**Software Test Document**



Attendance System

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*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. |

# Executed test cases

### Checkpoint Web App Performance Test Cases

The following test cases are for the Checkpoint Web Application.

#### Browser Compatibility

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Browser Compatibility | OK | FAIL | Description | Severity |
| Functionality in Chrome | X |  | OK. |  |
| Functionality in Firefox | X |  | OK. |  |
| Functionality in Opera | X |  | OK. |  |
| Functionality in Microsoft Edge | X |  | OK. |  |
| GUI is rendered correctly in Chrome | X |  | Some animations are lagging. | Cosmetic |
| GUI is rendered correctly in Firefox | X |  | OK. |  |
| GUI is rendered correctly in Opera | X |  | OK. |  |
| GUI is rendered correctly in Edge | X |  | Buttons are not rounded and glowing when hoovering over them | Cosmetic |

#### Multiple Simultaneous Users

Tester: Morten Liknes, Kevin Brueland & Chi Lam Date: 07.04.2017

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

### Host test cases

The following test cases are specifically for testing Host functionality.

#### Register Host Client Type

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Register Host Client Function | OK | FAIL | Description | Severity |
| Registration succeeds with valid data | X |  | Registration is successful |  |
| Registration fails with invalid password length (< 6 chars) | X |  | Ok. |  |
| Registration fails with duplicate username | X |  | Shows error message: “Registraion Failed: Violation of PRIMARY KEY constraint 'XPKCLIENT'. Cannot insert duplicate key in object 'dbo.CLIENT'. The duplicate key value is (Stingasdf). The statement has been terminated. “ this should be less confusing for the user. | cosmetic |
| Registration fails with invalid postcode  (does not exist) | X |  | Shows error message:” Registraion Failed: The INSERT statement conflicted with the FOREIGN KEY constraint "R\_19". The conflict occurred in database "CheckPoint", table "dbo.ADDRESS", column 'PostalCode'. The statement has been terminated.  “ | cosmetic |
| Registration fails with invalid email  format | X |  | 1. Input value: pergunner.com  Error message shown: “Email not valid - must contain be in the form 'xxx@xxx.xxx'  “  Sentence does not make sence.  2. Input value: per@gunnarcom  Error message shown:” Registraion Failed: The INSERT statement conflicted with the CHECK constraint "chk\_Email". The conflict occurred in database "CheckPoint", table "dbo.CLIENT", column 'Email'. The statement has been terminated.  ”  Should get a less confusing feedback for the user. | cosmetic |
| Registration fails with invalid phone number (< 8 digits / non-integer) | X |  | Input value: ssssssss  Server exception is thrown and server error page is displayed.  “Input string was not in correct format”  No exception handling is implemented | Low |
| Registration fails with null fields | X |  | Error message:” One or more field is empty! Please fill in all fields. Password must be 6 characters or more. Email not valid - must contain be in the form 'xxx@xxx.xxx' PhoneNumber must be 8 digits or more. Postal Code must be an valid integer value!  ”  Error message is displayed out of green border on webpage. This does not look good. | cosmetic |
| Registration response to invalid data | X |  | Ok. |  |
| Registration data stored correctly in database | X |  | Ok. |  |
| Response if registration fails | X |  | Ok. |  |
| Client is redirected to the login page after registration is successful | X |  | Ok. |  |

#### Host Login

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Create Appointment Function | OK | FAIL | Description | Severity |
| New Appointment creation with valid data is successful | X |  | OK. |  |
| Creation fails with null fields | X |  | Error message: ” One or more field is empty! Please fill in all fields. Time must be in correct format! Please enter a time hh:mm. Dates must be in correct format! Please enter a date mm/dd/yyyy: Time must be in correct format! Please enter a time hh:mm. Postal Code must be an valid integer value!”  Text is partially covered by button. | cosmetic |
| Creation fails with invalid time | X |  | OK. |  |
| Creation fails with invalid date | X |  | OK. |  |
| Creation fails with invalid postcode  (does not exist / non-integer) | X |  | Error message:”  Failed to save changes!The INSERT statement conflicted with the FOREIGN KEY constraint "R\_3". The conflict occurred in database "CheckPoint", table "dbo.ADDRESS", column 'PostalCode'. The statement has been terminated.”  Text is partially covered by button. | Cosmetic |
| Appointment is stored correctly in database | X |  | OK. |  |
| Response if creation fails | X |  | OK. Se above cosmetic bugs. |  |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Update Appointment Function | OK | FAIL | Description | Severity |
| Page shows correct appointment data | X |  | OK |  |
| Appointment updated with valid data is successful | X |  | Error message: ” One or more field is empty! Please fill in all fields. Time must be in correct format! Please enter a time hh:mm. Dates must be in correct format! Please enter a date mm/dd/yyyy: Time must be in correct format! Please enter a time hh:mm. Postal Code must be an valid integer value!”  Text is partially covered by button. | cosmetic |
| Update fails with null fields | X |  | OK. |  |
| Update fails with invalid time | X |  | OK. |  |
| Update fails with invalid date |  |  | Error message:”  Failed to save changes!The INSERT statement conflicted with the FOREIGN KEY constraint "R\_3". The conflict occurred in database "CheckPoint", table "dbo.ADDRESS", column 'PostalCode'. The statement has been terminated.”  Text is partially covered by button. | Cosmetic |
| Update fails with invalid postcode  (does not exist / non-integer) | X |  | OK. |  |
| Appointment is updated correctly in database | X |  | OK. Se above cosmetic bugs. |  |
| Response if update fails |  |  |  |  |

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Add Existing Appointment To Course Function | OK | FAIL | Description | Severity |
| Existing appointment is added successfully | X |  | Ok. “New appointment was added” text is covering navigation buttons. | Cosmetic |
| Adding fails with null fields | X |  | Hard to notice the message “select an appointment” which is displayed on top of gridview. | Cosmetic |
| Adding can be abandoned successfully | X |  | OK. No button available to go back. | Medium |
| Course is stored with existing appointment correctly in database | X |  | OK. |  |

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Host Home Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully | X |  | Ok. |  |
| Sorting appointment data functions correctly | X |  | Ok. |  |
| Create new appointment button navigates to correct page | X |  | Ok. |  |
| Manage appointment button navigates to correct page | X |  | Ok. |  |
| View courses button navigates to correct page | X |  | Ok. |  |
| Create Report button navigates to correct page |  |  | Not Implemented |  |
| Add selected appointment to course button navigates to correct page | X |  | Ok. |  |

Tester: Morten Liknes Date: 04.04.2017

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Add appointment to course page Function | OK | FAIL | Description | Severity |
| Courses page table is displayed successfully | X |  | Ok. |  |
| Sorting course data functions correctly | X |  | Ok. |  |
| Create new course button navigates to correct page | X |  | Ok. |  |
| Manage courses button navigates to correct page | X |  | Ok. |  |
| View appointments button navigates to correct page | X |  | Ok. |  |
| Manage attendance button navigates to correct page | X |  | Ok. |  |
| Create report button navigates to correct page | X |  | Ok. |  |

#### Manage Attendance

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

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

#### Attendance History

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

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

### User test cases

These test cases are specifically for testing User functionality.

#### Register User Client Type

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Register User Client Function | OK | FAIL | Description | Severity |
| Registration succeeds with valid data | Registration succeeds with valid data | X |  | Registration is successful |
| Registration fails with invalid password length (< 6 chars) | Registration fails with invalid password length (< 6 chars) | X |  | Ok. |
| Registration fails with duplicate username | Registration fails with duplicate username | X |  | Shows error message: “Registraion Failed: Violation of PRIMARY KEY constraint 'XPKCLIENT'. Cannot insert duplicate key in object 'dbo.CLIENT'. The duplicate key value is (Stingasdf). The statement has been terminated. “ this should be less confusing for the user. |
| Registration fails with invalid postcode  (does not exist) | Registration fails with invalid postcode  (does not exist) | X |  | Shows error message:” Registraion Failed: The INSERT statement conflicted with the FOREIGN KEY constraint "R\_19". The conflict occurred in database "CheckPoint", table "dbo.ADDRESS", column 'PostalCode'. The statement has been terminated.  “ |
| Registration fails with invalid email  format | Registration fails with invalid email  format | X |  | 1. Input value: pergunner.com  Error message shown: “Email not valid - must contain be in the form 'xxx@xxx.xxx'  “  Sentence does not make sence.  2. Input value: per@gunnarcom  Error message shown:” Registraion Failed: The INSERT statement conflicted with the CHECK constraint "chk\_Email". The conflict occurred in database "CheckPoint", table "dbo.CLIENT", column 'Email'. The statement has been terminated.  ”  Should get a less confusing feedback for the user. |
| Registration fails with invalid phone number (< 8 digits / non-integer) | Registration fails with invalid phone number (< 8 digits / non-integer) | X |  | Input value: ssssssss  Server exception is thrown and server error page is displayed.  “Input string was not in correct format”  No exception handling is implemented |
| Registration fails with null fields | Registration fails with null fields | X |  | Error message:” One or more field is empty! Please fill in all fields. Password must be 6 characters or more. Email not valid - must contain be in the form 'xxx@xxx.xxx' PhoneNumber must be 8 digits or more. Postal Code must be an valid integer value!  ”  Error message is displayed out of green border on webpage. This does not look good. |
| Registration response to invalid data | Registration response to invalid data | X |  | Ok. |
| Registration data stored correctly in database | Registration data stored correctly in database | X |  | Ok. |
| Response if registration fails | Response if registration fails | X |  | Ok. |
| Client is redirected to the login page after registration is successful | Client is redirected to the login page after registration is successful | X |  | Ok. |

#### User Login

Tester: Morten Liknes Date: 04.04.2017

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Update fails with invalid phone number (< 8 digits / non-integer) |  |  |  |  |
| Update fails with null fields |  |  |  |  |

#### Become Attendee Function

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Apply To Attend Course Page Function | OK | FAIL | Description | Severity |
| Course details and appointments are displayed correctly | X |  | Ok. |  |
| Sorting Appointment data functions correctly | X |  | Ok. |  |
| “Cancel” button redirects to correct page | X |  | Ok. |  |
| When Apply to course button is clicked a message box with “Yes” and “No” buttons are displayed with a confirmation message. | X |  | Ok. |  |
| “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. | X |  | Ok. |  |
| “No” button hides the messagebox | X |  | Ok. |  |
| “Continue” button is displayed after attendance attempt | X |  | Ok. |  |
| “Continue” button redirects to correct page | X |  | Ok. |  |
| Response if attendee creation fails | X |  | Ok. |  |

#### Attendance History

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Appointment Attendance History Page Function | OK | FAIL | Description | Severity |
| Appointment table is displayed successfully | X |  | Ok. |  |
| Attendance time and date is displayed for the selected appointment | X |  | Ok. |  |
| Sorting appointment data functions correctly |  | X | Sorting is not working. | LOW |

### Native Test Cases

#### Attend Appointment

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

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

Tester: Morten Liknes Date: 04.04.2017

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attend Appointment Function | OK | FAIL | Description | Severity |
| Reading terminal prompts attendee to swipe his RFID tag | X |  | Ok. |  |
| Reading terminal stores attendance data in database successfully |  | X | Application crashes “Injection manager has stopped working” | Critical |
| Reading terminal displays message to attendee confirming successful registration |  | X | Caused by the fault above |  |
| Registration fails if attendee is not signed up for the appointment |  | X | Caused by the fault above |  |
| Response if registration fails |  | X | Caused by the fault above |  |

#### Attendance Registration Time

Tester: Morten Liknes Date: 04.04.2017

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