**Software Test Plan**



Attendance System

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# Introduction

The CheckPoint project is a web based attendance system capable of registering and verifying attendance to a wide range of event types. The system will allow anyone hosting an appointment or event to efficiently track attendance levels. In addition, it will allow potential attendees to easily discover and sign up for local and national events through a web based user panel.

The nature of the application is therefore not critical to human life or health and will not need to be subject to the most stringent testing procedures. However, the application does have the potential to cause considerable disruption and frustration to users if it fails to function according to the specification requirements.

Acquiring evidence that a product is of sufficient quality with a reasonable level of confidence is the primary objective of the testing process.

This test plan will describe the necessary test procedures that must be undertaken and passed in order for the project to meet this demand. A selection of tests will be chosen to target specific aspects of the projects functionality. Each test will be documented in an auditable fashion such that it may be used to assess the quality of the product. Once all tests have achieved a satisfactory pass mark the results will provide a level of assurance to the customer and developer that the product is fit for purpose.

In order for the tests to be considered valid, they must be performed with certain constraints. The tests must be performed under conditions that reflect those similar to an end user. In this instance that will mean a clean operating system devoid of developer tools and libraries. To achieve this goal the testing will be performed from inside a virtual machine environment with a clean install of the specified operating system.

The specific functional and non-functional requirements that should be targeted by the tests are described in the Software Development Plan and the Software Requirements and Design Document.

# Goals and exit criteria

This chapter will describe quality, schedule and performance goals of the testplan.

## Quality goals that needs to be met for the test phase to exit

The following goals are essential for the test phase to exit:

* All test cases have been performed.
* No critical or high impact faults should remain. These are defined in chapter 6 Test-bug report-fix-retest process.
* 95% of medium impact bugs must be resolved.
* All bugs and defects have been properly recorded and signed off.

All test goals should preferably be fulfilled before the test phase may be closed and implementation can proceed, however there will be some flexibility and the criteria for exit may be reviewed in the event that certain tests do not pass.

## Schedule goals of the project

Testing should be executed at least once in each iteration of the project, as shown in figure 2 chapter 7 in the Software Development Plan.

The software should also be tested according to the regression testing which is described in chapter 4.1.

## Performance and efficiency goals of the product

As outlined in chapter 3.2 of the Software Requirements and Design document.

* The reading terminal should be responsive enough to process and register an attendance within 3 seconds.
* The system should have an uptime of 22 hours per day.
* The GUI should not require the user to have any prior technical experience in order to navigate the system.

# Items to be tested/ inspected

This section gives a description of which aspects of the Checkpoint software are to be tested.

## Executables such as modules and components

The items to be tested are the Checkpoint web application software, the Checkpoint native application software and the associated Reading-terminal hardware. The number of individual components and modules that would ordinarily be subject to both unit testing and integration testing under far exceed the capabilities and resources available to the development team on this project. With this considered function testing will be the primary focus of the testing phase.

The specific functions to be tested are as shown in *Table 1*, *Table 2*,*Table 3* and *Table 4*

*Table 1: Checkpoint web app functionality*

|  |  |
| --- | --- |
| Checkpoint Web App  Feature / Functionality | SRD Design Requirement Reference  Use Case Documents |
| Client Registration | Chapter 8.2.1 Register |
| Log In | Chapter 8.2.2 Log In |
| Become Attendee | Chapter 8.2.3 Become Attendee |
| Manage Profile | Chapter 8.2.4 Manage Profile |
| Create Appointment | Chapter 8.2.5 Create Appointment |
| Manage Appointment | Chapter 8.2.6 Manage Appointment |
| Create Course | Chapter 8.2.7 Create Course |
| Manage Course | Chapter 8.2.8 Manage Course |
| Manage Attendance | Chapter 8.2.9 Manage Attendance |
| Create Report | Chapter 8.2.10 Create Report |

Table 2: Checkpoint web app performance

|  |  |
| --- | --- |
| Checkpoint Web App  Performance | SRD Design Requirement Reference  Technical Requirements |
| Browser Support Chrome, Firefox, Microsoft Edge, Opera | Chapter 3.1.1 Functional Requirements |
| Support Access by Multiple Simultaneous Users | Chapter 3.1.1 Functional Requirements |

*Table 3: Checkpoint Native App & hardware reading terminal functionality*

|  |  |
| --- | --- |
| Checkpoint Native App  & Hardware Reading-terminal  Feature / Functionality | SRD Design Requirement Reference  Use Case Documents |
| Attend Appointment | Chapter 8.2.9 Attend Appointment |

*Table 4: Checkpoint native app and hardware reading-terminal performance*

|  |  |
| --- | --- |
| Checkpoint Native App  & Hardware Reading-terminal  Performance | SRD Design Requirement Reference |
| Attendance Registration Time (within 3 secs) | Chapter 3.2 Non-Functional Requirements |

## Items Not to be Tested

Excluded aspects of the application which will not be tested due to time constraints, lack of resources or being beyond the scope of this iteration include:

* Stress testing
* Recovery testing
* Security testing
* Database integrity testing
* Access testing
* Configuration testing (various OS and hardware configurations)

# Test process/ methodologies

This chapter describes different types of test methodologies and why the different test methodologies has or have not been prioritized in the testing of the Checkpoint software .

## Unit test/ functional test/ acceptance test/ regression test/ and so on, methodologies.

Unit testing consists of testing every individual class and its methods in isolation with the use of mock-up classes with which to provide data for the isolated class to consume. This involves the creation of a duplicate mock class for every single class in the application and both black-box and white-box testing to be performed. Due to the limited time constraints of the project it will not be possible to complete unit testing of the project. It may be possible to unit test a small number of critical classes.

Integration testing is carried out following the unit tests being satisfied and involves bringing the individual classes together and testing their behavior once again when they are interacting with each other and not the mocks. Once again, the schedule does not permit us to complete a full integration test but it may be possible to test a small chain of critical classes.

Function testing involves testing the application according to the software design requirements and specifications as outlined in the development documentation. These tests directly address the ability of the application to fulfill the use cases. As such the function testing will be prioritized and will form the most significant part of the testing procedure. Documentation of each function under test will be recorded and signed by the tester. A list of each function and a reference to the requirements can be found in chapter *3 Items to be tested/ inspected*.

User Interface testing concerns verifying that the actual graphical user interface and the interaction with the reading terminal function conform to the specifications laid out in the software design and requirements documentation.

Regression testing will be carried out manually after any bug fixes have been applied to ensure the modifications themselves have not lead to the creation of more bugs. Testing of related functions will be postponed until the regression checks are completed to minimize side-effects. Regression tests must be completed before any big changes to the project are made and will follow the functional test cases in this document.

System testing follows integration testing and is concerned with testing the whole application in its entirety. System testing looks to discover defects that may arise between the inter-assembly items and hardware components that might not become apparent with integration testing. System testing will only be viable once all components of the project have been written.

## Black-box testing (e.g., input domain test, boundary value testing

Black-box testing does not require the tester to have any knowledge about the underlying system. The main focus is to discover defects which impair the functionality of the software as specified by the requirements and use case documents. Black-box testing will most closely match the experience of the majority of the users of the Checkpoint software. As such, this approach will be a critical aspect of the testing phase and form the main body of the test cases.

## White-box testing (e.g., control path testing, data flow testing )

White-box testing requires the tester to have detailed knowledge of the programs source code and structure. Rather than focusing on the functional requirements from the perspective of an end user, white-box testing looks at the data flow of the code and seeks to discover aspects which might be vulnerable to failure or fragile. This might include the complexity of conditional logic, the structure of the inter-class communication or the general implementation of the code. Most often performed on the same level as unit testing and integration testing, white-box testing is costly in terms of resources requiring time and testers with a proficiency in programming. Due to the tight schedule of the CheckPoint project white-box testing will not be prioritized.

## Test metrics

The results obtained from the test case documents will be reviewed and assessed according to severity and the quality goal requirements.

## Test-bug report-fix-retest process

Any bugs or failures during testing will be recorded and logged with Microsoft VSTS development tools. The bug will be allocated to a developer who will be tasked with correcting the behavior and regression testing the associated function along with related functions. Once the regression test is complete the bug will be marked as resolved on the bug tracker.

The severity of the bug or failure will be recorded according to the criteria in *Table 5*.

*Table 5: Severity of bug criteria*

|  |  |
| --- | --- |
| Severity | Impact |
| 1.Critical | System crash, potential data loss or corruption.  Necessitates a reboot or restart to recover. |
| 2.High | Functionality is disrupted or unable to be completed. Impacts other areas of the program. |
| 3.Medium | Functionality not working as specified but can be achieved via other means. |
| 4.Low | Functionality works as specified except under certain outlying conditions. |
| 5.Cosmetic | Experience impacted by confusing feedback or inappropriate graphical response. Functionality is otherwise correct |

Bug fixing will be prioritized according to the level of severity.

Each bug must be reported with a description of both the bug and how to reproduce the undesired behavior.

*Table 6: Bug description and steps to reproduce*

|  |  |
| --- | --- |
| Bug | Steps to Reproduce |
| Description of bug | Description of how to reproduce the bug. |

# Resources

This chapter contains information about which resources are used during testing of the Checkpoint system.

## People

The people in *Table 7* will be responsible for executing and documenting the tests described in this document.

*Table 7: Test personnel and contact information*

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Email | Phone number | Role |
| Brueland, Kevin | [Kevin.brueland@gmail.com](mailto:Kevin.brueland@gmail.com) | 4128376 | System developer |
| Liknes, Morten | mliknes@hotmail.com | 47882901 | System developer |
| Lam, Chi Mon Noel | tonje\_@hotmail.co.uk | 99297412 | System developer |

## Tools

Microsoft Visual Studui Team Services Bug tracking tools will be used for documenting, storing and tracking bugs.

## Systems

To achieve a clean environment when testing the software, the testing will take place on a virtual computer through VMware Workstation Player 12.5.

The virtual computer will have installed:

* Windows 10 Education (Version 1703)
* SQL-server 2016 express.
* Mozilla Firefox, Microsoft Edge, Google Chrome and Opera web browsers

# Schedule

The test schedule will cohere with the Gantt chart in the SDP (Software Development Plan) chapter 7.

## Test-case development

The test cases will be developed in week 13 and mainly on Tuesday 28.03.2017 and Friday 31.03.2017 within said week.

## Test execution

Test execution will cohere with the Gantt chart in the SDP chapter 7.

The software should also be tested according to the regression testing which is described in chapter 4.1

Some testing will also take place in week 14 and mainly on Tuesday 04.04.2017 and Friday 07.04.2017 of said week.

## Bug reporting and fixing

Bug reporting will be done at the end of each test execution.  
Bug fixing will be scheduled after the severity of the bug and time available to fix it.

# Risks

This chapter will describe the risks involved for the test plan not to meet its criteria.

## Missing goals

The risks for missing the test goals described in *Chapter 2* are shown in *Table 8*.

*Table 8: Risk analysis*

|  |  |  |
| --- | --- | --- |
| Risk | Probability | Consequence |
| Project not completed to the degree that all functionalities have been implemented. | medium | All functions cannot be tested or system tested. |
| Testing not completed due to disease. | low | All functions will not be tested or system tested. |
| Testing not completed due to time limitation | medium | All functions will not be tested or system tested. |

# Major test scenarios and test cases

This section includes all the test cases developed for the Checkpoint software.

## Checkpoint Web App Performance Test Cases

The following test cases in this section are for testing the performance of the Checkpoint Web Application.

Browser compatibility test caseas shown in *Table 9.*

Table 9: Browser compatibility test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Browser Compatibility | OK | FAIL | Description | Severity |
| Functionality in Chrome |  |  |  |  |
| Functionality in Firefox |  |  |  |  |
| Functionality in Opera |  |  |  |  |
| Functionality in Microsoft Edge |  |  |  |  |
| GUI is rendered correctly in Chrome |  |  |  |  |
| GUI is rendered correctly in Firefox |  |  |  |  |
| GUI is rendered correctly in Opera |  |  |  |  |
| GUI is rendered correctly in Edge |  |  |  |  |

Multiple simultaneous users test case as shown in *Table 10.*

Table 10: Multiple simultaneous users test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Multiple Simultaneous Users | OK | FAIL | Description | Severity |
| System handles 3 or more simultaneous attempt to update the same table in the database |  |  |  |  |

## Checkpoint Web App Host Functionality Test Cases

The following test cases in this section are for testing the Host functionality in the Checkpoint Web Application.

Register host client test case as shown in *Table 11.*

Table 11: Register host client function test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Register Host Client Function | OK | FAIL | Description | Severity |
| Registration succeeds with valid data |  |  |  |  |
| Registration fails with invalid password length (< 6 chars) |  |  |  |  |
| Registration fails with duplicate username |  |  |  |  |
| Registration fails with invalid postcode  (does not exist) |  |  |  |  |
| Registration fails with invalid email  format |  |  |  |  |
| Registration fails with invalid phone number (< 8 digits / non-integer) |  |  |  |  |
| Registration fails with null fields |  |  |  |  |
| Registration response to invalid data |  |  |  |  |
| Registration data stored correctly in database |  |  |  |  |
| Response if registration fails |  |  |  |  |
| Client is redirected to the login page after registration is successful |  |  |  |  |

Host login test case as shown in *Table 12.*

Table 12: Login function test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Login Function | OK | FAIL | Description | Severity |
| Login succeeds with valid data |  |  |  |  |
| Login fails with invalid data |  |  |  |  |
| Login recognizes correct client type |  |  |  |  |
| Login stores client to session |  |  |  |  |
| Login response to null fields |  |  |  |  |
| Login hides password |  |  |  |  |

Manage host profile test case as shown in *Table 13*.

Table 13: Manage profile test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Manage Profile Function | OK | FAIL | Description | Severity |
| Page shows correct profile data |  |  |  |  |
| Profile updated with valid data is successful |  |  |  |  |
| Update fails with invalid password length (< 6 chars) |  |  |  |  |
| Response if update fails |  |  |  |  |
| Update fails with invalid postcode  (does not exist) |  |  |  |  |
| Update fails with invalid email format |  |  |  |  |
| Update fails with invalid phone number (< 8 digits / non-integer) |  |  |  |  |
| Update fails with null fields |  |  |  |  |

Create appointment test case as shown in *Table 14*.

Table 14: Create appointment test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Create Appointment Function | OK | FAIL | Description | Severity |
| New Appointment creation with valid data is successful |  |  |  |  |
| Creation fails with null fields |  |  |  |  |
| Creation fails with invalid time |  |  |  |  |
| Creation fails with invalid date |  |  |  |  |
| Creation fails with invalid postcode  (does not exist / non-integer) |  |  |  |  |
| Appointment is stored correctly in database |  |  |  |  |
| Response if creation fails |  |  |  |  |

Update appointment test case as shown in *Table 15.*

Table 15: Update appointment test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Update Appointment Function | OK | FAIL | Description | Severity |
| Page shows correct appointment data |  |  |  |  |
| Appointment updated with valid data is successful |  |  |  |  |
| Update fails with null fields |  |  |  |  |
| Update fails with invalid time |  |  |  |  |
| Update fails with invalid date |  |  |  |  |
| Update fails with invalid postcode  (does not exist / non-integer) |  |  |  |  |
| Appointment is updated correctly in database |  |  |  |  |
| Response if update fails |  |  |  |  |

Delete appointment test case as shown in *Table 16.*

Table 16: Delete appointment test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Delete Appointment Function | OK | FAIL | Description | Severity |
| Appointment is deleted |  |  |  |  |
| Deletion is updated correctly in database |  |  |  |  |

Create course test case as shown in *Table 17*.

Table 17:Create course test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Create Course Function | OK | FAIL | Description | Severity |
| New course creation with valid data is successful |  |  |  |  |
| Creation fails with null fields |  |  |  |  |
| Course is stored correctly in database |  |  |  |  |
| Response if creation fails |  |  |  |  |

Add existing appointment to course test case as shown in *Table 18*.

Table 18: Add existing appointment to course test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Add Existing Appointment To Course Function | OK | FAIL | Description | Severity |
| Existing appointment is added successfully |  |  |  |  |
| Adding can be abandoned successfully |  |  |  |  |
| Course is stored with existing appointment correctly in database |  |  |  |  |

Host homepage test case as shown in *Table 19*.

Table 19: Host homepage test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Host Home Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully |  |  |  |  |
| Sorting appointment data functions correctly |  |  |  |  |
| Create new appointment button navigates to correct page |  |  |  |  |
| Manage appointment button navigates to correct page |  |  |  |  |
| View courses button navigates to correct page |  |  |  |  |
| Add selected appointment to course button navigates to correct page |  |  |  |  |

Host courses page test case as shown in *Table 20*.

Table 20: Host courses page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Host Courses Page Function | OK | FAIL | Description | Severity |
| Courses page table is displayed successfully |  |  |  |  |
| Sorting course data functions correctly |  |  |  |  |
| Create new course button navigates to correct page |  |  |  |  |
| Manage courses button navigates to correct page |  |  |  |  |
| View courses button navigates to correct page |  |  |  |  |
| Manage attendance button navigates to correct page |  |  |  |  |

Add appointment to course page test case as shown in *Table 21.*

Table 21: Add appointment to course page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Add appointment to course page Function | OK | FAIL | Description | Severity |
| Appointment Data is displayed correctly |  |  |  |  |
| “Yes“ button navigates to correct page |  |  |  |  |
| “No” button navigates to correct page |  |  |  |  |
| Appointment data is read only |  |  |  |  |

Select course page test case as shown in *Table 22*.

Table 22: Select course page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Select Course Page Function | OK | FAIL | Description | Severity |
| Course table is displayed successfully |  |  |  |  |
| “Add Appointment To Selected Course “button navigates to correct page |  |  |  |  |
| “Cancel” button navigates to correct page |  |  |  |  |
| Data is stored correctly in the database |  |  |  |  |

Manage course attendance page test case as shown in *Table 22*.

Table 23: Manage course attendance page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Manage Course Attendance Page Function | OK | FAIL | Description | Severity |
| Course table is displayed successfully and shows courses with active attendee request |  |  |  |  |
| Attendees table is displayed successfully when a course is selected |  |  |  |  |
| When a course is selected “Accept Attendance Request” and “Accept All Attendance Requests For Selected Course” buttons will show |  |  |  |  |
| “Accept attendance request” button accepts the selected attendee |  |  |  |  |
| “Accept All Attendance Requests For Selected Course” button accepts all the attendee requests |  |  |  |  |
| Attendees are updated correctly in the database |  |  |  |  |
| Sorting course data functions correctly |  |  |  |  |
| Sorting attendee data functions correctly |  |  |  |  |
| Response if updating the database fails |  |  |  |  |
| “Manage Attendance For Appointments” button navigates to correct page |  |  |  |  |

Manage appointment attendance page test case as shown in *Table 23*.

Table 24: Manage appointment attendance page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Manage Appointment Attendance Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully and shows appointments with active attendee request |  |  |  |  |
| Attendees table is displayed successfully when an appointment is selected |  |  |  |  |
| Appointment is selected “Accept attendance request” and “Accept All Attendance Requests For Selected Course” buttons will show |  |  |  |  |
| “Accept attendance request” button accepts the selected attendee |  |  |  |  |
| “Accept All Attendance Requests For Selected Appointment” button accepts all the attendee requests |  |  |  |  |
| Attendees are updated correctly in the database |  |  |  |  |
| Sorting appointment data functions correctly |  |  |  |  |
| Sorting attendee data functions correctly |  |  |  |  |
| Response if updating the database fails |  |  |  |  |
| “Manage Attendance For Courses” button navigates to correct page |  |  |  |  |

Completed appointments page test case as shown in *Table 25*.

Table 25: Completed appointments page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Completed Appointments Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully |  |  |  |  |
| Sorting appointment data functions correctly |  |  |  |  |
| “View Attendances For Selected Appointment” button redirects to correct page |  |  |  |  |

Appointment attendance records page test case as shown in *Table 25*.

Table 26: Appointment attendance records page test case

Tester: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Appointment Attendance Records Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully |  |  |  |  |
| Attendees table is displayed successfully |  |  |  |  |
| “View Completed Appointments” button redirects to correct page |  |  |  |  |

## Checkpoint Web App User Functionality Test Cases

The following test cases in this section are for testing the User functionality in the Checkpoint Web Application.

Register user client test case as shown in *Table 26*.

Table 27: Register user client test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Register User Client Function | OK | FAIL | Description | Severity |
| Registration succeeds with valid data |  |  |  |  |
| Registration fails with invalid password length (< 6 chars) |  |  |  |  |
| Registration fails with duplicate username |  |  |  |  |
| Registration fails with invalid postcode  (does not exist) |  |  |  |  |
| Registration fails with invalid email  format |  |  |  |  |
| Registration fails with invalid phone number (< 8 digits / non-integer) |  |  |  |  |
| Registration fails with null fields |  |  |  |  |
| Registration response to invalid data |  |  |  |  |
| Registration data stored correctly in database |  |  |  |  |
| Response if registration fails |  |  |  |  |
| Client is redirected to the login page after registration is successful |  |  |  |  |

Login test case as shown in *Table 27*.

Table 28: Login test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Login Function | OK | FAIL | Description | Severity |
| Login succeeds with valid data |  |  |  |  |
| Login fails with invalid data |  |  |  |  |
| Login recognizes correct client type |  |  |  |  |
| Login stores client to session |  |  |  |  |
| Login response to null fields |  |  |  |  |
| Login hides password |  |  |  |  |

Manage profile test case as shown in *Table 28*.

Table 29: Manage profile test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Manage Profile Function | OK | FAIL | Description | Severity |
| Page shows correct profile data |  |  |  |  |
| Profile updated with valid data is successful |  |  |  |  |
| Update fails with invalid password length (< 6 chars) |  |  |  |  |
| Response if update fails |  |  |  |  |
| Update fails with invalid postcode  (does not exist) |  |  |  |  |
| Update fails with invalid email format |  |  |  |  |
| Update fails with invalid phone number (< 8 digits / non-integer) |  |  |  |  |
| Update fails with null fields |  |  |  |  |

Find public appointments page test case as shown in *Table 29*.

Table 30: Find public appointments page test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Find Public Appointments Page Function | OK | FAIL | Description | Severity |
| Public appointments table are displayed correctly |  |  |  |  |
| Sorting appointment data functions correctly |  |  |  |  |
| Selecting an appointment and clicking Apply To Attend The Selected Appointment button navigates to correct page. |  |  |  |  |
| Find Public Courses button redirects to correct page |  |  |  |  |

Find public courses page test case as shown in *Table 30*.

Table 31: Find public courses page test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Find Public Courses Page Function | OK | FAIL | Description | Severity |
| Public Courses table are displayed correctly |  |  |  |  |
| Sorting Course data functions correctly |  |  |  |  |
| Selecting a course and clicking Apply To Attend The Selected Course button navigates to correct page. |  |  |  |  |
| Find Public Appointments button redirects to correct page |  |  |  |  |

Apply to attend appointment page test case as shown in *Table 31*.

Table 32: Apply to attend appointment page test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Apply To Attend Appointment Page Function | OK | FAIL | Description | Severity |
| Appointment details are displayed correctly |  |  |  |  |
| Message box with “Yes” and “No” buttons are displayed with a confirmation message. |  |  |  |  |
| “Yes” button updates database with a new attendee where status is 0 , tag Id and Appointment id is correct. |  |  |  |  |
| “No” button redirects to correct page |  |  |  |  |
| “Back To Find Appointments” button is displayed after attendance attempt |  |  |  |  |
| “Back To Find Appointments” button redirects to correct page |  |  |  |  |
| Response if attendee creation fails |  |  |  |  |

Apply to attend course page test case as shown in *Table 32*.

Table 33: Apply to attend course page test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Apply To Attend Course Page Function | OK | FAIL | Description | Severity |
| Course details and appointments are displayed correctly |  |  |  |  |
| Sorting Appointment data functions correctly |  |  |  |  |
| “Cancel” button redirects to correct page |  |  |  |  |
| When Apply to course button is clicked a message box with “Yes” and “No” buttons are displayed with a confirmation message. |  |  |  |  |
| “Yes” button updates databasae with a new attendee for each appointment in the couse where status is 0 , tag Id and Appointment id is correct. |  |  |  |  |
| “No” button hides the messagebox |  |  |  |  |
| “Continue” button is displayed after attendance attempt |  |  |  |  |
| “Continue” button redirects to correct page |  |  |  |  |
| Response if attendee creation fails |  |  |  |  |

Appointment attendance history page test case as shown in *Table 33*.

Table 34: Appointment attendance history page test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Appointment Attendance History Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully |  |  |  |  |
| Attendance time and date is displayed for the selected appointment |  |  |  |  |
| Sorting appointment data functions correctly |  |  |  |  |

## Checkpoint Native App Functionality Test Cases

The following test cases in this section are for testing the functionality in the Checkpoint Native Application.

Reading terminal login view test case as shown in *Table 34*.

Table 35: Reading terminal login view test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reading Terminal Login View | OK | FAIL | Description | Severity |
| Login succeeds with valid data |  |  |  |  |
| Login fails with invalid data |  |  |  |  |
| Login hides password |  |  |  |  |

Start appointment view test case as shown in *Table 35*.

Table 36: Start appointment view test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Start Appointment View | OK | FAIL | Description | Severity |
| Reading terminal displays appointments successfully |  |  |  |  |
| “Start Appointments” button starts the selected appointment |  |  |  |  |

Attend appointment test case as shown in *Table 36*.

Table 37: Attend appointment test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attend Appointment Function | OK | FAIL | Description | Severity |
| Reading terminal prompts attendee to swipe his RFID tag. |  |  |  |  |
| Reading terminal stores attendance data in database successfully |  |  |  |  |
| Reading terminal displays message to attendee confirming successful registration |  |  |  |  |
| Registration fails if attendee is not signed up for the appointment |  |  |  |  |
| Response if registration fails |  |  |  |  |

## Checkpoint Native App & Hardware Performance Test Cases

The following test cases in this section are for testing the performance in the Checkpoint Native Application and hardware.

Reading terminal attendance registration time as shown in *Table 37*.

Table 38: Reading terminal attendance registration time test case

Tester:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Reading terminal Attendance Registration time | OK | FAIL | Description | Severity |
| Registers attendee and gives attendee feedback within 3 seconds |  |  |  |  |