Music Use for People with Dementia : Completion and Handover Report

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Executive Summary

This document's main objective is to provide an in-depth analysis of the current project, testing all functionality of the mobile application and administration site. Any changes from the projects System Analysis and Design report are also outlined in this report. The report also includes the details of future work, any known bugs or issues as well as

Testing of the application and administration website took place to reveal any bugs or system issues. The details of all the tests, the expected result, the outcome of the testing and also any further actions are included. Testing covered app functionalities such as signing in/up/out (all validation and database communication), communication of survey results and answer validation, viewing and linking to songs and reading and viewing of information pages. Testing of the admin site involved testing the functionality of the editing, adding and deleting of users, questionnaires, songs and tags
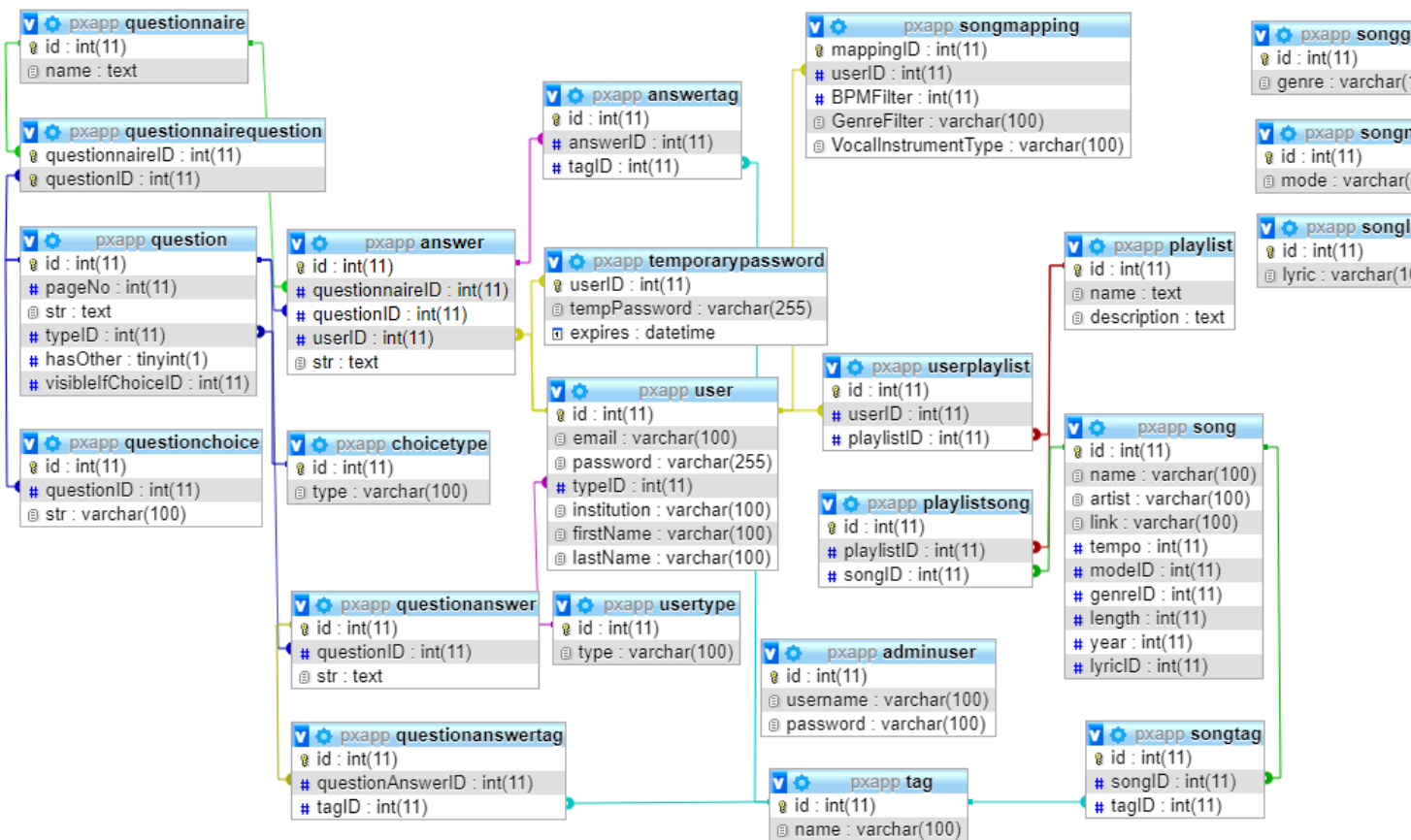
Table of Contents

Introduction

This document will take the contents of the project plan and project proposal into consideration in order to provide detailed testing results on the project systems and display tables and diagrams of the systems structure. The following pages provide an updated version of the database schema as well as the results of all tests conducted. Also provided is any identified bugs or issues and outlined is any future work suggested by our team. This document will provide an in depth insight into the current state of the project, what aspects have been completed and work successfully and any areas which will need improvement, fixing or further development.

1 - Implemented Database Schema

pxapp questionnaire
- id : int(11)
- name : text

pxapp questionnairequestion
- questionnaireID : int(11)
- questionID : int(11)

pxapp question
- id : int(11)
- pageNo : int(11)
- str : text
- typeID : int(11)
- hasOther : tinyint(1)
- visibleIfChoiceID : int(11)

pxapp questionchoice
- id : int(11)
- questionID : int(11)
- str : varchar(100)

pxapp answer
- id : int(11)
- questionnaireID : int(11)
- questionID : int(11)
- userID : int(11)
- str : text

pxapp choicetype
- id : int(11)
- type : varchar(100)

pxapp questionanswer
- id : int(11)
- questionID : int(11)
- str : text

pxapp questionanswertag
- id : int(11)
- questionAnswerID : int(11)
- tagID : int(11)

pxapp answertag
- id : int(11)
- answerID : int(11)
- tagID : int(11)

pxapp temporarypassword
- userID : int(11)
- tempPassword : varchar(255)
- expires : datetime

pxapp user
- id : int(11)
- email : varchar(100)
- password : varchar(255)
- typeID : int(11)
- institution : varchar(100)
- firstName : varchar(100)
- lastName : varchar(100)

pxapp usertype
- id : int(11)
- type : varchar(100)

pxapp adminuser
- id : int(11)
- username : varchar(100)
- password : varchar(100)

pxapp tag
- id : int(11)
- name : varchar(100)

pxapp songmapping
- mappingID : int(11)
- userID : int(11)
- BPMFilter : int(11)
- GenreFilter : varchar(100)
- VocalInstrumentType : varchar(100)

pxapp playlist
- id : int(11)
- name : text
- description : text

pxapp userplaylist
- id : int(11)
- userID : int(11)
- playlistID : int(11)

pxapp playlistsong
- id : int(11)
- playlistID : int(11)
- songID : int(11)

pxapp song
- id : int(11)
- name : varchar(100)
- artist : varchar(100)
- link : varchar(100)
- tempo : int(11)
- modeID : int(11)
- genreID : int(11)
- length : int(11)
- year : int(11)
- lyricID : int(11)

pxapp songtag
- id : int(11)
- songID : int(11)
- tagID : int(11)

pxapp songg...
- id : int(11)
- genre : varchar(1...

pxapp songm...
- id : int(11)
- mode : varchar(...

pxapp songl...
- id : int(11)
- lyric : varchar(10...

5

2 - Test Results

Use Case / Feature	Info Pages - Listview	
Test Purpose	List view loads all info pages and are clickable	
Expected Result	All info pages are displayed in listview and clicking on an item loads that info page	
Success/Failure	**Success**	
Test Data		
Column Name	**Set 1**	**Set 2**
Signed In	Yes	No
Expected Result	Success	Success
Success/Failure	Success	Success
Date Tested	8/10/19	8/10/19
Actions	No Action	No Action

Use Case / Feature	Info Pages - Listview Children	
Test Purpose	List view loads all info pages and children tabs are clickable	
Expected Result	All info pages are displayed in listview and clicking on a child tab loads that info page	
Success/Failure	**Success**	
Test Data		
Column Name	**Set 1**	**Set 2**
Signed In	Yes	No

Expected Result	Success	Success
Success/Failure	Success	Success
Date Tested	8/10/19	8/10/19
Actions	No Action	No Action

Use Case / Feature	Info Pages - Images and Text	
Test Purpose	Confirm all info pages with both images and text	
Expected Result	All info pages display the correct text and image as selected in the listview	
Success/Failure	**Success**	
Test Data		
Column Name	Set 1	Set 2
Signed In	Yes	No
Expected Result	Success	Success
Success/Failure	Success	Success
Date Tested	8/10/19	8/10/19
Actions	No Action	No Action

Use Case / Feature	Info Pages - Next Button
Test Purpose	Confirm all info pages with both images and text
Expected Result	All info pages display the correct text and image as selected in the listview
Success/Failure	**Failure (Optional Feature)**

Test Data		
Column Name	**Set 1**	**Set 2**
Signed In	Yes	No
Expected Result	Success	Success
Success/Failure	Failure	Failure
Date Tested	8/10/19	8/10/19
Actions	Functionality yet to be implemented	Functionality yet to be implemented

Use Case / Feature	Account : Sign In validation		
Test Purpose	Input validation (username required, password required, invalid email format)		
Expected Result	Email is only in an email format and password and email are entered		
Success/Failure	**Success**		
Test Data			
Column Name	**Set 1**	**Set 2**	**Set 3**
Email	test1@test.com	testtest.com	test3@test.com
Password	test1	test2	
Expected Result	Success (inputs accepted)	Failure (incorrect email format)	Failure (no password input)
Success/Failure	Success	Failure	Failure
Date Tested	8/10/19	8/10/19	8/10/19
Actions	No Action	No Action	No Action

Use Case / Feature	Account : Sign In break-in		
Test Purpose	Username manipulation (capitalisation, inserting random characters, etc.) , password manipulation		
Expected Result	Login is denied to all break in attempts		
Success/Failure	**Success**		
Test Data			
Column Name	Set 1	Set 2	Set 3
Email	test@email.com	123!$@%^&.com	TEst@EmaIL.com
Password	test1	test2	test
Expected Result	Login Failure (credentials are close, but not accurate)	Login Failure (invalid email format detected)	Login Failure (no password input)
Success/Failure	Login Failure	Login Failure	Login Failure
Date Tested	8/10/19	8/10/19	8/10/19
Actions	No Action	No Action	No Action

Use Case / Feature	Account : Restricted Access		
Test Purpose	Pages access when not signed in		
Expected Result	User can only access some pages when signed in		
Success/Failure	**Failure**		
Test Data			
Column Name	Set 1	Set 2	Set 3
Signed In	Yes	Yes	Yes
Page	Info Pages	Surveys	Songs

Expected Result	Access Success	Access Failure	AccessFailure
Success/Failure	Access Success	Access Success	AccessFailure
Date Tested	8/10/19	8/10/19	8/10/19
Actions	No Action	Users can access post-surveys, this needs to be restricted	No Action

Use Case / Feature	Account : Sign Out
Test Purpose	Signing out and users signing in again
Expected Result	Sign-out is successful and users are unable to sign in again without re-entering their details
Success/Failure	**Success**
Test Data	

Column Name	**Set 1**
Email	test@email.com
Password	test1
Expected Result	Log-out successful, User needs to re-enter credentials to log in
Success/Failure	Success
Date Tested	8/10/19
Actions	No Action

Use Case / Feature	Account : Sign Out in app locations
Test Purpose	Sign-out from app locations
Expected Result	Sign-out is successful from app locations (change

	password and account info)
Success/Failure	**Success**

Test Data	

Column Name	Set 1	Set 2
App Location	Change Password Page	Account Info Page
Expected Result	Logout Successful	Logout Successful
Success/Failure	Success	Success
Date Tested	8/10/19	8/10/19

Use Case / Feature	Account : Sign Up & Validation
Test Purpose	Sign-up and user being added to database
Expected Result	Sign-up is successful if all inputs are valid, the user is added to the database and able to sign-in
Success/Failure	**Success**

Test Data	

Column Name	Set 1	Set 2	Set 3
Email	testing@email.com	123!$@%^&.com	testing@email.com
Password	test		test
First Name, Last name and Institution	All fields have inputs	No field inputs	Some fields have inputs
Expected Result	Sign Up Success	Failure : Email format error, Password and other fields not entered error	Failure : Some fields do not have input errors
Success/Failure	Success	Failure	Failure

Date Tested	8/10/19	8/10/19	8/10/19
Actions	No Action	No Action	No Action

Use Case / Feature	Account : Information display
Test Purpose	Viewing user details
Expected Result	Signed in users able to view their correct details
Success/Failure	**Success**

Test Data	
Column Name	**Set 1**
Email	test@email.com
Password	test1
First Name, Last name and Institution	Test, tester, WSU
Expected Result	Display First name, Last name and Institution of the user for updating
Success/Failure	Success
Date Tested	8/10/19
Action	No Action

Use Case / Feature	Account : Update
Test Purpose	Sign-up and user being added to database
Expected Result	Sign-up is successful if all inputs are valid, the user is added to the database and able to sign-in
Success/Failure	**Success**

Test Data

Column Name	Set 1	Set 2	Set 3
First name / New First name	Test / Jake		
Last name / New Last name		Tester / Tom	
Institution / New Institution			WSU / UWS
Expected Result	Successfully updated in database and displayed next time info is viewed	Successfully updated in database and displayed next time info is viewed	Successfully updated in database and displayed next time info is viewed
Success/Failure	Success	Success	Success
Date Tested	8/10/19	8/10/19	8/10/19
Actions	No Action	No Action	No Action

Use Case / Feature	Account : Password Reset	
Test Purpose	App password reset functionality	
Expected Result	User receives email to reset password which allows the user to reset and update the database)	
Success/Failure	**Success**	
Test Data		
Column Name	Set 1	Set 2
Email	test1@email.com	test2@email.com
Reset Password Enterer	TESTING1	TESTING2
Expected Result	New Password entered saves in database for the user	New Password entered saves in database for the user
Success/Failure	Success	Success
Date Tested	12/10/19	12/10/19

Actions	No Action	No Action

Use Case / Feature	Surveys – Database
Test Purpose	Test that Surveys display in app for users
Expected Result	All Surveys in the database are displayed in the list view
Success/Failure	**Success**

<table>
<tr><td colspan="3" align="center">Test Data</td></tr>
<tr><td>Column Name</td><td>Set 1</td><td>Set 2</td></tr>
<tr><td>Surveys</td><td>Pre-surveys</td><td>Post-surveys</td></tr>
<tr><td>Expected Result</td><td>Display all surveys in a listview</td><td>Display all surveys in a listview</td></tr>
<tr><td>Success/Failure</td><td>Success</td><td>Success</td></tr>
<tr><td>Date Tested</td><td>12/10/19</td><td>12/10/19</td></tr>
<tr><td>Actions</td><td>No Action</td><td>No Action</td></tr>
</table>

Use Case / Feature	Surveys – Navigation Functionality
Test Purpose	Test that Surveys listview is functional
Expected Result	Clicking on the listview items opens the relevant survey
Success/Failure	**Success**

<table>
<tr><td colspan="3" align="center">Test Data</td></tr>
<tr><td>Column Name</td><td>Set 1</td><td>Set 2</td></tr>
<tr><td>Surveys</td><td>Pre-surveys</td><td>Post-surveys</td></tr>
<tr><td>Expected Result</td><td>Clicking on all the listview items open the relevant survey</td><td>Clicking on all the listview items open the relevant survey</td></tr>
</table>

Success/Failure	Success	Failure
Date Tested	12/10/19	12/10/19
Actions	No Action	Needs to be implemented

Use Case / Feature	Surveys – Questions Display	
Test Purpose	Test that Surveys Questions Display	
Expected Result	Clicking on the listview items opens the relevant survey which shows the questions and choices	
Success/Failure	**Success**	
Test Data		
Column Name	Set 1	Set 2
Surveys	Pre-surveys	Post-surveys
Expected Result	Each question page displays the correct question and answer choices	Each question page displays the correct question and answer choices
Success/Failure	Success	Success
Date Tested	12/10/19	12/10/19
Actions	No Action	No Action

Use Case / Feature	Surveys – Answer Display	
Test Purpose	Answers are displayed in survey	
Expected Result	If an answer exists in the survey then it is shown in the survey the next time it is selected	
Success/Failure	**Failure (Optional Feature)**	
Test Data		

Column Name	Set 1	Set 2
Surveys	Pre-surveys	Post-surveys
Expected Result	If an answer exists in the survey then it is shown in the survey	If an answer exists in the survey then it is shown in the survey
Success/Failure	Failure	Failure
Date Tested	12/10/19	12/10/19
Actions	Future Work	Future Work

Use Case / Feature	Surveys – Answer Validation	
Test Purpose	Answer inputs are validated	
Expected Result	Only valid inputs are accepted	
Success/Failure	**Success**	
Test Data		
Column Name	Set 1	Set 2
Surveys	Pre-surveys	Post-surveys
Expected Result	Before users can go to the next page there answers must be valid	Before users can go to the next page there answers must be valid
Success/Failure	Success	Success
Date Tested	12/10/19	12/10/19
Actions	No Action	No Action

Use Case / Feature		Admin Site – Sign In / Sign Out	
Test Purpose		Functionality of Sign In / Sign Out	
Expected Result		Only admin credentials sign in and sign out works	
Success/Failure		**Success**	
Test Data			
Column Name	Set 1		Set 2
Username	admin		admin
Password	admin		password
Sign Out Success	Success		
Expected Result	Success (Able to sign in and out of the admin site)		Failure (Unable to sign in)
Success/Failure	Success		Failure
Date Tested	12/10/19		12/10/19
Actions	No Action		No Action

Use Case / Feature		Admin Site – Manage Questionnaires	
Test Purpose		Add and edit questionnaire names	
Expected Result		Edits are saved and added surveys are saved in the database	
Success/Failure		**Success**	
Test Data			
Column Name	Set 1		Set 2

Questionnaire Management	Adding a Questionnaire	Editing the Questionnaire name
Expected Result	Questionnaires are able to be added, all options (adding page number, question name, choice type and if the question has an other option) are functional	The edited name is saved in the database and if it exists in the app it is updated
Success/Failure	Success	Success
Date Tested	12/10/19	12/10/19
Actions	Can add blank questions, blank question choices, no minimum choices for type. Future development could add this validation, not necessary for the project.	No Action

Use Case / Feature	Admin Site – Manage Questions		
Test Purpose	Ensure admin users can manage (edit, add, delete) questionnaires and their questions from the admin website		
Expected Result	Any changes (edits, additions or removals) are represented in the android application		
Success/Failure	**Success**		
Test Data			
Column Name	**Set 1**	**Set 2**	**Set 3**
Questionnaire 1, Question 1 (Before)	'In the last 2 weeks I have had little interest or pleasure in doing things'		
Questionnaire 1, Question 1 (After)	'Testing Set 1'		
Questionnaire 2, Page 1 (Before removal of question 1)		'Agitation or anxiety'	
Questionnaire 2, Page 1 (After removal of question 1)		'Withdrawal or Apathy'	

Questionnaire choices (Before addition)			5 choices for questions (radio buttons)
Questionnaire choices (After addition)			6 choices for questions (radio buttons)
Expected Result	Success (Display question 1 text as normal before change, display 'Testing Set 1' after change	Success (On page 1, display Question 1 before removal, display question 2 after removal)	Success (In question there are 5 radio button choices before the edit, then 6 after))
Success/Failure	Success	Success	Success
Date Tested	30/9/19	30/9/19	30/9/19
Actions	No Action	No Action	No Action

Use Case / Feature		Admin Site – Edit Users	
Test Purpose		Ensure admin users can manage (edit, add, delete) users from the admin website	
Expected Result		Any changes (edits, additions or removals) are represented in the android application	
Success/Failure		**Success**	
Test Data			
Column Name	**Set 1**	**Set 2**	**Set 3**
Email Address	test1@test.com	test2@test.com	test3@test.com
Password	test1		
New Password (Edited on Admin site)	test11		
First Name		John	
New First Name (Edited on Admin site)		TESTING	
Institution			WSU

New Institution (Edited on Admin site)			UWS
Expected Result	Success (Display new password in database and user can ONLY login with new password)	Success (first name changes in database and for user when they are logged in, changed from 'John' to 'TESTING'	Success (institution changes in database and for user when they are logged in, changed from 'WSU' to 'UWS'
Success/Failure	Success	Success	Success
Date Tested	30/9/19	30/9/19	30/9/19
Actions	No Action	No Action	No Action

Use Case / Feature	Admin Site – Manage Users		
Test Purpose	Ensure admin users can manage (edit, add, update password, check answers) a user from the admin website		
Expected Result	Any changes are represented in the android application		
Success/Failure	**Success**		
Test Data			
Column Name	**Set 1**	**Set 2**	**Set 3**
Email Address	test1@test.com	test2@test.com	test3@test.com
Type Changed	Email	First Name	Update Password
Old Value	test@email.com	test	test
New Value	testNEW@email.com	John	PassWord
Questionnaires viewable	Yes	Yes	Yes
Expected Result	Success (Display new value in database and displays in app)	Success (Display new value in database and displays in app)	Success (Password is update, login requires new password)
Success/Failure	Success	Success	Success

Date Tested	12/10/19	12/10/19	12/10/19
Actions	No Action	No Action	No Action

Use Case / Feature	Admin Site – Manage User		
Test Purpose	Ensure admin users can manage (edit, add, update password, check answers) a user from the admin website		
Expected Result	Any changes are represented in the android application		
Success/Failure	**Success**		
Test Data			
Column Name	Set 1	Set 2	Set 3
Email Address	test1@test.com	test2@test.com	test3@test.com
Type Changed	Email	First Name	Update Password
Old Value	test@email.com	test	test
New Value	testNEW@email.com	John	PassWord
Questionnaires viewable	Yes	Yes	Yes
Expected Result	Success (Display new value in database and displays in app)	Success (Display new value in database and displays in app)	Success (Password is update, login requires new password)
Success/Failure	Success	Success	Success
Date Tested	12/10/19	12/10/19	12/10/19
Actions	No Action	No Action	No Action

Use Case / Feature	Admin Site – Manage Questionnaires

Test Purpose		Answer inputs are validated	
Expected Result		Only valid inputs are accepted	
Success/Failure		**Success**	
Test Data			
Column Name	**Set 1**	**Set 2**	
Surveys	Pre-surveys	Post-surveys	
Expected Result	Before users can go to the next page there answers must be valid	Before users can go to the next page there answers must be valid	
Success/Failure	Success	Success	
Date Tested	12/10/19	12/10/19	
Actions	No Action	No Action	

Use Case / Feature		Manage Songs from Admin Site	
Test Purpose		Ensure admin users can manage (edit, add, delete) songs from the admin website	
Expected Result		Any changes (edits, additions or removals) are represented in the android application	
Success/Failure		**Success**	
Test Data			
Column Name	**Set 1**	**Set 2**	**Set 3**
Song Name	Water Music		
Song BPM		177	

Song Genre			Classical
New Song Name (Edited on Admin site)	TESTING Music		
New Song BPM (Edited on Admin site)		80	
New Song Genre (Edited on Admin site)			TESTING
Expected Result	Success (Display new song name in database, 'TESTING Music' replacing 'Water Music')	Success (Display new song BPM in database, 80 replacing 177)	Success (Display new song genre in database, 'Classical' replacing 'TESTING')
Success/Failure	Success	Success	Success
Date Tested	17/10/19	17/10/19	17/10/19
Actions	No Action	No Action	No Action

3 - Variations Report

The only variation from the SAD report is the new Database Schema.

4 - Bug Fixing & Development

4.1 Known Bugs

After testing was complete on the application and the admin site there weren't any bugs discovered to report.

4.2 Outstanding Development Work & Further Improvements

Android App
- Allow a carer to add patients under them.
- Allow a user to view/update their answers after completing a questionnaire.

Admin Site
- Allow an admin to add tags to multiple songs at once.

Server
- Take into account the user's preferences when generating a playlist.
- Delete existing playlists if the user generates another playlist.
- Only allow one user/admin to sign in to their account at a given time.
- Check that question page numbers start at 1 and are consecutive.

5 - Requirements & Setup

Requirements

- Node 10.16.2
- Apache, MySQL, phpMyAdmin
- Angular 8.2.4
    - Angular CLI 8.3.8

Setup

1. Import the SQL scripts located in `PXAppServer/sql` to MySQL. Make sure to run `px_create.sql` first and `insert_songs.sql` before `insert_playlists.sql`.
2. Change the options in `PXAppServer/config.js` to suit your needs.
3. In the root directory of `admin-site` and `PXAppServer`, open a terminal window and run `npm install`.
4. In the root directory of `admin-site`, run `ng build --prod`.
5. Copy (or symlink) `admin-site/dist/admin-site` to the root directory of `PXAppServer`.
6. In the root directory of `PXAppServer`, run `npm start.`

Conclusion

This document takes the contents of the project plan and project proposal into consideration in order to provide detailed testing results on the project systems and display tables and diagrams of the systems structure. The current document provides an updated version of the database schema as well as the results of all tests conducted. Also provided is any identified bugs or issues and outlined is any future work suggested by our team. This document has provided an in depth insight into the current state of the project, what aspects have been completed and work successfully and any areas which will need improvement, fixing or further development.