Specification-Based Test Document

CEN4072 – Fundamentals of Software Testing

Prepared for Dr. Peter Clarke

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# Abstract

Payroll Management System (POS) is a web-based system meant to provide employees and employers a mean to manage different aspects of payroll management, such as, time sheet management, salary calculations, etc. This document delineates the corpus of Team 1’s (henceforth also referred to as, “we”, and “us”) Specification-Based Test Document project. We outline the features we test throughout the projects, the systems that these features involve, and the unit tests used to test the subsystems that compose said systems. We include specific test case input and logs of our activity, results, and problems we’ve encountered.

**Table of Contents**

[Abstract 2](#_Toc33895237)

[1 Introduction 4](#_Toc33895238)

[1.1 Overview of System 4](#_Toc33895239)

[1.2 Requirements of the System 4](#_Toc33895240)

[1.3 Overall Testing Approach 5](#_Toc33895241)

[1.4 Terminology 5](#_Toc33895242)

[1.5 Document Organization 5](#_Toc33895243)

[2 Specification Test Plan 6](#_Toc33895244)

[2.1 Organization 6](#_Toc33895245)

[2.2 Hardware & Software Requirements 6](#_Toc33895246)

[2.3 Test Reference Items 6](#_Toc33895247)

[2.4 Tested Features 6](#_Toc33895248)

[2.5 Features Not Tested 6](#_Toc33895249)

[2.6 Work Breakdown 6](#_Toc33895250)

[3 Unit Testing 6](#_Toc33895251)

[3.1 Unit Test Cases 6](#_Toc33895252)

[4 Subsystem Testing 6](#_Toc33895253)

[4.1 Subsystem Test Cases 6](#_Toc33895254)

[5 System Testing 7](#_Toc33895255)

[5.1 System Test Cases 7](#_Toc33895256)

[6 Test Summary Report 40](#_Toc33895257)

[7 Risks & Contingencies 40](#_Toc33895258)

[8 Approvals 40](#_Toc33895259)

[9 Glossary 40](#_Toc33895260)

[10 Appendix 40](#_Toc33895261)

[10.1 Appendix A – Test Schedule 40](#_Toc33895262)

[10.2 Appendix B -- Implemented Use Cases 40](#_Toc33895263)

[10.3 Appendix C – Test Drivers & Stubs 42](#_Toc33895264)

[10.4 Appendix D – GUI Tests 42](#_Toc33895265)

[10.5 Appendix E -- Diary 42](#_Toc33895266)

# Introduction

The following chapter introduces the Specification-Based Test Document (STD) with the goal of conducting a specification-based testing on all of the implemented features of the provided system (PMS or Payroll Management System).

The purpose of the PMS is defined below. Following that, the scope of the requirements of the system is defined in Section 1.2. Section 1.3 contains overall testing approach such as unit, subsystems, and system test. Finally Section 1.4 and 1.5 go through terminology (definitions, abbreviations, acronyms) and a brief explanation regarding this document’s organization.

## Overview of System

Payroll administration can be very simple, involving the payment of just a handful of employees, or very complicated, involving payroll for employees. In some, very small companies, payroll may have handled by the owner of the company or an employee. However, other companies may have many employees to pay and keep track of necessitating a well-planned, efficient payroll administration system. Payroll Management System is a simple web-based application and it is user‐ friendly.

The main purpose of Payroll Management System is to become a quick and easy to use web applications for users (Employee’s/Employer’s) that need to fill in the timesheets and the generating the pay slips. The process consists of calculation of salaries and tax deductions of the employees. The rate of tax deductions is pulled up from the taxfoundation.org where we can find the tax rates in different states. This application (P.M.S) is available on desktop platforms and it can be accessed through many browsers such as Google Chrome, Mozilla Firefox.

## Requirements of the System

The system shall allow all registered employers and employees to login to the PMS (PMS\_02\_Login, see Appendix B).

The system shall allow all of the logged in users (employer & employee) to logout of their account (PMS\_21\_logout, see Appendix B).

The system shall allow registered employers to add employees to their company (PMS\_13\_AddEmployee, see Appendix B).

The system shall allow employers to modify their employees submitted time sheets (PMS\_05\_ModifyTS, see Appendix B).

The system shall allow employers to approve their employees submitted time sheets (PMS\_05\_ApproveTS, see Appendix B).

The system shall allow employers to calculate their employees salaries based on their submitted time sheets (PMS\_07\_CalcSal, see Appendix B).

The system shall allow employees to submit their saved time sheets (No written use case found in original final systems document of the PMS).

The system shall allow employees to enter their time sheets and save them in the data storage (PMS\_08\_SaveTS, see Appendix B).

The system shall allow users (employee & employer) to set security questions for their accounts (No clearly written use case found in original final systems document of the PMS).

The system shall allow employees to view their work profile including their role, contact details, etc. (No written use case found in original final systems document of the PMS).

## Overall Testing Approach

## Terminology

## Document Organization

# Specification Test Plan

## Organization

## Hardware & Software Requirements

## Test Reference Items

## Tested Features

## Features Not Tested

## Work Breakdown

# Unit Testing

## Unit Test Cases

### Test Identification & Objective (Summary)

### Test Criteria & Procedures

### Test Cases

# Subsystem Testing

## Subsystem Test Cases

### Test Identification & Objective (Summary)

### Test Criteria & Procedures

### Test Cases

# System Testing

## System Test Cases

### Test Identification & Objective (Summary)

### Test Criteria & Procedures

Database tables setup for System Tests Pre-conditions are as follows:

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *employees* | | | | | | | | | | | | |
| emp\_id | first\_name | last\_name | gender | dob | job | phone | email | address | accno | bankname | joindate |
| 1 | Adam | Sandler | on | 1990-01-10 | Movie Star | 0 | asand@email.com | 2121 NW 1st St | 1 | Bank of America | 2020-01-01 |
| 99 | John | Smith | on | 1996-01-01 | SW Tester | 8888888888 | jsmith@email.com | 21 SW 10th St | 123 | Bank of America | 2020-01-01 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *users* | | | | | | | | | |
| emp\_id | user\_id | password | sec\_que1 | ans1 | sec\_que2 | ans2 | sec\_que3 | ans3 | createDate |
| 1 | adam | adam | Favorite Color? | pink | First pet name? | adam | Favorite movie? | adam | 2020-01-12 |
| 99 | john | smith | Favorite Color? | *Red* | First Pet Name? | Ana | Favorite movie? | Matrix | 2020-01-12 |
| 1 | user1 | user1 | *NULL* | *NULL* | *NULL* | *NULL* | *NULL* | *NULL* | 2020-01-12 |
| 9 | mcdlr | 1234$ | *NULL* | *NULL* | *NULL* | *NULL* | *NULL* | *NULL* | 2020-02-12 |
| 98 | sara | smith | Favorite Color? | *White* | First Pet Name? | Dana | Favorite movie? | Matrix | 2020-01-12 |

|  |  |
| --- | --- |
| *employer* | |
| username | password |
| user1 | user1 |
| mcdlr | 1234$ |

|  |  |
| --- | --- |
| *paymode* | |
| normal\_pay | extra\_pay |
| 10 | 15 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| emp\_ts | | | | | | | | | | |
| ets\_id | emp\_id | day | wdate | intime | lunch\_out | lunch\_in | outtime | total \_hours | status | date1 |
| 1144 | 1 | Monday | 2020-01-01 | 10:00:00 | 12:00:00 | 13:00:00 | 22:00:00 | 11 | approved | 2020-01-14 |
| 1114 | 1 | Tuesday | 2020-01-02 | 10:00:00 | 12:00:00 | 13:00:00 | 22:00:00 | 11 | approved | 2020-01-14 |
| 1172 | 1 | Wednesday | 2020-01-03 | 10:00:00 | 12:00:00 | 13:00:00 | 22:00:00 | 11 | approved | 2020-01-14 |
| 1341 | 1 | Thursday | 2020-01-04 | 10:00:00 | 12:00:00 | 13:00:00 | 22:00:00 | 11 | approved | 2020-01-14 |
| 1800 | 1 | Friday | 2020-01-05 | 10:00:00 | 12:00:00 | 13:00:00 | 22:00:00 | 11 | approved | 2020-01-14 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *save\_ts* | | | | | | | | | | | |
| ets\_id | emp\_id | day | date1 | intime | lunch\_out | lunch\_in | outtime | total\_hours | status | createDate |
| 1832 | 99 | Monday | 2020-02-24 | 10:00:00 | 11:00:00 | 12:00:00 | 22:00:00 | 11 | not approved | 2020-02-24 |
| 1833 | 99 | Tuesday | 2020-02-25 | 10:00:00 | 11:00:00 | 12:00:00 | 21:30:00 | 10.5 | not approved | 2020-02-25 |
| 1834 | 99 | Wednesday | 2020-02-26 | 10:00:00 | 11:00:00 | 11:00:00 | 21:00:00 | 11 | not approved | 2020-02-26 |

### Test Cases

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-Login-001-Sunny01 |
| Purpose | Investigate the execution of the login use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John clicks on employee login on the main navigation bar. 2. He enters “1” as Employee ID. 3. Then he enters “john” as User Name. 4. Then he enters “smith” as Password. 5. Finally he clicks on the Login button in the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. John would be finally logged in and being able to see the Payroll Management System Employee Module home page. Also there would be no modifications and/or updates to the database as a result of this action. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-Login-001-Sunny02 |
| Purpose | Investigate the execution of the login use case for SFTalent Co. (an employer). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. clicks on employer login on the main navigation bar. 2. Then he enters “user1” as User Name. 3. Then he enters “user1” as Password. 4. Finally he clicks on the Login button in the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. SFTalent Co. would be finally logged in and being able to see the Payroll Management System Employer Module home page. Also there would be no modifications and/or updates to the database as a result of this action. |

Following tables include all of the performed system test cases (total of 60).

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-Login-001-Sunny03 |
| Purpose | Investigate the execution of the login use case for Miami Car Dealership (an employee). |
| Test Set Up | The PMS system is set up and working. Miami Car Dealership is using Firefox as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. Miami Car Dealership clicks on employer login on the main navigation bar. 2. Then he enters “mcdlr” as User Name. 3. Then he enters “1234$” as Password. 4. Finally he clicks on the Login button in the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. Miami Car Dealership would be finally logged in and being able to see the Payroll Management System Employer Module home page. Also there would be no modifications and/or updates to the database as a result of this action. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-Login-001-Rainy01 |
| Purpose | Investigate the proper execution of the login use case for John Smith (an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John clicks on employee login on the main navigation bar. 2. He enters “1” as Employee ID. 3. Then he enters “smith” as Password. 4. Finally he clicks on the Login button in the bottom of the form. |
| Expected Output | The system cannot complete the request without exceptions or errors. John would see an error message displayed on the screen with the “Error : fail” message shown. This is because he left the User Name field of the login form blank. All three fields are required for a successful login request. Also there would be no modifications and/or updates to the database as a result of this action. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-Login-001-Rainy02 |
| Purpose | Investigate the proper execution of the login use case for James Brown (an employee). |
| Test Set Up | The PMS system is set up and working. James Brown (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. James clicks on employee login on the main navigation bar. 2. He enters “624200” as Employee ID. 3. He enters “jbrown” as User Name. 4. Then he enters “Pa$sw0rd” as Password. 5. Finally he clicks on the Login button in the bottom of the form. |
| Expected Output | The system cannot complete the request without exceptions or errors. James would see an error message displayed on the screen with the “Error : fail” message shown. This is because he has not registered for an employee account yet or in other words, the database does not contain his information or neither credentials. Also there would be no modifications and/or updates to the database as a result of this action. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-Login-001-Rainy03 |
| Purpose | Investigate the proper execution of the login use case for SFTalent Co. (an employer). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. clicks on employer login on the main navigation bar. 2. Then he enters “user1” as User Name. 3. Then he enters “pass” as Password. 4. Finally he clicks on the Login button in the bottom of the form. |
| Expected Output | The system cannot complete the request without exceptions or errors. John would see an error message displayed on the screen with the “Error : fail” message shown. This is because they did not enter the correct password for the user1. Also there would be no modifications and/or updates to the database as a result of this action. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-AddEmployee-002-Sunny01 |
| Purpose | Investigate the proper execution of the add employee case for Sara Smith (an employee) for SFTalent Co. (the employer ) |
| Test Set Up | The PMS system is set up and working. SFTalent Co. (an employer) is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on the employee option in the main navigation bar of the employer module. 2. Then they click on the Add Employee option in the drop down menu shown. 3. Then he enters “2” in Employee ID. 4. Then he enters “Sara” in First Name. 5. Then he enters “Smith” in Last Name. 6. He chooses Female in their gender. 7. He enters “1990-01-01” in the Date of Birth (YYYY-MM-DD). 8. He enters “Sales Assistant” in Job Role field. 9. He enters “3053458989” in their Contact. 10. He enters [sara.smith@email.com](mailto:sara.smith@email.com) as Email 11. He enters “3456 NW 10th Ave” in the Address. 12. He enters “1234567999” in Account Number. 13. He enters “Bank of America” in bank name. 14. Finally he clicks on the Add button in the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “Employee Details Added”. Following row(s) will be added to employees table in database.   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *employees* | | | | | | | | | | | | | emp\_id | first\_name | last\_name | gender | dob | job | phone | email | address | accno | bankname | joindate | | 2 | Sara | Smith | on | ... | … | 305… | … | … | … | Bank of … | 2020… | |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-AddEmployee-002-Sunny02 |
| Purpose | Investigate the proper execution of the add employee case for John Smith (an employee) for SFTalent Co. (the employer ) |
| Test Set Up | The PMS system is set up and working. SFTalent Co. (an employer) is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on the employee option in the main navigation bar of the employer module. 2. Then they click on the Add Employee option in the drop down menu shown. 3. Then he enters “2” in Employee ID. 4. Then he enters “John” in First Name. 5. Then he enters “Smith” in Last Name. 6. He chooses Male in their gender. 7. He enters “1980-01-01” in the Date of Birth (YYYY-MM-DD). 8. He enters “Finance Manager” in Job Role field. 9. He enters “3050000000” in their Contact. 10. He enters john.smith@email.com as Email 11. He enters “3456 NW 10th Ave” in the Address. 12. He enters “1234567777” in Account Number. 13. He enters “Bank of America” in bank name. 14. Finally he clicks on the Add button in the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “Employee Details Added”. Following row(s) will be added to employees table in database. Note that even though emp\_id = 2 was not a unique value and were used for Sara Smith as well, and that did not affected the employee registration process.   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *employees* | | | | | | | | | | | | | emp\_id | first\_name | last\_name | gender | dob | job | phone | email | address | accno | bankname | joindate | | 2 | John | Smith | on | ... | … | 305… | … | … | … | Bank of … | 2020… | | 2 | Sara | Smith | on | … | … | 305… | …. | … | … | Bank of … | 2020… | |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-AddEmployee-002-Sunny03 |
| Purpose | Investigate the proper execution of the add employee case for Albert Lee Smith (an employee) for Miami Car Dealership (the employer ) |
| Test Set Up | The PMS system is set up and working. Miami Car Dealership (an employer) is using Firefox as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. Miami Car Dealership. hovers on the employee option in the main navigation bar of the employer module. 2. Then they click on the Add Employee option in the dropdown menu shown. 3. Then he enters “3” in Employee ID. 4. Then he enters “Albert” in First Name. 5. Then he enters “Lee” in Last Name. 6. He enters “1996-11-05” in the Date of Birth (YYYY-MM-DD). 7. He enters “Finance Manager” in Job Role field. 8. He enters “8574567890” in their Contact. 9. He enters alber.lee@gmx.com as Email 10. He enters “009878678” in Account Number. 11. He enters “Wells Fargo” in bank name. 12. Finally he clicks on the Add button in the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “Employee Details Added”. Following row(s) will be added to employees table in database. Note that even though emp\_id = 2 was not a unique value and were used for Sara Smith as well, and that did not affected the employee registration process. Also gender and address columns will be NULL since there were no input during registration.   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *employees* | | | | | | | | | | | | | emp\_id | first\_name | last\_name | gender | dob | job | phone | email | address | accno | bankname | joindate | | 3 | Albert | Lee | *NULL* | ... | … | 857… | … | *NULL* | … | Wells… | 2020… | |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-AddEmployee-002-Rainy01 |
| Purpose | Investigate the improper execution of the add employee case for John Smith (an employee) for SFTalent Co. (the employer) |
| Test Set Up | The PMS system is set up and working. SFTalent Co. (an employer) is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on the employee option in the main navigation bar of the employer module. 2. Then they click on the Add Employee option in the drop down menu shown. 3. Then he enters “2” in Employee ID. 4. Then he enters “John” in First Name. 5. Then he enters “Smith” in Last Name. 6. He chooses Female in their gender. 7. He enters “1990-21-10” in the Date of Birth (not YYYY-MM-DD). 8. He enters “Sales Assistant” in Job Role field. 9. He enters “3050000000” in their Contact. 10. He enters john.smith@email.com as Email 11. He enters “3456 NW 10th Ave” in the Address. 12. He enters “1234567999” in Account Number. 13. He enters “Bank of America” in bank name. 14. Finally he clicks on the Add button in the bottom of the form. |
| Expected Output | The system cannot complete the request without exceptions or errors. SFTalent Co. would see an error message displayed on the screen with the “Error : Employee Registration Failed” message shown. This is because the date format entered in the Date of Birth field was not YYYY-MM-DD which is the proper required format. As a result of this action there would be no changes to database table entries. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-AddEmployee-002-Rainy02 |
| Purpose | Investigate the improper execution of the add employee case for John Smith (an employee) for SFTalent Co. (the employer) |
| Test Set Up | The PMS system is set up and working. SFTalent Co. (an employer) is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on the employee option in the main navigation bar of the employer module. 2. Then they click on the Add Employee option in the drop down menu shown. 3. Then he enters “2” in Employee ID. 4. Then he enters “John” in First Name. 5. Then he enters “Smith” in Last Name. 6. He chooses Female in their gender. 7. He enters “1990-01-01” in the Date of Birth (YYYY-MM-DD). 8. He enters “Sales Assistant” in Job Role field. 9. He enters “305-000-0000” in their Contact. 10. He enters john.smith@email.com as Email 11. He enters “3456 NW 10th Ave” in the Address. 12. He enters “1234567999” in Account Number. 13. He enters “Bank of America” in bank name. 14. Finally he clicks on the Add button in the bottom of the form. |
| Expected Output | The system cannot complete the request without exceptions or errors. SFTalent Co. would see an error message displayed on the screen with the message that says please enter a number for Contact field. The format is supposed to be without the dashes for the phone number in the contact field. As a result of this action there would be no changes to database table entries. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-AddEmployee-002-Rainy03 |
| Purpose | Investigate the improper execution of the add employee case for John Smith (an employee) for SFTalent Co. (the employer) |
| Test Set Up | The PMS system is set up and working. SFTalent Co. (an employer) is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on the employee option in the main navigation bar of the employer module. 2. Then they click on the Add Employee option in the drop down menu shown. 3. Then he enters “2” in Employee ID. 4. Then he enters “John” in First Name. 5. Then he enters “Smith” in Last Name. 6. He chooses Female in their gender. 7. He enters “1990-01-01” in the Date of Birth (YYYY-MM-DD). 8. He enters “305-000-0000” in their Contact. 9. He enters john.smith@email.com as Email 10. He enters “3456 NW 10th Ave” in the Address. 11. He enters “1234567999” in Account Number. 12. He enters “Bank of America” in bank name. 13. Finally he clicks on the Add button in the bottom of the form. |
| Expected Output | The system cannot complete the request without exceptions or errors. SFTalent Co. would see an error message displayed on the screen with the message that says “Fill out this field” for the job role’s field. As a result of this action there would be no changes to database table entries. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SecurityQuestion-003-Sunny03 |
| Purpose | Investigate the proper execution of the security question security use case for Sara Smith (an employee). |
| Test Set Up | The PMS system is set up and working. Sara Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that the employee, Sara Smith is aware of their employee id and user name as well as a temporary password, in addition to security questions and answers. |
| Input | The following sequence is done:   1. Sara Smih first clicks on the employee login button on the main navigation bar on PMS homepage. 2. Then She clicks on the *Forgot Password?* Hyperlink. 3. She inputs “98” in the Employee ID field. 4. She then inputs “sara” in the User Name field. 5. She then chooses “Favorite Color?” as Security Question 1. 6. She then inputs “White” in the answer for question 1. 7. She then chooses “First Pet name?” as Security Question 2. 8. She He then chooses “Favorite Movie?” as Security Question 3. 9. She then inputs “Matrix” in the answer for question 3. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “Your password= smith”. As a result of this action there would be no updates and/or modifications to the database entries. As a result of this action there would be no changes to the database entries. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SecurityQuestion-003-Sunny01 |
| Purpose | Investigate the proper execution of the security question security use case for Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. Adam Sandler (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that the employee, Adam Sandler, is aware of their employee id and user name as well as a temporary password, in addition to security questions and answers. |
| Input | The following sequence is done:   1. Adam Sandler first clicks on the employee login button on the main navigation bar on PMS homepage. 2. Then he clicks on the *Forgot Password?* Hyperlink. 3. He inputs “1” in the Employee ID field. 4. He then inputs “adam” in the User Name field. 5. He then chooses “Favorite Color?” as Security Question 1. 6. He then inputs “pink” in the answer for question 1. 7. He then chooses “First Pet name?” as Security Question 2. 8. He then inputs “adam” in the answer for question 2. 9. He then chooses “Favorite Movie?” as Security Question 3. 10. He then inputs “adam” in the answer for question 3. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “Your password= adam”. As a result of this action there would be no updates and/or modifications to the database entries. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-SecurityQuestion-003-Sunny02 |
| Purpose | Investigate the proper execution of the security question security use case for John Smith (an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that the employee, John Smith, is aware of their employee id and user name as well as a temporary password, in addition to security questions and answers. |
| Input | The following sequence is done:   1. John Smith first clicks on the employee login button on the main navigation bar on PMS homepage. 2. Then he clicks on the *Forgot Password?* Hyperlink. 3. He inputs “99” in the Employee ID field. 4. He then inputs “john” in the User Name field. 5. He then chooses “Favorite Color?” as Security Question 1. 6. He then inputs “Red” in the answer for question 1. 7. He then chooses “First Pet name?” as Security Question 2. 8. He then inputs “Ana” in the answer for question 2. 9. He then chooses “Favorite Movie?” as Security Question 3. 10. He then inputs “Matrix” in the answer for question 3. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “Your password= smith”. As a result of this action there would be no updates and/or modifications to the database entries. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-SecurityQuestion-003-Rainy01 |
| Purpose | Investigate the proper execution of the security question security use case for Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. Adam Sandler (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that the employee, Adam Sandler, is aware of their employee id and user name as well as a temporary password, in addition to security questions and answers. |
| Input | The following sequence is done:   1. Adam Sandler first clicks on the employee login button on the main navigation bar on PMS homepage. 2. Then he clicks on the *Forgot Password?* Hyperlink. 3. He inputs “1” in the Employee ID field. 4. He then inputs “adam” in the User Name field. 5. He then chooses “Favorite Color?” as Security Question 1. 6. He then inputs “pink” in the answer for question 1. 7. He then chooses “First Pet name?” as Security Question 2. 8. He then inputs “idk” in the answer for question 2. 9. He then chooses “Favorite Movie?” as Security Question 3. 10. He then inputs “adam” in the answer for question 3. |
| Expected Output | The system cannot complete the request without any exceptions or errors. An alert error will be displayed showing the message “user details not found”. This happened due to the incorrect answer for second security question. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-SecurityQuestion-003-Rainy02 |
| Purpose | Investigate the proper execution of the security question security use case for Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. Adam Sandler (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that the employee, Adam Sandler, is aware of their employee id and user name as well as a temporary password, in addition to security questions and answers. |
| Input | The following sequence is done:   1. Adam Sandler first clicks on the employee login button on the main navigation bar on PMS homepage. 2. Then he clicks on the *Forgot Password?* Hyperlink. 3. He inputs “1” in the Employee ID field. 4. He then inputs “adam” in the User Name field. 5. He then chooses “Favorite Color?” as Security Question 1. 6. He then inputs “pink” in the answer for question 1. 7. He then chooses “First Pet name?” as Security Question 2. 8. He then inputs “adam” in the answer for question 2. 9. He then chooses “First Pet name?” as Security Question 3. 10. He then inputs “adam” in the answer for question 3. |
| Expected Output | The system cannot complete the request without any exceptions or errors. An alert error will be displayed showing the message “user details not found”. This happened due to the incorrect security question chosen for the third security question. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-SecurityQuestion-003-Rainy03 |
| Purpose | Investigate the proper execution of the security question security use case for James Brown (an employee). |
| Test Set Up | The PMS system is set up and working. James Brown (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that the employee, James Brown, is aware of their employee id and user name as well as a temporary password, in addition to security questions and answers. Note that users table does not contain any related information or credentials related to James Brown. |
| Input | The following sequence is done:   1. James Brown first clicks on the employee login button on the main navigation bar on PMS homepage. 2. Then he clicks on the *Forgot Password?* Hyperlink. 3. He inputs “999” in the Employee ID field. 4. He then inputs “james” in the User Name field. 5. He then chooses “Favorite Color?” as Security Question 1. 6. He then inputs “yellow” in the answer for question 1. 7. He then chooses “First Pet name?” as Security Question 2. 8. He then inputs “max” in the answer for question 2. 9. He then chooses “First Pet name?” as Security Question 3. 10. He then inputs “dog” in the answer for question 3. |
| Expected Output | The system cannot complete the request without any exceptions or errors. An alert error will be displayed showing the message “user details not found”. This happened due to lack of credentials for James Brown in the database entries. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-ModifyTS-004-Sunny01 |
| Purpose | Investigate the proper execution of the modify timesheet use case for SFTalent Co. (an employer) and Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. Note that it is assumed that the SFTalent Co. (the employer) is already logged in and viewing the homepage of PMS employer module. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on Time Sheets menu option on the main navigation bar for employer module. 2. He then clicks on View Time Sheets. 3. He then selects “1” as Employee ID. 4. He clicks on Get Details button next to the drop-down list. 5. He then modifies the in time column of the row indicated with TS\_ID = 1800, from 10:00:00 to 09:00:00. 6. He also modifies the total hours entry for the same column to 12 7. Finally he clicks on Update Time Sheet button. |
| Expected Output | The system completes the request without exceptions or errors. SFTalent Co. would be finally modified the time sheet of Adam Sandler (an employee). An alert message saying “time sheet updated” will be shown. Also as a result of this action, the effected row of the emp\_ts table in the database entries will be updated as follows.   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | emp\_ts | | | | | | | | | | | | ets\_id | emp\_id | day | wdate | intime | lunch\_out | lunch\_in | outtime | total \_hours | status | date1 | | 1800 | 1 | Friday | 2020-01-05 | 09:00:00 | 12:00:00 | 13:00:00 | 22:00:00 | 12 | approv. | 2020-01-14 | |

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| Test Case ID | SystemTest-PMS-ModifyTS-004-Sunny02 |
| Purpose | Investigate the proper execution of the modify timesheet use case for SFTalent Co. (an employer) and Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. Note that it is assumed that the SFTalent Co. (the employer) is already logged in and viewing the homepage of PMS employer module. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on Time Sheets menu option on the main navigation bar for employer module. 2. He then clicks on View Time Sheets. 3. He then selects “1” as Employee ID. 4. He clicks on Get Details button next to the drop-down list. 5. He then modifies the outtime column of the row indicated with TS\_ID = 1172, from 22:00:00 to 18:00:00. 6. Finally he clicks on Update Time Sheet button. |
| Expected Output | The system completes the request without exceptions or errors. SFTalent Co. would be finally modified the time sheet of Adam Sandler (an employee). An alert message saying “time sheet updated” will be shown. Also as a result of this action, the effected row of the emp\_ts table in the database entries will be updated as follows. Note that total hours column will not be automatically affected as a result of this action.   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | emp\_ts | | | | | | | | | | | | ets\_id | emp\_id | day | wdate | intime | lunch\_out | lunch\_in | outtime | total \_hours | status | date1 | | 1172 | 1 | Wednesday | 2020-01-03 | 10:00:00 | 12:00:00 | 13:00:00 | 18:00:00 | 11 | approv. | 2020-01-14 | |

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| Test Case ID | SystemTest-PMS-ModifyTS-004-Rainy02 |
| Purpose | Investigate the improper execution of the modify timesheet use case for SFTalent Co. (an employer) and Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. Note that it is assumed that the SFTalent Co. (the employer) is already logged in and viewing the homepage of PMS employer module. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on Time Sheets menu option on the main navigation bar for employer module. 2. He then clicks on View Time Sheets. 3. He then selects “1” as Employee ID. 4. He clicks on Get Details button next to the drop-down list. 5. He then modifies the outtime column of the row indicated with TS\_ID = 1800, from 22:00:00 to 9:00 PM. 6. He also clears the value of total hours entry for the same column so it becomes an emoty field. 7. Finally he clicks on Update Time Sheet button. |
| Expected Output | The system cannot complete the request without any exceptions or errors. SFTalent Co. would be shown an error message saying, “You have an error in your SQL syntax: …”. This is because the total hours field must always be filled and cannot be left empty or NULL, even though other in and out time entries might be left empty. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-CalcSal-005-Sunny01 |
| Purpose | Investigate the proper execution of the calculate salary use case for SFTalent Co. (an employer) and Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. Note that it is assumed that the SFTalent Co. (the employer) is already logged in and viewing the homepage of PMS employer module. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on Salary menu option on the main navigation bar for employer module. 2. He then clicks on Calculate Pay. 3. He then clicks on Calculate button. |
| Expected Output | The system completes the request without exceptions or errors. SFTalent Co. finally calculated all salaries for the current time sheets for all of their employees including Adam Sandler. An alert message showing “Pay Calculations completed” will be shown. As a result of this action a row containing the following data entries will be added to the salaries table in the database.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *salaries* | | | | | | | emp\_id | total\_hours | tax | gross\_sal | net\_sal | date1 | | 1 | 53 | 159 | 530 | 371 | 2020-02-17 | |

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| --- | --- |
| Test Case ID | SystemTest-PMS-ModifyTS-004-Rainy01 |
| Purpose | Investigate the improper execution of the modify timesheet use case for SFTalent Co. (an employer) and Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. Note that it is assumed that the SFTalent Co. (the employer) is already logged in and viewing the homepage of PMS employer module. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on Time Sheets menu option on the main navigation bar for employer module. 2. He then clicks on View Time Sheets. 3. He then selects “1” as Employee ID. 4. He clicks on Get Details button next to the drop-down list. 5. He then modifies the outtime column of the row indicated with TS\_ID = 1800, from 22:00:00 to 9:00 PM. 6. He also modifies the total hours entry for the same column to 11 7. Finally he clicks on Update Time Sheet button. |
| Expected Output | The system cannot complete the request without any exceptions or errors. SFTalent Co. would be shown an error message saying “Incorrect time value : 9:00 PM”. This is due to the improper format of the time used. It should be 00:00:00 format with 24 hour system not the AM/PM format. As a result of this action there would be no changes to the database entries. |

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| Test Case ID | SystemTest-PMS-CalcSal-005-Sunny02 |
| Purpose | Investigate the proper execution of the calculate salary use case for SFTalent Co. (an employer) and Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS Employer Module. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. Note that it is assumed that the SFTalent Co. (the employer) is already logged in and viewing the homepage of PMS employer module. Note that in this test case paymode table in the database does not have any entries yet. |
| Input | The following sequence is done:   1. SFTalent Co. hovers on Salary menu option on the main navigation bar for employer module. 2. He then clicks on Pay Mode. 3. He then inputs “15” in Actual Pay field. 4. He then inputs “20” in Extra Time Pay field. 5. He again hovers on Salary option in menu bar. 6. He clicks on Calculate Pay this time. 7. He finally clicks on Calculate button. |
| Expected Output | The system completes the request without exceptions or errors. SFTalent Co. finally calculated all salaries for the current time sheets for all of their employees including Adam Sandler. An alert message showing “Pay Calculations completed” will be shown. As a result of this action a row containing the following data entries will be added to the salaries table in the database as well as paymode table.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *salaries* | | | | | | | emp\_id | total\_hours | tax | gross\_sal | net\_sal | date1 | | 1 | 53 | 238.5 | 795 | 556.5 | 2020-02-17 |  |  |  | | --- | --- | | *paymode* | | | normal\_pay | extra\_pay | | 15 | 20 | |

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| Test Case ID | SystemTest-PMS-Logout-001-Sunny03 |
| Purpose | Investigate the proper execution of the logout use case for Miami Car Dealership (an employer). |
| Test Set Up | The PMS system is set up and working. Miami Car Dealership is using Firefox as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. Miami Car Dealership clicks on Logout button on the main navigation bar for PMS: Employer Module. |
| Expected Output | The system completes the request without exceptions or errors. Miami Car Dealership would be finally logged out and redirected to the PMS homepage. As a result of this action there would be no changes and/or modifications to the database. |

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| Test Case ID | SystemTest-PMS-Logout-006-Rainy02 |
| Purpose | Investigate the improper execution of the logout use case for John Smith (an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that John Smith (the employee) is already logged into the employee module for PMS. Note that server connection is broken after its established due to the server being down or bad network connectivity. |
| Input | The following sequence is done:   1. John clicks on Logout button on the main navigation bar for PMS: Employee Module. |
| Expected Output | The system cannot complete the request without exceptions or errors. John Smith would not be logged out. An alert error showing a message saying “Page load failed with error:…” may appear on the screen. As a result of this action there would be no changes and/or modifications to the database. |

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| Test Case ID | SystemTest-PMS-Logout-006-Sunny01 |
| Purpose | Investigate the proper execution of the logout use case for SFTalent Co. (an employer). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. clicks on Logout button on the main navigation bar for PMS: Employer Module. |
| Expected Output | The system completes the request without exceptions or errors. SFTalent Co. would be finally logged out and redirected to the PMS homepage. As a result of this action there would be no changes and/or modifications to the database. |

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| Test Case ID | SystemTest-PMS-Logout-006-Rainy03 |
| Purpose | Investigate the improper execution of the logout use case for Miami Car Dealership (an employer). |
| Test Set Up | The PMS system is set up and working. Miami Car Dealership is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. Miami Car Dealership clicks on Logout button on the main navigation bar for PMS: Employer Module. |
| Expected Output | The system cannot complete the request without exceptions or errors. Miami Car Dealership would not be logged out. An alert error showing a message saying “Page load failed with error:…” may appear on the screen. As a result of this action there would be no changes and/or modifications to the database. |

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| Test Case ID | SystemTest-PMS-Logout-006-Sunny02 |
| Purpose | Investigate the proper execution of the logout use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John clicks on Logout button on the main navigation bar for PMS: Employee Module. |
| Expected Output | The system completes the request without exceptions or errors. John would be finally logged out and redirected to the PMS homepage. As a result of this action there would be no changes and/or modifications to the database. |

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| --- | --- |
| Test Case ID | SystemTest-PMS-Logout-006-Rainy01 |
| Purpose | Investigate the improper execution of the logout use case for SFTalent Co. (an employer). |
| Test Set Up | The PMS system is set up and working. SFTalent Co. is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. SFTalent Co. clicks on Logout button on the main navigation bar for PMS: Employer Module. |
| Expected Output | The system cannot complete the request without exceptions or errors. SFTalent Co. would not be logged out. An alert error showing a message saying “Page load failed with error:…” may appear on the screen. As a result of this action there would be no changes and/or modifications to the database. |

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| Test Case ID | SystemTest-PMS-ViewProfile-007-Sunny02 |
| Purpose | Investigate the proper execution of the view profile use case for Adam Sandler (an employee). |
| Test Set Up | The PMS system is set up and working. Adam Sandler (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. Adam clicks on View Pay Slips button on main navigation bar for PMS: Employee module. |
| Expected Output | The system completes the request without exceptions or errors. Adam would be finally looking at his employee profile details including his name, ID, Job Title, phone, as well as the recent pay slips. As a result of this action there would be no changes and/or modifications to the database. |

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| Test Case ID | SystemTest-PMS-SaveTS-008-Sunny01 |
| Purpose | Investigate the proper execution of the save timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He picks “Monday” from the first row of the Day column picker. 4. Then he enters “2020-02-24” in the Date column. (YYYY-MM-DD) 5. He enters “10:00:00” in In time field. 6. He enters “11:00:00” in Lunch out field. 7. He enters “12:00:00” in Lunch in field. 8. He enters “22:00:00” in Check Out field. 9. He finally clicks save. |
| Expected Output | The system completes the request without exceptions or errors. Proper output would be a success message and saved values in the time sheet table, However due to faulty implementation of PMS redirect page for Time Sheet Control, an error display will be shown containing the “HTTP Status 500 – Internal Server Error”. But this does not affect the updates and modification to the database, hence the table *save\_ts* in PMS Database will be updated with the following row:   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *save\_ts* | | | | | | | | | | | | ets\_id | emp\_id | day | date1 | intime | lunch\_out | lunch\_in | outtime | total\_hours | status | createDate | | 1832 | 99 | Monday | 2020-02-24 | 10:00:00 | 11:00:00 | 12:00:00 | 22:00:00 | 11 | not approved | 2020-02-24 | |

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| --- | --- |
| Test Case ID | SystemTest-PMS-ViewProfile-007-Sunny01 |
| Purpose | Investigate the proper execution of the view profile use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John clicks on View Pay Slips button on main navigation bar for PMS: Employee module. |
| Expected Output | The system completes the request without exceptions or errors. John would be finally looking at his employee profile details including his name, ID, Job Title, phone, as well as the recent pay slips. As a result of this action there would be no changes and/or modifications to the database. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SaveTS-008-Sunny02 |
| Purpose | Investigate the proper execution of the save timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He picks “Tuesday” from the second row of the Day column picker. 4. Then he enters “2020-02-25” in the Date column. (YYYY-MM-DD) 5. He enters “10:00:00” in In time field. 6. He enters “11:00:00” in Lunch out field. 7. He enters “12:00:00” in Lunch in field. 8. He enters “21:30:00” in Check Out field. 9. He finally clicks save. |
| Expected Output | The system completes the request without exceptions or errors. Proper output would be a success message and saved values in the time sheet table, however due to faulty implementation of PMS redirect page for Time Sheet Control, an error display will be shown containing the “HTTP Status 500 – Internal Server Error”. But this does not affect the updates and modification to the database, hence the table *save\_ts* in PMS Database will be updated with the following row:   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *save\_ts* | | | | | | | | | | | | ets\_id | emp\_id | day | date1 | intime | lunch\_out | lunch\_in | outtime | total\_hours | status | createDate | | 1833 | 99 | Tuesday | 2020-02-25 | 10:00:00 | 11:00:00 | 12:00:00 | 21:30:00 | 10.5 | not approved | 2020-02-25 | |

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| Test Case ID | SystemTest-PMS-SaveTS-008-Sunny03 |
| Purpose | Investigate the proper execution of the save timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He picks “Wednesday” from the third row of the Day column picker. 4. Then he enters “2020-02-26” in the Date column. (YYYY-MM-DD) 5. He enters “10:00:00” in In time field. 6. He enters “11:00:00” in Lunch out field. 7. He enters “11:00:00” in Lunch in field. 8. He enters “21:00:00” in Check Out field. 9. He finally clicks save. |
| Expected Output | The system completes the request without exceptions or errors. Proper output would be a success message and saved values in the time sheet table, however due to faulty implementation of PMS redirect page for Time Sheet Control, an error display will be shown containing the “HTTP Status 500 – Internal Server Error”. But this does not affect the updates and modification to the database, hence the table *save\_ts* in PMS Database will be updated with the following row:   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *save\_ts* | | | | | | | | | | | | ets\_id | emp\_id | day | date1 | intime | lunch\_out | lunch\_in | outtime | total\_hours | status | createDate | | 1834 | 99 | Wednesday | 2020-02-26 | 10:00:00 | 11:00:00 | 11:00:00 | 21:00:00 | 11 | not approved | 2020-02-26 | |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SaveTS-008-Rainy001 |
| Purpose | Investigate the improper execution of the save timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database Tables *users & employees* contain the following. It is also assumed that John Smith (the employee) is already logged into the employee module for PMS   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *employees* | | | | | | | | | | | | | emp\_id | first\_name | last\_name | gender | dob | job | phone | email | address | accno | bankname | joindate | | 99 | John | Smith | on | 19 | … | 0 | a… | 2121 … | 1 | Bank of A. | 2020/… |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *users* | | | | | | | | | | | emp\_id | user\_id | password | sec\_que1 | ans1 | sec\_que2 | ans2 | sec\_que3 | ans3 | createDate | | 99 | john | smith | Favorite Color? | *Red* | First Pet Name? | Ana | Favorite movie? | Matrix | 2020-01-12 | |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He picks “Wednesday” from the third row of the Day column picker. 4. Then he enters “2020-26-02” in the Date column. (not YYYY-MM-DD) 5. He enters “10:00:00” in In time field. 6. He enters “11:00:00” in Lunch out field. 7. He enters “11:00:00” in Lunch in field. 8. He enters “21:00:00” in Check Out field. 9. He finally clicks save. |
| Expected Output | The system cannot complete the request without exceptions or errors. An error display will be shown containing the “HTTP Status 500 – Internal Server Error”. Due to the incorrect input format for the date column there would be no updates or modifications to the database. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SaveTS-008-Rainy002 |
| Purpose | Investigate the improper execution of the save timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database Tables *users & employees* contain the following. It is also assumed that John Smith (the employee) is already logged into the employee module for PMS   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *employees* | | | | | | | | | | | | | emp\_id | first\_name | last\_name | gender | dob | job | phone | email | address | accno | bankname | joindate | | 99 | John | Smith | on | 19 | … | 0 | a… | 2121 … | 1 | Bank of A. | 2020/… |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *users* | | | | | | | | | | | emp\_id | user\_id | password | sec\_que1 | ans1 | sec\_que2 | ans2 | sec\_que3 | ans3 | createDate | | 99 | john | smith | Favorite Color? | *Red* | First Pet Name? | Ana | Favorite movie? | Matrix | 2020-01-12 | |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He picks “Wednesday” from the third row of the Day column picker. 4. Then he enters “2020-02-26” in the Date column. (not YYYY-MM-DD) 5. He enters “11:00:00” in Lunch out field. 6. He enters “11:00:00” in Lunch in field. 7. He enters “21:00:00” in Check Out field. 8. He finally clicks save. |
| Expected Output | The system cannot complete the request without exceptions or errors. An error display will be shown containing the “HTTP Status 500 – Internal Server Error”. Due to the empty value for In time field, there would be no changes, neither updates to the database. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SaveTS-008-Rainy003 |
| Purpose | Investigate the improper execution of the save timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He picks “Wednesday” from the third row of the Day column picker. 4. Then he enters “2020-02-26” in the Date column. (not YYYY-MM-DD) 5. He enters “10:00 AM” in In time field. 6. He enters “11:00 AM” in Lunch out field. 7. He enters “11:00 AM” in Lunch in field. 8. He enters “21:00 PM” in Check Out field. 9. He finally clicks save. |
| Expected Output | The system cannot complete the request without exceptions or errors. An error display will be shown containing the “HTTP Status 500 – Internal Server Error”. Time format to be saved in the database is HH:MM:SS with the 24 hour format instead of the AM/PM. So there would be no updates or modifications to the database. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SubmitTS-009-Sunny01 |
| Purpose | Investigate the proper execution of the submit timesheet use case for John Smith(an employee). |
| Test Set Up | The PMS system is set up and working. John Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that John Smith (the employee) is already logged into the employee module for PMS. |
| Input | The following sequence is done:   1. John hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He finally clicks submit button on the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “time sheet submitted” is displayed. As a result of this action, *save\_ts* table in the database will clear all of the values related to employee’s specific saved time sheet, and *emp\_ts* table will be updated with the following rows:   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | *emp\_ts* | | | | | | | | | | | | ets\_id | emp\_id | day | wdate | intime | lunch\_out | lunch\_in | outtime | total\_hours | status | createDate | | 1832 | 99 | Monday | 2020-02-24 | 10:00:00 | 11:00:00 | 12:00:00 | 22:00:00 | 11 | not approved | 2020-02-24 | | 1833 | 99 | Tuesday | 2020-02-25 | 10:00:00 | 11:00:00 | 12:00:00 | 21:30:00 | 10.5 | not approved | 2020-02-25 | | 1834 | 99 | Wednesday | 2020-02-26 | 10:00:00 | 11:00:00 | 11:00:00 | 21:00:00 | 11 | not approved | 2020-02-26 | |

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| --- | --- |
| Test Case ID | SystemTest-PMS-SubmitTS-009-Sunny02 |
| Purpose | Investigate the proper execution of the submit timesheet use case for Adam Sandler(an employee). |
| Test Set Up | The PMS system is set up and working. Adam Sandler (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that Adam Sandler (the employee) is already logged into the employee module for PMS. |
| Input | The following sequence is done:   1. Adam hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then he clicks on Add Time Sheets button in the displayed drop-down menu. 3. He finally clicks submit button on the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “time sheet submitted” is displayed. As a result of this action,since the *save\_ts* table in the database did not have any rows related to Adam’s saved time sheets, there would be no updates to the emp\_ts neither save\_ts tables in the database. |

|  |  |
| --- | --- |
| Test Case ID | SystemTest-PMS-SubmitTS-009-Sunny03 |
| Purpose | Investigate the proper execution of the submit timesheet use case for Sara Smith(an employee). |
| Test Set Up | The PMS system is set up and working. Sara Smith (an employee) is using Chrome as their browser and he is currently on the home page for PMS. Database contents and tables setup are as described in introduction of section 5.1 (System Test Cases) of this document. It is also assumed that Sara Smith (the employee) is already logged into the employee module for PMS. |
| Input | The following sequence is done:   1. Sara hovers on Time Sheets menu option from the main navigation bar of PMS: Employee module. 2. Then she clicks on Add Time Sheets button in the displayed drop-down menu. 3. She finally clicks submit button on the bottom of the form. |
| Expected Output | The system completes the request without exceptions or errors. An alert message saying “time sheet submitted” is displayed. As a result of this action,since the *save\_ts* table in the database did not have any rows related to Sara’s saved time sheets, there would be no updates to the emp\_ts neither save\_ts tables in the database. |

# Test Summary Report

# Risks & Contingencies

# Approvals

# Glossary

# Appendix

## Appendix A – Test Schedule

## Appendix B -- Implemented Use Cases

### **Login**

**Use Case ID:** PMS\_02\_Login

**Use Case Level:**

**Details:**Tom enters his/her username “Maria001” and password “Password1234” to log in to the system.

**Actor:** the actor in this case is Employer(Maria).

**Pre-conditions**: Maria should be authenticated employer of the system.

**Description:**

**Trigger:**The system responds by ...

a. The use case begins when the Maria enters username “Maria001” and password “Password1234” in the login page.

1. Maria then clicks on “Sign in” button in the login page.
2. PMS system authenticates username “Maria001” and password “Password1234”

**Relevant requirements:**

**Post-conditions:**1) Maria is taken to PMS Homepage.

### **Logout**

**Use Case ID**: PMS\_21\_logout***.***

**Actors:** Maria, Employee

**Pre-conditions:**

* 1. 1)  Maria has an account in payroll management system.
  2. 2)  Maria tries to login with username “maria007” and password “pmsmaria123”.

**Description:** This will help the user to logout.

**Trigger:**

Maria clicks the “logout” button in the home page. The system responds by ...

1)  Maria is logged out from the system.

2)  Maria is shown a message saying “Successfully logged out”.

**Post-conditions:** 1) Maria is redirected to login page.

### **Add Employee**

**Use Case ID:** PMS\_13\_AddEmployee.

**Actor:** the actor in this case is Amit who is the Employee.

**Pre-conditions:**

* 1. Amit is logged in using valid employee\_id “ashen007”.
  2. Amit is in the manage tab of the webpage.

**Description:**

**Trigger:**Amit clicks on the manage tab. He has two options to manage Employee and Employee.  1) Amit clicks on the “Employee” option

* 1. **2)**The PM system will then give options to Amit like to add a Employee.
  2. **3)**Amit clicks on add Employee.
  3. **4)**Then Amit fills in the info like:

1. DeptName: Deployment. DeptLocation: Room155. DeptManager: Popya.

**5)** Then Amit clicks on save button.

**Post-conditions:** The PM system will create a new Employee with name “Popya” to the department “Deployment”

### **Modify TS**

**Use Case ID :** PMS\_05\_ModifyTS

**Actors**: Maria (Employer**).**

**Pre-conditions**: The user Maria logs in with her credentials.

**Description**: The employer Maria will modify Tom’s timesheet which had already been submitted. Maria clicks “SearchEmployee” menu item in PMS.

The system responds by

1)Maria searches Tom’s information by Tom’s ID (001).

2) The system shows the unapproved timesheet for the Tom’s ID i.e. 001 that Maria is searching for.

3) Now Maria will select the timesheet she is looking for and will click on the edit button.

4) Now Maria will edit the timesheet and click the approve button when she verifies that the information provided is valid.

**Post-conditions:**

l) The timesheet is forwarded towards calculating the Paycheck.

### **Approve TS**

**Use Case ID** : PMS\_05\_ApproveTS

**Actors**: Maria (Employer).

**Pre-conditions**:

l) The user Maria logs in with her credentials.

**Description**:

The employer Maria will approve the employee Tom’s time sheet which had already been submitted.

**Trigger**: Maria clicks “SearchEmployee” menu item in PMS. The system responds by

1) Maria searches Tom’s information by Tom’s ID (001).

2) The system shows the unapproved timesheet for the Tom’s ID i.e. 001 that Maria is

searching for.

3) Now Maria will select the timesheet she is looking for and will click on the view button.

Now Maria will view the timesheet and click the approve button when she verifies that the information provided is valid.

**Post-conditions:**

l) The timesheet is forwarded towards calculating the Paycheck.

### **Calculate Salary**

**Use Case ID** : PMS\_07\_CalcSal

**Actors**: Maria (Employer).

**Pre-conditions:**

1) The user Maria logs in with her credentials.

**Description**:

1) The employer Maria will click on the salary in the menu.

Trigger: Maria clicks “CalcSalary” menu item in PMS. The system responds by

1) Maria sees the Salary page opened.

2) Maria searches Tom’s information by Tom’s [D (001).

3) The system shows the salary in the menu.

4) Now Maria will select the Calcsalary button of the Tom.

5) Now Maria will View the Calcsalary of the Tom.

**Post-conditions:**

l) The timesheet is moved back to salary window.

### **Save TS**

**Use Case ID** : PMS\_08\_SaveTS

**Actors**: Tom (Employee).

**Pre-conditions:**

l. The user Tom logs in with her credentials.

2. The employee Tom’s timesheet will saved.

**Trigger**: Tom clicks “Timesheet” menu item in PMS. The system responds by

1. Tom fills the Timesheet for particular duration of work. Timesheet.

2. The system shows values inserted in

3. Tom saves the Timesheet values inserted using Save Timesheet button.

**Post-conditions:**

l. The timesheet is forwarded towards calculating the Paycheck.

## Appendix C – Test Drivers & Stubs

## Appendix D – GUI Tests

## Appendix E -- Diary