**COMP6030 – Software Testing**

Unit Test Plan

Class to test: CrownPassHolder

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| Test Case | Method and Parameters | Expected Output |
| Check in to Controlled Area | checkIn(ControlledArea) | Return newly created Visit Object. |
| Failed Check in to Controlled Area (Invalid Controlled Area) | checkIn(ControlledArea) | Error message raised stating that the Controlled Area supplied is invalid. |
| Failed to Check in to Controlled Area (Maximum Capacity Reached) | checkIn(ControlledArea) | Error message raised stating that the Controlled area is current at maximum capacity. |
| Failed to Check in to Controlled Area (User does not have Green InfectionState) | checkIn(ControlledArea) | Error message raised stating that the User does not qualify to enter Controlled Area due to their InfectionState not being green. |
| Check out of Controlled Area | checkOut(Visit) | CheckOutTime on latest Visit object in VisitationHistory is updated to the current time. |
| Failed to check out of Controlled Area (Already checked out) | checkOut(Visit) | Error message raised stating that Visit has already been checked out. |
| Failed to check out of Controlled Area (Not checked in/No Visit Exists) | checkOut(Visit) | Error message raised stating that the user does not have a Visit on record to be able to check out of. |
| Print CrownPass | printPass() | A copy of the CrownPassHolder object is sent to the printing service. |
| Unable to Print CrownPass | printPass() | Error message raised stating that the printing service is unavailable. |
| Notify CrownPassHolder | notifyUser(message:string) | Calls the Notification Service with the correct notification message. |
| Unable to Notify CrownPassHolder | notifyUser(message:string) | Error message raised stating the Notification Service is unavailable. |
| Book a vaccination | bookVaccination(VaccinationCenter,DateTime) | Calls the appointment service to create an appointment at the Vaccination Center at the specific time. Appointment Service should create a new Appointment object in user’s ‘Appointments’ property. |
| Unable to book vaccination at the provided time | bookVaccination(VaccinationCenter,DateTime) | Error message raised stating that the Appointments service was unable to book the correct time because the time was unavailable at that Vaccination Center. |
| Unable to book vaccination at the provided Vaccination Center | bookVaccination(VaccinationCenter,DateTime) | Error message raised stating that the Appointments service was unable to book because the Vaccination Center provided was invalid. |
| Display CrownPass of holder | displayPass() | Returns a copy of the CrownPassHolder object to the PassService so it can return it to the user device. |
| Unable to display CrownPass | displayPass() | Error message raised stating that the Pass service is unavailable. |
| Get ID of user | getCrownPassID() | Returns a uint64 number representing the CrownPass ID. |
| Get First Name of user | getFirstName() | Returns a string representing the first name of the CrownPass user. |
| Get Last Name of user | getLastName() | Returns a string representing the last name of the CrownPass user. |
| Get Contact Details of user | getContactDetails() | Returns a ContactDetails object containing the contact details for the CrownPass user. |
| Get file path of user’s photo | getPhotoFilePath() | Returns a string representing the file path where the user’s photo is stored on the web server. |
| Get file path of user’s QR code | getQRCodeFilePath() | Returns a string representing the file path where the user’s QR code is stored on the web server. |
| Get user’s gender | getGender() | Returns an EGender enumerable representing the user’s gender. |
| Get date of birth of user | getDateOfBirth() | Returns a DateTime representing the date of birth of the user. |
| Get vaccination state of user | getVaccinationState() | Returns an EVaccinationColor enumerable representing the vaccination state of the user. |
| Get infection state of user | getInfectionState() | Returns an EInfectionColor enumerable representing the infection state of the user. |
| Get history of visited controlled areas for user | getVisitationHistory() | Returns a list of Visit objects representing the history of Visits that a user has made to Controlled Areas. |
| Get user’s appointments | getAppointments() | Returns a list of Appointments representing the current appointments that the user has booked. |
| Set user’s name | setName(FirstName,LastName) | CrownPassHolder FirstName and LastName properties are updated to the new values. |
| Set user’s contact details | setContactDetails(ContactDetails) | CrownPassHolder’s ContactDetails field are updated to be the same as the ContactDetails object provided. |
| Set file path for user’s photo | setPhotoFilePath(string) | CrownPassHolder’s PhotoFilePath field is updated to the value provided. |
| Set file path for user’s QR code | setQRCodeFilePath(string) | CrownPassHolder’s QRCodeFilePath field is updated to the value provided. |
| Set user’s gender | setGender(EGender) | CrownPassHolder’s Gender field is updated to the value provided. |
| Set user’s date of birth | setDateOfBirth(DateTime) | CrownPassHolder’s DateOfBirth field is updated to the value provided. |
| Set user’s vaccination state | setVaccinationState(EVaccinationColor) | CrownPassHolder’s VaccinationState field is updated to the value provided. |
| Set user’s infection state | setInfectionState(EInfectionColor) | CrownPassHolder’s InfectionState field is updated to the value provided. |
| Authenticate user |  |  |
| Log out user |  |  |

System Test Plan

**Use Case: Display Pass**

Scenario 1: Successful request from user to display pass on their device.

Description of Scenario 1:

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| --- | --- | --- |
| User | CrownPassHolder MGMT Service | Database |
| 1. Authenticated user selects ‘Display Pass’ on their device. |  |  |
| 2. Device sends HTTP GET request to web server. | 3. CrownPass service receives request to get CrownPass for specified user. |  |
|  | 4. CrownPass service sends query to database to check CrownPassHolder data exists. | 5. Database receives query. |
|  | 7. CrownPass service receives data for CrownPassHolder from database. | 6. Database checks data exists. |
| 9. User receives HTTP OK Response with CrownPass data. | 8. CrownPass service builds a JSON object from received data to return in HTTP response payload. |  |
| 10. Mobile app formats data to display to user. |  |  |

Scenario 2: User data does not exist in database (Registration Incomplete).

Description of Scenario 2:

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| --- | --- | --- |
| User | CrownPassHolder MGMT Service | Database |
| 1. Authenticated user selects ‘Display Pass’ on their device. |  |  |
| 2. Device send HTTP GET request to web server. | 3. CrownPass service receives request to get CrownPass for specified user. |  |
|  | 4. CrownPass service send query to database to check CrownPassHolder data exists. | 5. Database receives query. |
|  | 7. CrownPass service receives error from database stating that data does not exist for user. | 6. Database checks data exists. |
| 9. User receives HTTP error response. | 8. CrownPass service sends HTTP error response. |  |
| 10. Mobile app redirects user to registration service to complete registration. |  |  |