
Scenario	User login to the system
Actor	Both User and Employee
Pre-condition	The system has to keep a record about that login
Post-condition	Personal information has to be stored before login
Flow of events	The User enters relevant data like user name, password. The system matches data with the stored database. The system gives access to manager based on role.
Exception condition	Cant access the account

Table 4: Use Case Description (Assign Task)

Use Case Name:	Assign task	
Scenario :	Manager assigning course	
Brief Description:	Manager can assign a task, reassign a task and delete a task.	
Actor:	Manager	
Precondition:	Must need to login to the system	
Post condition:	Assign the task	
Flow of events:	Manager	System
	1. User must have an account for assign a task 2. Assign the task by employee	1.Confirm the valid login 2.Confirm task assign
Exception Condition:	1. If manager can't enter the valid user name or password can't enter the system 2. Can't assign or re-assign the task	

Table 5: Use Case Description (View Task Details)

Use Case Name:	View Task Details	
Scenario :	User view the Task Details	
Brief Description:	User view and update the task details	
Actor:	Both Employee and Manager	
Pre-condition:	Must need to login to the system	
Post-condition:	Task Details	
Flow of events:	Employee or Manager	System
	1. User must have an account for view the assigned task details 2. View Task details 3. Update task status	1.Confirm the valid registration 2.Confirm the valid login 3. Confirm view task details 4.Confirm update task status

Table 6: Use Case Description (Update Task Status)

Use Case Name:	Update Task Status	
Scenario :	Employee updates the task progress	
Brief Description:	Employee can updates the task progress as it is done or in progress	
Actor:	Employee	
Pre-condition:	Must need to login to the system	
Post-condition:	Update Task Status	
Flow of events:	Employee	System
	1. User must have an account to update task status. 2. Update the task progress	1.Confirm the valid login 2.Confirm task status update
Exception Condition:	1. If employee can't enter the valid user name or password can't enter the system 2. Can't update the task progress	

Table 7: Use Case Description (Update Task)

Use Case Name:	Update Task	
Scenario :	Manager updates the task	
Brief Description:	Manager updates the details of the task like the time, date, details and assigned employ	
Actor:	Manager	
Pre-condition:	Must need to login to the system	
Post-condition:	Update Task	
Flow of events:	Manager	System
	1. User must have an account for updating a task 2. Updating a task details	1.Confirm the valid login 2.Confirm task updates
Exception Condition:	1. If manager can't enter the valid user name or password can't enter the system 2. Can't updates a task	

Table 8: Use Case Description (Delete Task)

Use Case Name:	Delete Task	
Scenario :	Manager deletes the task	
Brief Description:	Manager deletes a task	
Actor:	Manager	
Pre-condition:	Must need to login to the system	
Post-condition:	Task deleted	
Flow of events:	Manager	System
	1. User must have an account for updating a task 2. Deletes a existing task	1.Confirm the valid login 2.Confirm delete a task
Exception Condition:	1. If manager can't enter the valid user name or password can't enter the system 2. Can't delete a task	

Table 9: Use Case Description (View Employee)

Use Case Name:	View Employee	
Scenario :	View employee info	
Brief Description:	View the registered employee list	
Actor:	Manager	
Pre-condition:	Must need to login to the system	
Post-condition:	Employee list	
Flow of events:	Manager	System
	1. User must have an account for updating a task 2. View employee info list	1.Confirm the valid login 2.Confirm employee list view
Exception Condition:	1. If manager can't enter the valid user name or password can't enter the system 2. Can't view the list of employee	

Table 10: Use Case Description (Delete Employee)

Use Case Name:	Delete Employee	
Scenario :	Manager deletes an employee	
Brief Description:	Manager deletes an employee from the employee list	
Actor:	Manager	
Pre-condition:	Must need to login to the system	
Post-condition:	Employee deleted	
Flow of events:	Manager	System
	1. User must have an account for updating a task 2. Deletes a existing employee from the list	1.Confirm the valid login 2.Confirm delete an employee
Exception Condition:	1. If manager can't enter the valid user name or password can't enter the system 2. Can't delete an employee	

3.3. Activity diagram

3.3.1. Activity diagram (Registration)

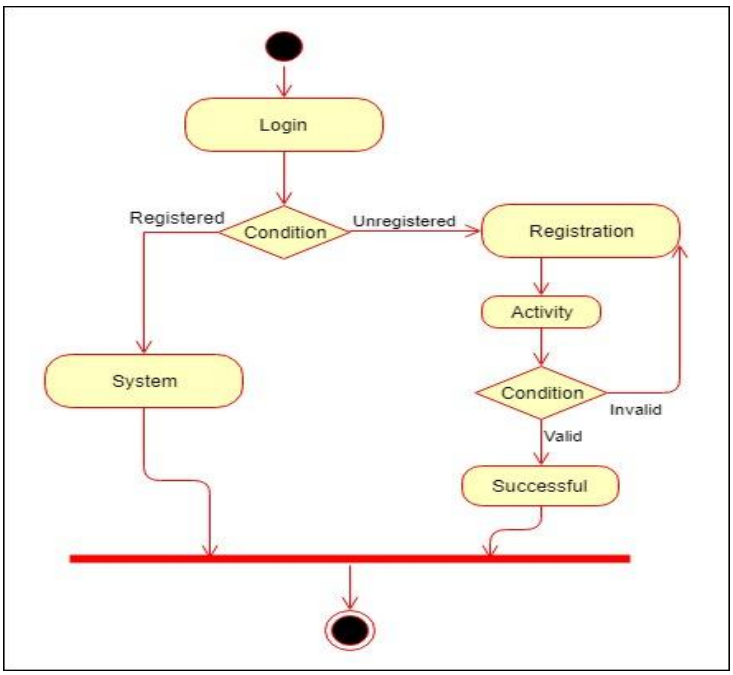


Figure 4: Activity Diagram for Registration

3.3.2. Activity diagram (Login)

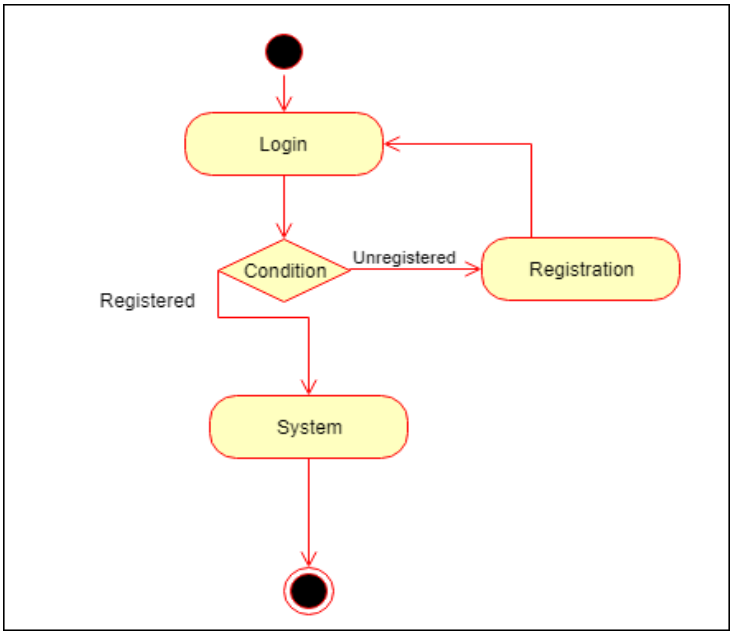


Figure 5: Activity Diagram for Login

3.3.3. Activity diagram (Assign Task)

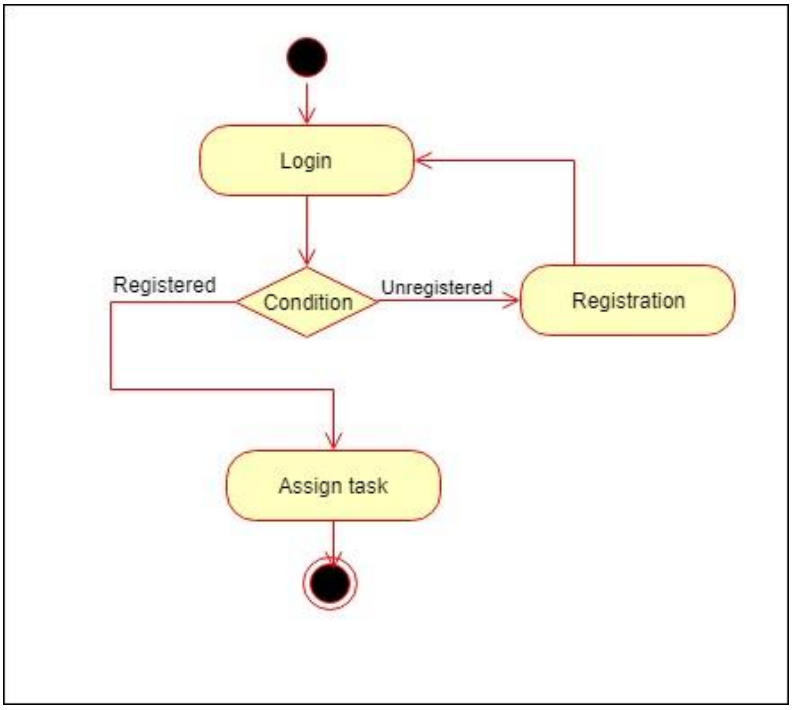


Figure 6: Activity Diagram for Assign Task

3.3.4. Activity diagram (Update Task Status)

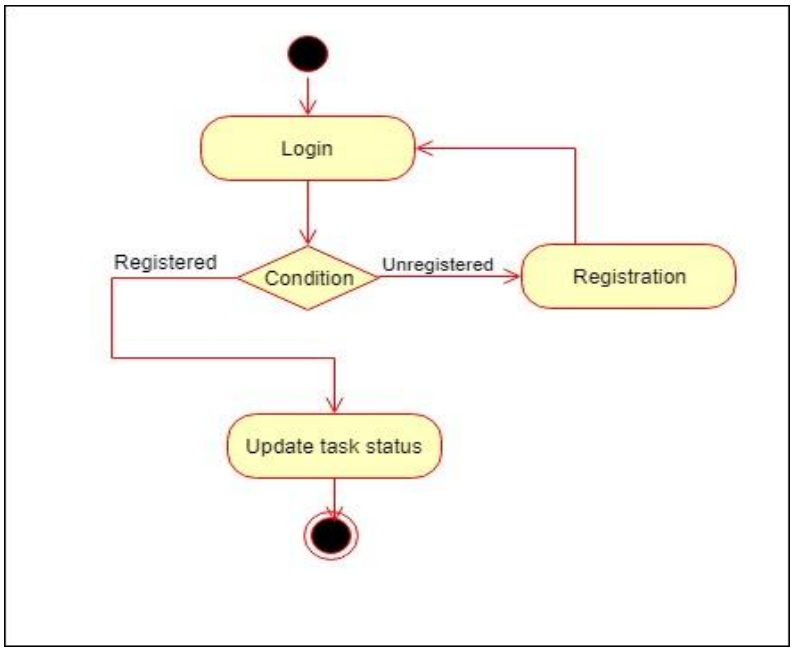


Figure 7: Activity Diagram for Update Task Status

3.3.5. Activity diagram (View Task Details)

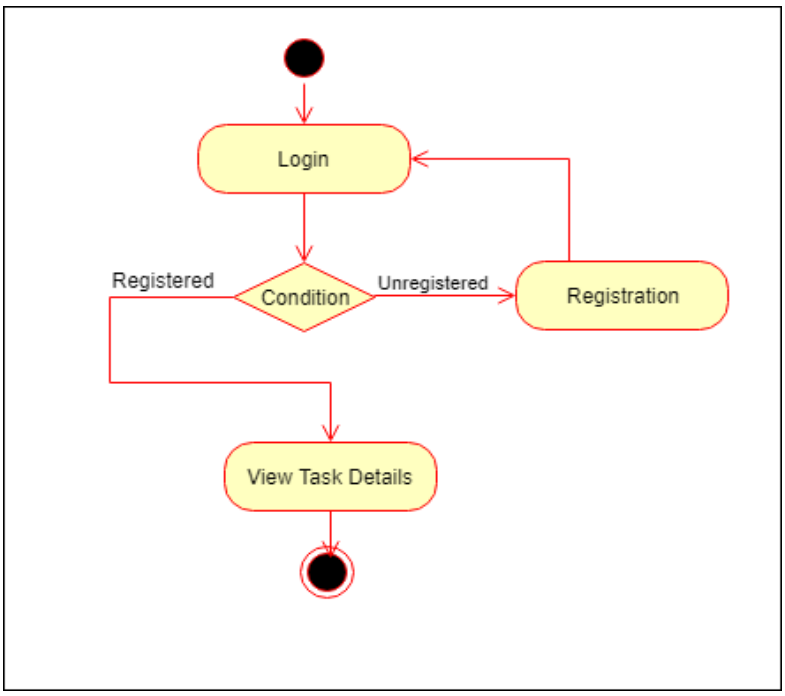


Figure 8: Activity Diagram for View Task Details

3.3.6. Activity diagram (Update Task)

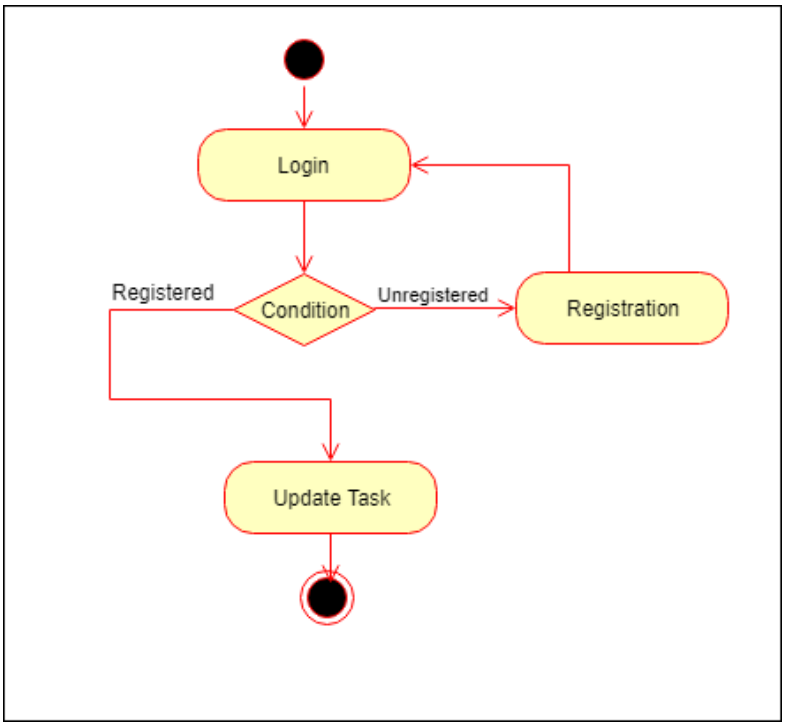


Figure 9: Activity Diagram for Update Task

3.3.7. Activity diagram (Delete Task)

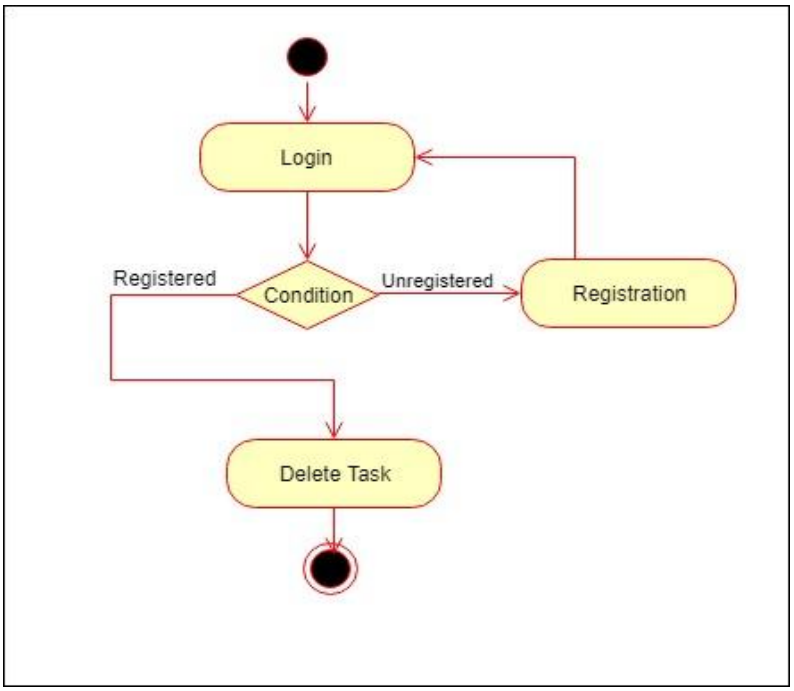


Figure 10: Activity Diagram for Delete Task

3.3.8. Activity diagram (View Employee)

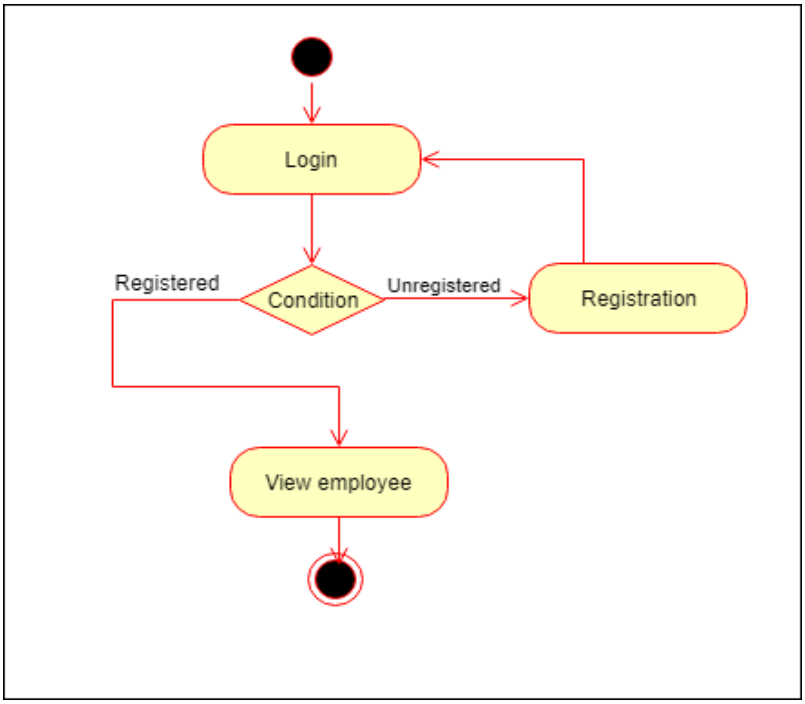


Figure 11: Activity Diagram for Delete Task

3.3.9. Activity diagram (View Employee)

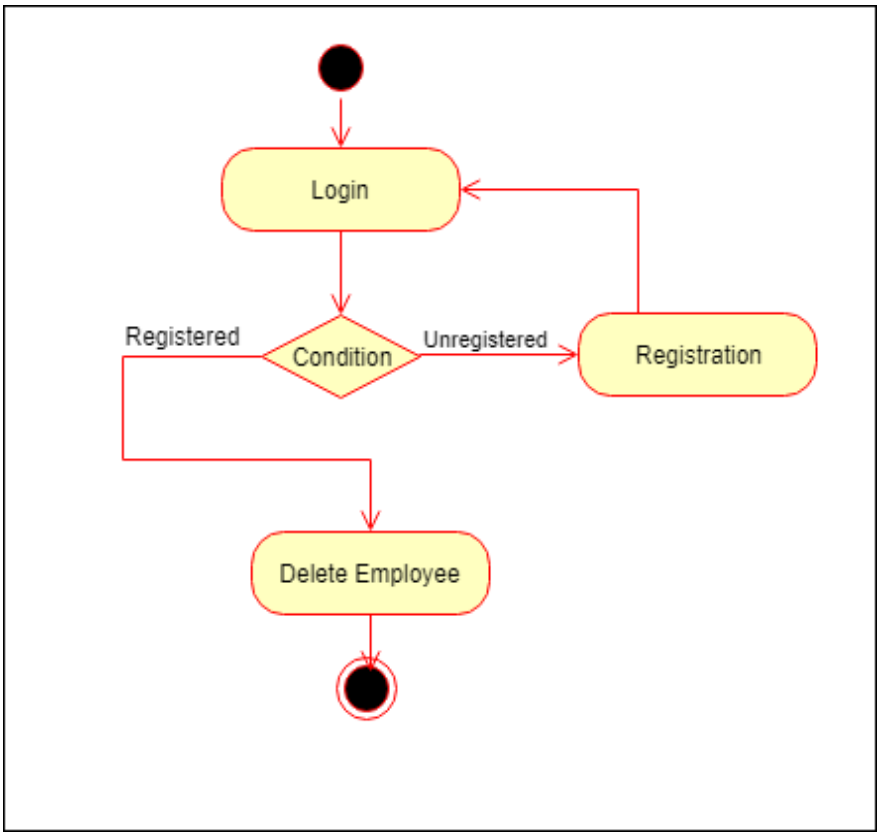


Figure 12: Activity Diagram for Delete Task

Chapter 4

System Design Specification

4.1. Sequence Diagram

4.1.1. Sequence Diagram for Login into System

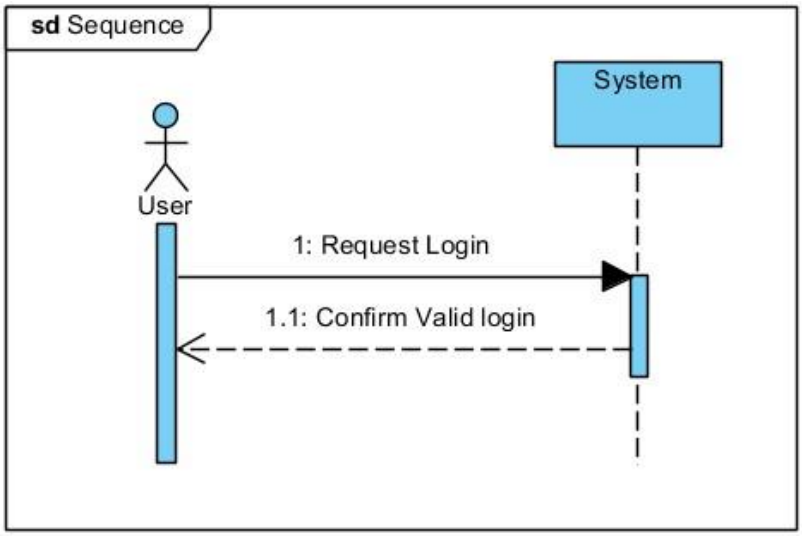


Figure 13: System Login

4.1.2. Sequence Diagram for Registration

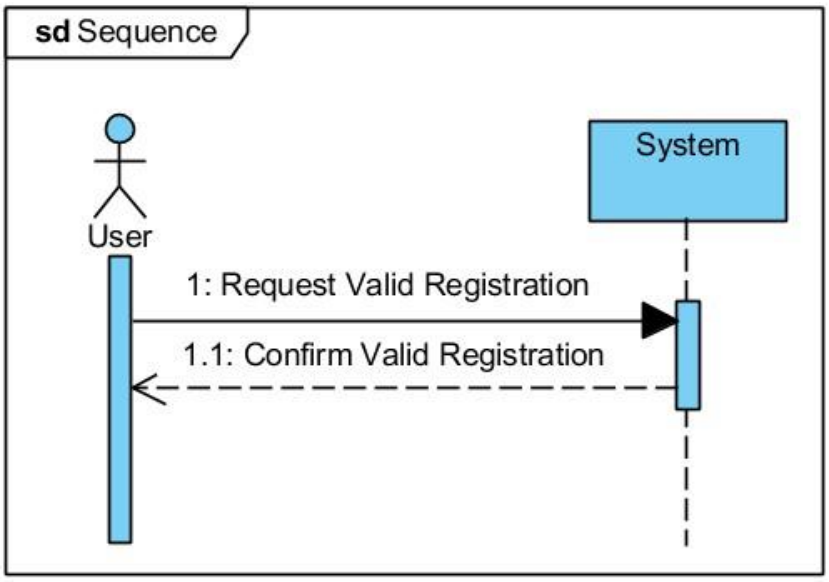


Figure 14: System Registration

4.1.3. Sequence Diagram for View Task Details

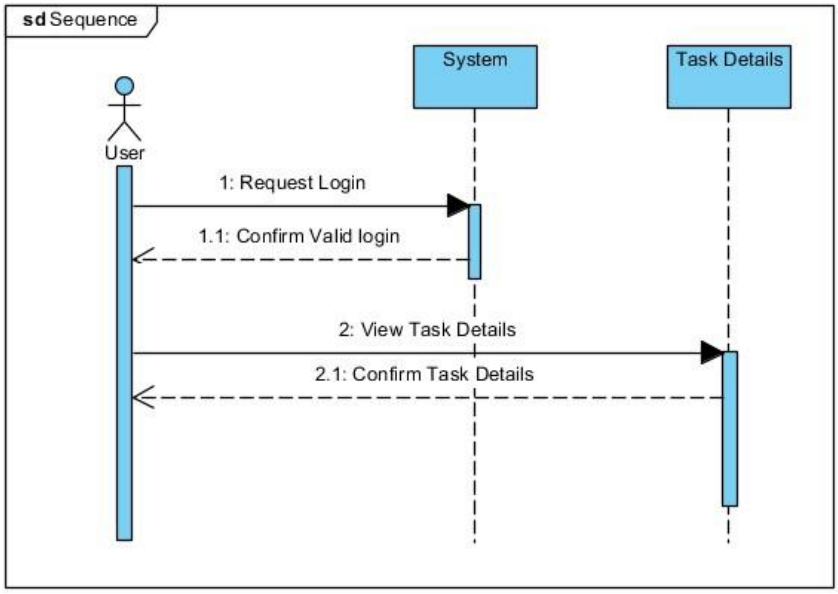


Figure 15: View Task Details

4.1.4. Sequence Diagram for View Employees

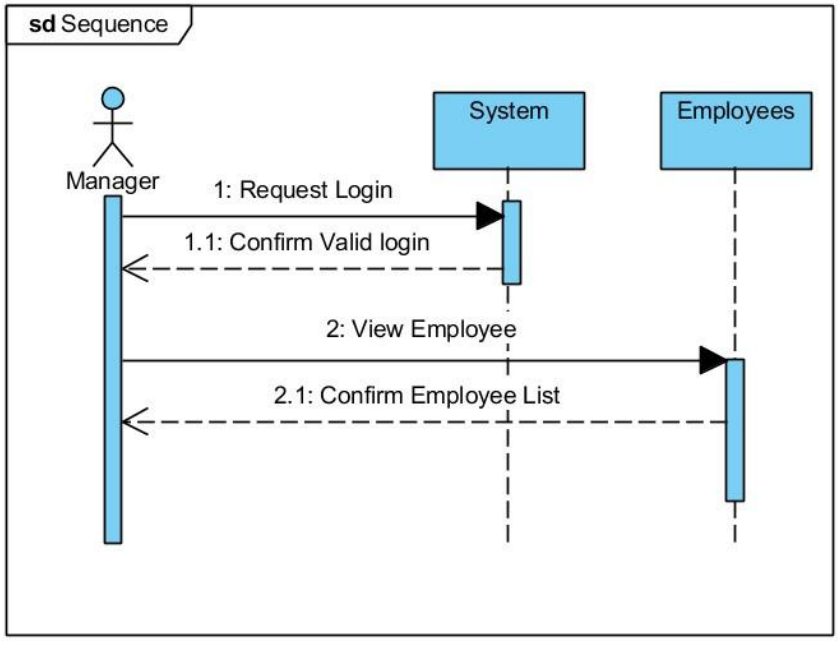


Figure 16: View Employee

4.1.5. Sequence Diagram for Delete Employees

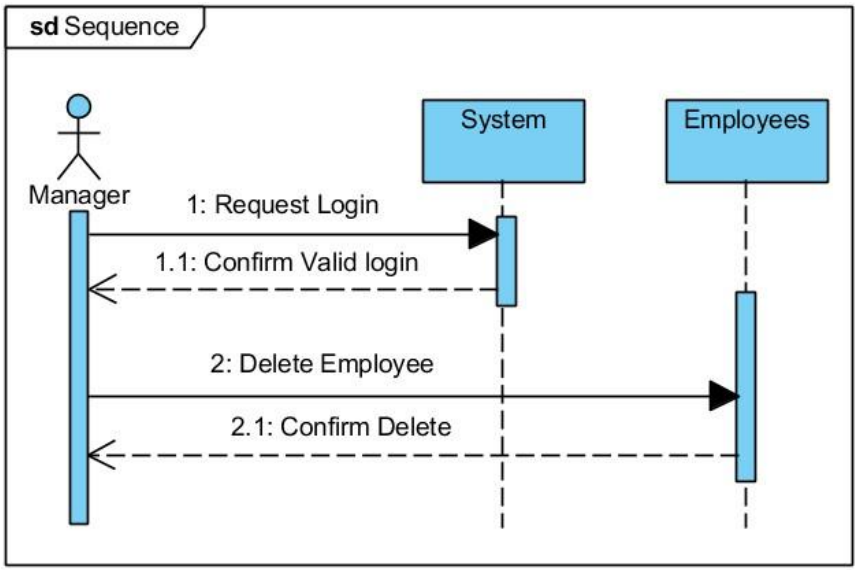


Figure 17: Delete Employee

4.1.6. Sequence Diagram for Assign Task

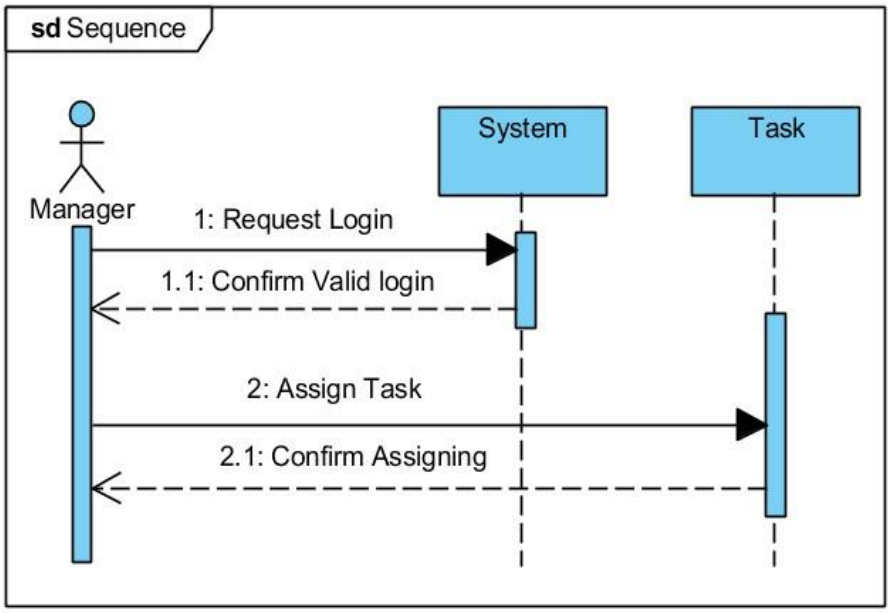


Figure 18: Assign Task

4.1.7. Sequence Diagram for Delete Task

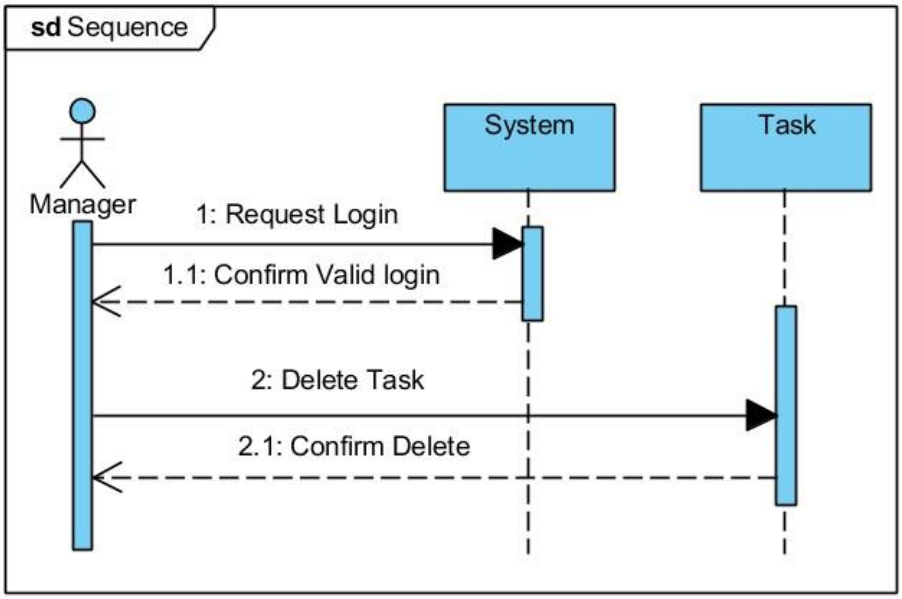


Figure 19: Delete Task

4.1.8. Sequence Diagram for Update Task

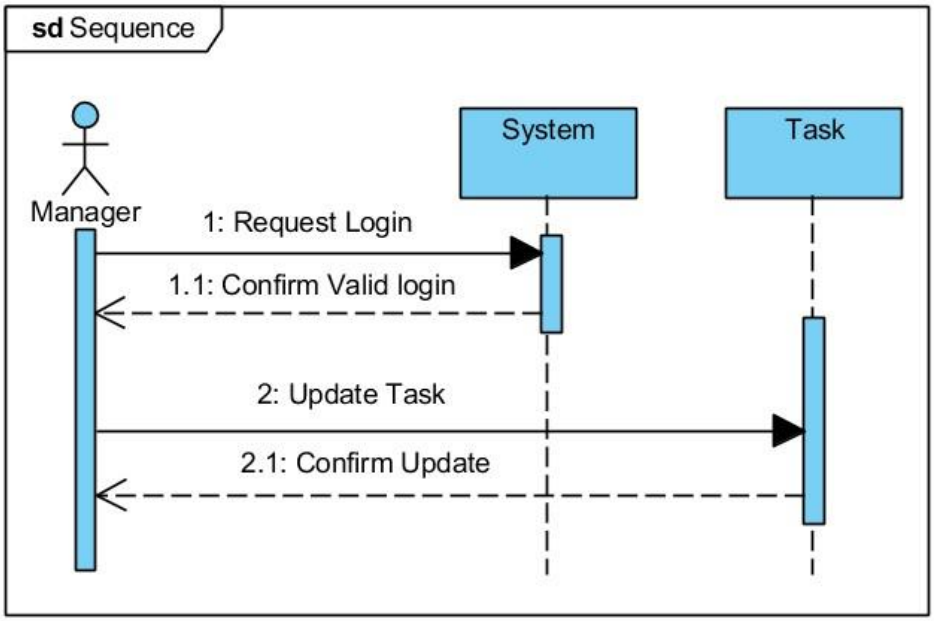


Figure 20: Update Task

4.1.9. Sequence Diagram for Update Task Status

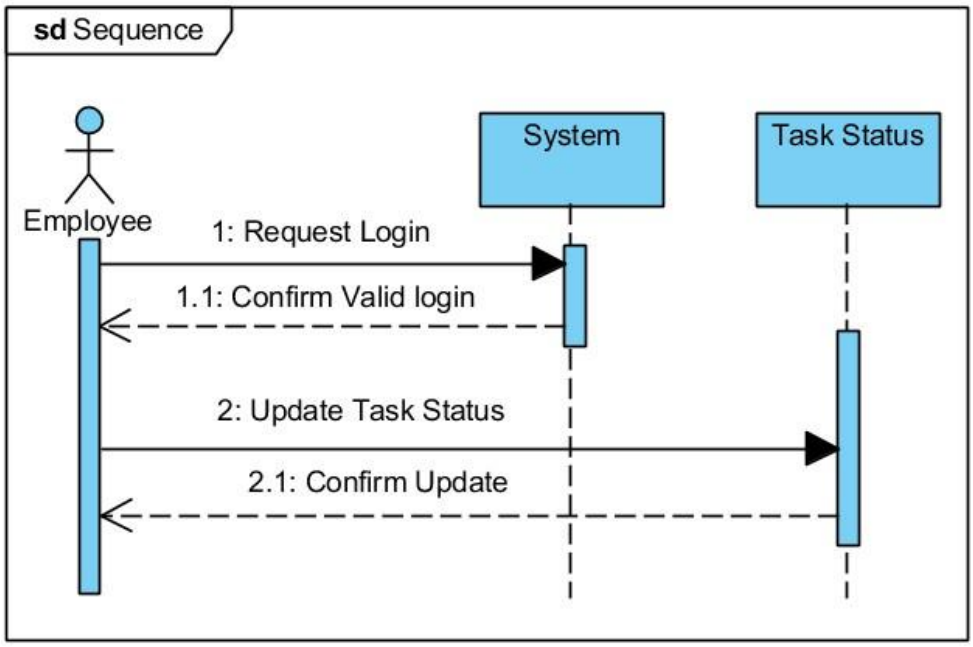


Figure 21: Update Task Status

4.2. Class Diagram

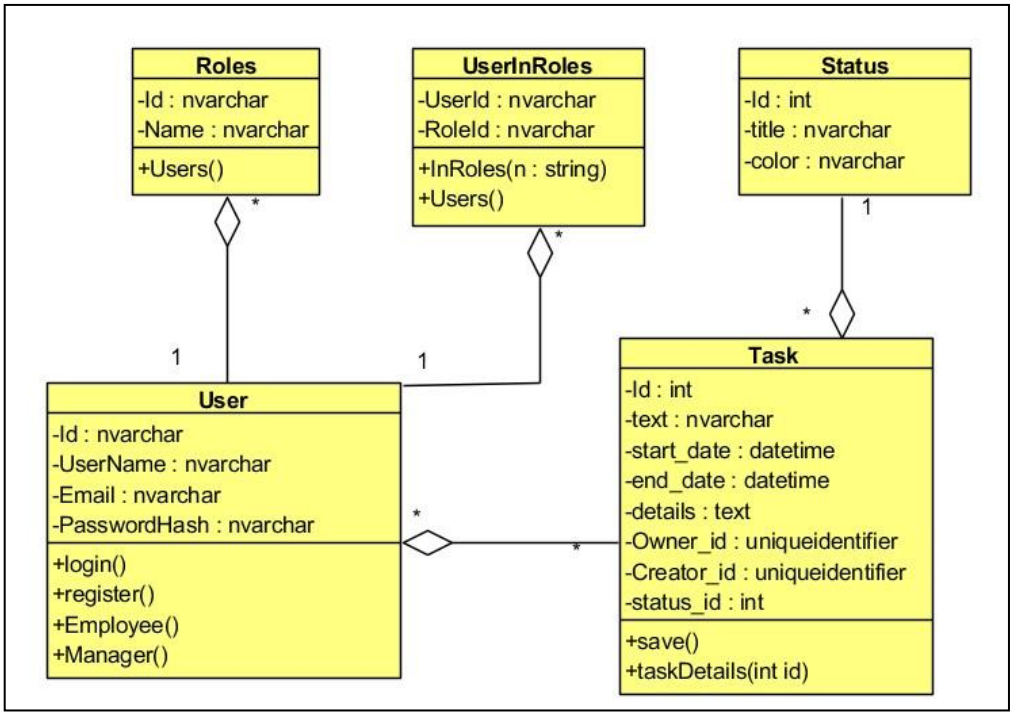


Figure 22: Class Diagram for the System

4.3. Entity Relationship diagram

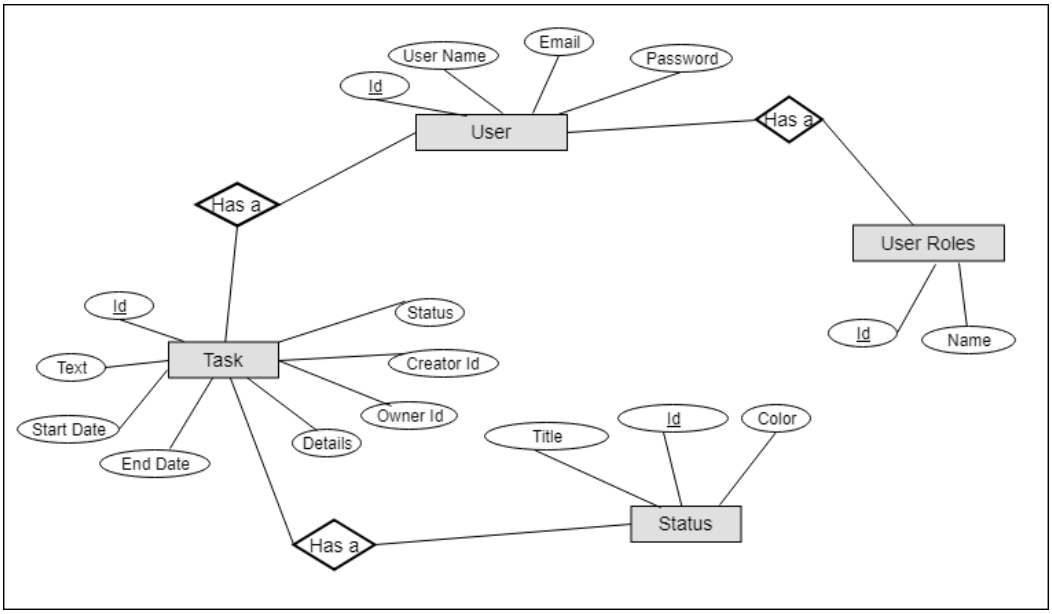


Figure 23: ER Diagram

4.4. Development Tools and Technology

4.4.1. User Interface Technology

4.4.1.1. Asp .Net MVC5
4.4.1.2. CSS
4.4.1.3. Java Script
4.4.1.4. Bootstrap

4.4.2. Implementation Tools and Platforms

4.4.2.1. Microsoft Visual Studio 2017

4.4.2.2. SQL Server 2012

Chapter 5

System Testing

5.1. Testing Features

5.1.1. Features to be tested

5.1.1.1. Registration
5.1.1.2. User Login
5.1.1.3. Assign task
5.1.1.4. Update Task

5.1.2. Features not to be tested

5.1.2.1. View Employees
5.1.2.2. View Tasks

5.2. Testing Strategies

5.2.1. Test Approach

1. The system will manually tested
2. The system testing is based on user acceptance

5.2.2. Pass/Fail Criteria

1. Component Pass/Fail criteria – The test will pass if the case meet the object design requirement or fail if not
2. Integration Pass/Fail criteria - The test will pass if the case meet the object design and the system architecture requirement or fail if not
3. System Pass/Fail criteria - The test will pass if the case meet the functional and non-functional requirements or fail if not

5.2.3. Suspension and Resumption

1. Build Acceptance Test – the system will pass the test if every build is successful if not than try build again.
2. Regression Testing – the system should work properly after each change on the system.

3. System Design Changes - the system should work properly after each change in the design.

5.3. Testing Schedule

Table 11: Testing Schedule Table

Test Phase	Time	Owner
Test Plan Creation	1 weeks	Minhaz Khan Shawon
Test Specification Creation	2 weeks	Minhaz Khan Shawon
Test Specification Team Review	2 weeks	Minhaz Khan Shawon
Component Testing	3 weeks	Minhaz Khan Shawon
Integration Testing	3 weeks	Minhaz Khan Shawon
System Testing	3 weeks	Minhaz Khan Shawon

5.4. Test Cases

5.4.1. Test Case Module-1: Registration

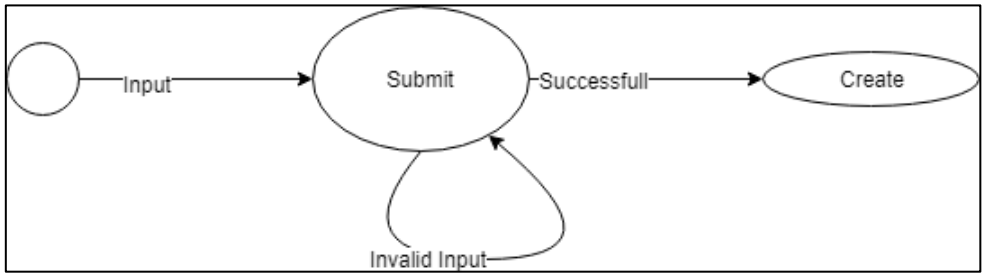


Figure 24: State Transition Diagram

Table 12: Test Case Table

Test Case ID: TC1	Test Design by: Minhaz Khan Shawon
Test Priority: High	Test Design Date: 07.10.2018
Module Name: Registration	Test Execute by: Minhaz Khan Shawon
Description: Registration of a new employee	Test Execute Date: 07.10.2018

Step	Test cases	Test data	Expected result	P/f	Actual result
01	Enter empty value		Display Exception	Pass	Display Exception
02	Enter space between strings in user name field	A king	Don't take space between strings in user name field	Pass	Don't take space between strings in user name field
03	Enter password min 4 and max 6 characters long	123456	Display error message	Pass	Display error message
04	Enter duplicate User ID		Display error message "User Already exist.	Pass	Display error message "User Already exist.
05	New user registration		Redirected to the index page	Pass	Redirected to the index page

5.4.2. Test Case Module-2: Login

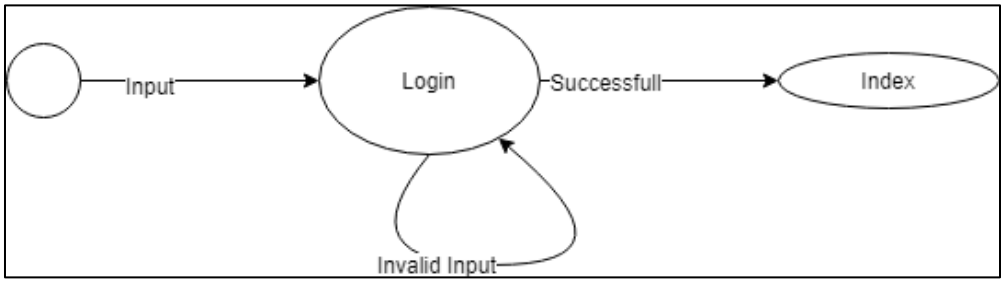


Figure 25: State Transition Diagram

Table 13: Test Case Table

Test Case ID: TC2	Test Design by: Minhaz Khan Shawon
Test Priority: High	Test Design Date: 09.10.2018
Module Name: Login	Test Execute by: Minhaz Khan Shawon
Description: Test login process into the system	Test Execute Date: 09.10.2018

Step	Test Cases	Test Data	Expected Result	P/F	Actual Result
01	Enter empty value for user name and password		Display Exception	Pass	Display Exception
02	Enter correct value for user name & password	User name and password	Accept	Pass	Accept
03	Enter wrong value for user name & password	User name and password	Display Exception	Pass	Display Exception
04	Click login button with correct input		Redirected to the index page	Pass	Redirected to the index page

5.4.3 Test Case Module-3: Assign Task

Table 14: Test Case Table

Test Case ID: TC3	Test Design by: Minhaz Khan Shawon
Test Priority: High	Test Design Date: 09.10.2018
Module Name: Assign Task	Test Execute by: Minhaz Khan Shawon
Description: Test assign a task to employee process	Test Execute Date: 09.10.2018

5.4.3

Step	Test Cases	Test Data	Expected Result	P/F	Actual Result
01	Click a employee		Clicking a employee and directly Assign a task	Pass	Clicking a employee and directly Assign a task
02	Input task details and time to assign a task	Task details and time	Task Assigned	Pass	Task Assign
03	Delete a task		Task deleted	Pass	Task delete

5.4.4 Test Case Module-3: Assign Task

Table 15: Test Case Table

Test Case ID: TC4	Test Design by: Minhaz Khan Shawon
Test Priority: High	Test Design Date: 09.10.2018
Module Name: Update Task	Test Execute by: Minhaz Khan Shawon
Description: Test update a task from employee process	Test Execute Date: 09.10.2018

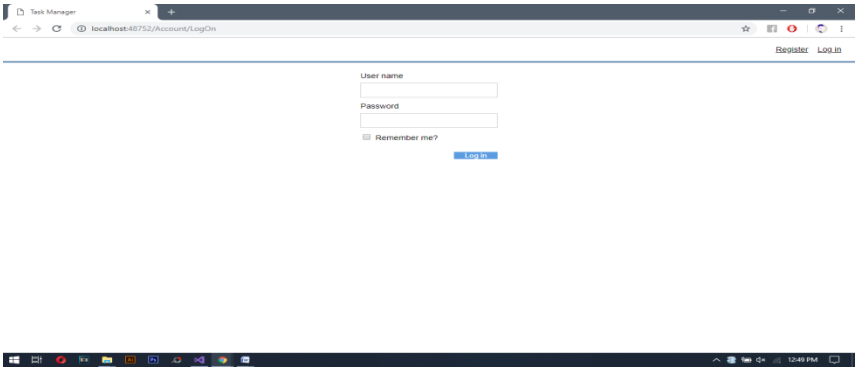
Step	Test Cases	Test Data	Expected Result	P/F	Actual Result
01	Click Task Details		View task details	Pass	View task details
02	Update the task status		Task status updated	Pass	Task status update

Chapter 6

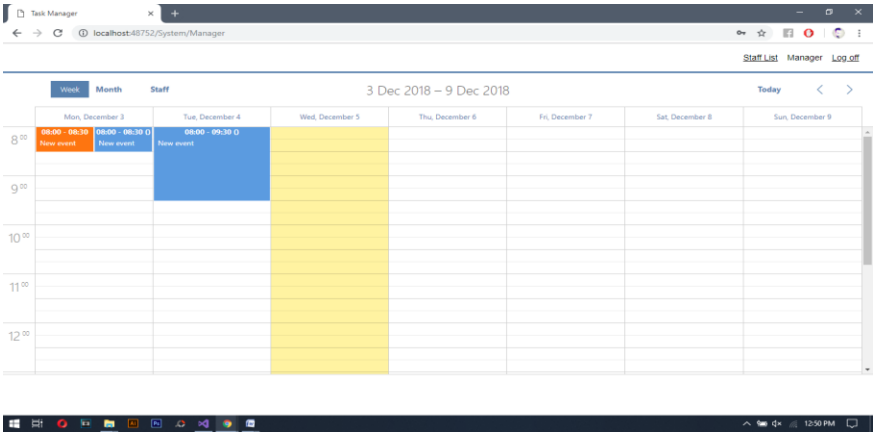
User Manual

6.1 User Manual (Manager)

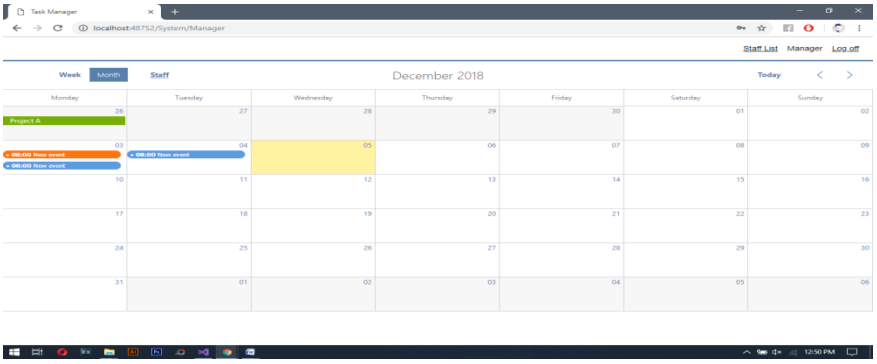
6.1.1 Login



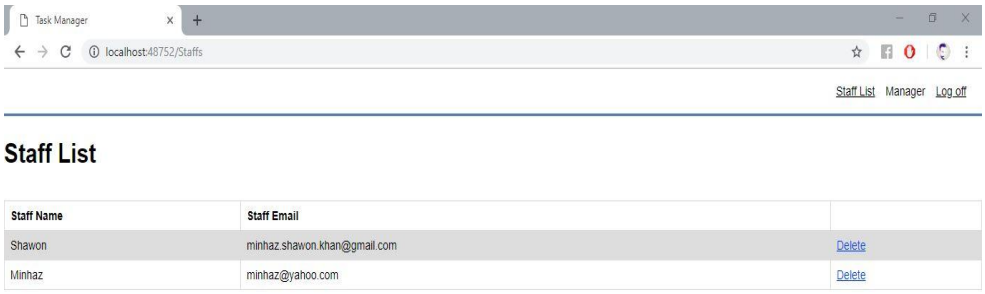
6.1.2 Week View



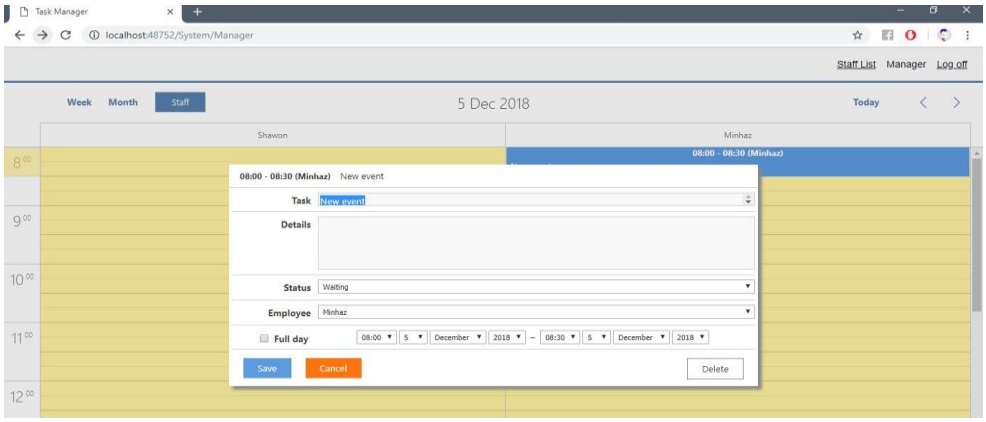
6.1.3 Month View



6.1.4 Employee List View

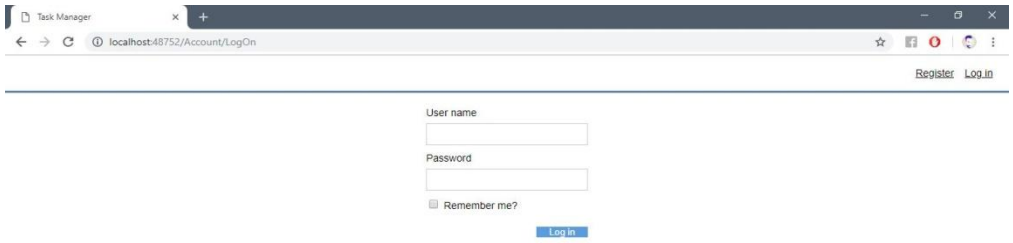


6.1.5 Assign Task

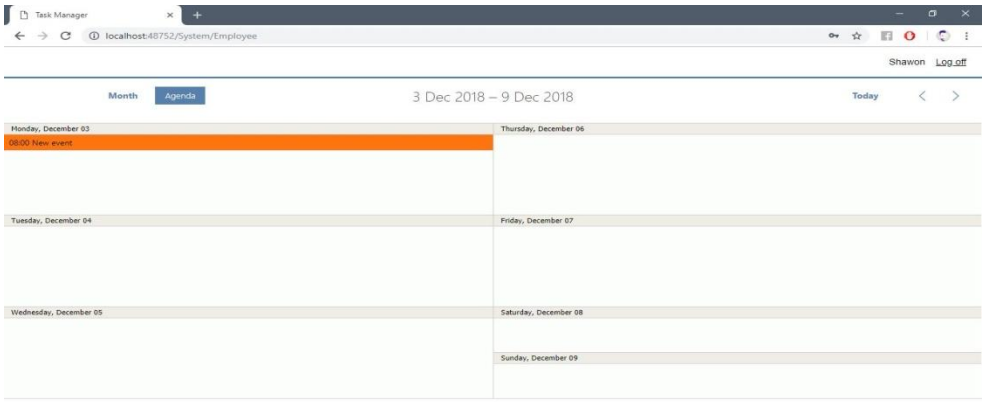


6.2 User Manual (Manager)

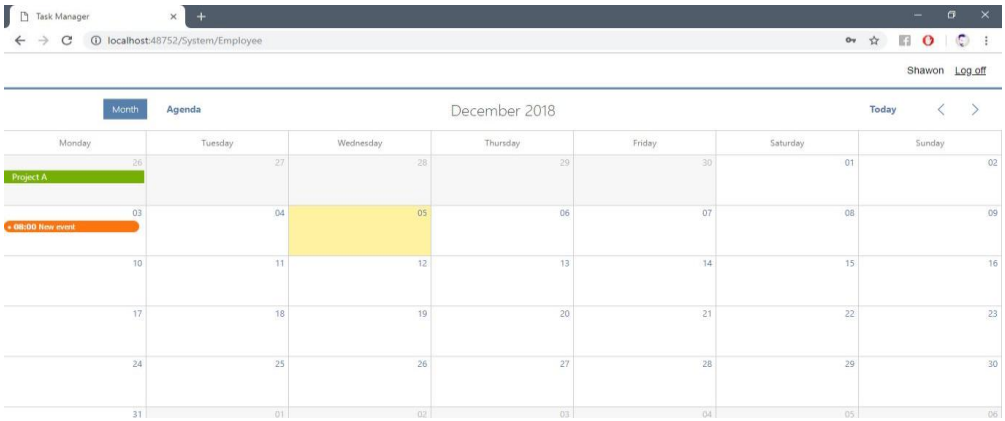
6.2.1 Login



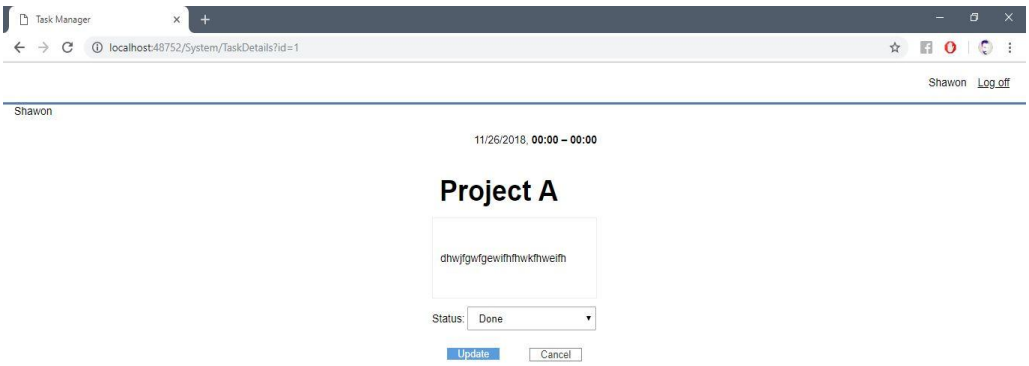
6.2.2 Agenda View



6.2.3 Month View



6.2.4 Update Task Details



Chapter 7

Project Summary

7.1 Repository Link

https://github.com/Shawon007sky/taskMonitor

7.2 Obstacles & Achievements

The .Net MVC framework is updating every day so it's quite tough to work with new technology. The library function of ASP .Net is very helpful though the implementation is hard and there was lots of error while developing this system.

7.3 Future Scope

This system is not huge as with simple frames for work with and easy to use and helpful. There was some features I wanted to implement but I was unable to implement them for now but in the future there are some ideas to make this project more helpful and unique is given below

1. Pie chart employee work progress ratio.
2. SWOT analysis of Task done by employee.
3. Bar chart of projects done so far and success rate

Conclusion

Though I have successfully implemented the system “Employee performance evaluation and task monitor system” but there also some restriction in my project. Now this web system is using “local host”. In near future domain should be taken and launch this web application.

Appendices

May include any supporting material which is not essential for the main body of the report

These could be:

- Questionnaire designed for use
- Completed questionnaires received
- Details of requirements
- User evaluation of the system I developed
- User manual/guide
- Test plans and results
- Project plans
- Tables of contents
- Diagrams

References

- Rachel Burger,(2016, September 12th). Blog post. Retrieve from *https://blog.capterra.com/free-task-management-software*

- Blake Morrison.(2013 May 3rd).Blog post. Retrieve from *https://blogs.technet.microsoft.com/askperf/2013/05/03/finally-a-windows-task-manager-performance-tab-blog*

- Sayedur Rahman.(2009 May 20th). Blog post. Retrieve from *https://www.codeproject.com/Articles/36511/Task-Management-System*