COMP6030-Software Testing

Unit test plan

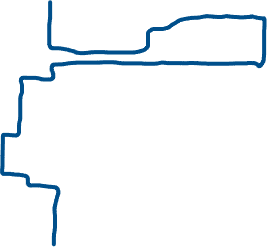
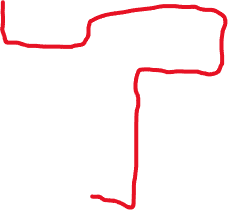
Class test: Controlled Area

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| --- | --- | --- |
| Test Case | Method and Parameters | Expected Output |
| Register Controlled area | Registerarea () | Return registered area |
| Failed to register controlled area | Registerarea ()) | Error message states invalid info to register area entered |
| Failed to register controlled area (name of the area) | Registerarea () | Error message states that the name of the area is not set or invalid |
| Failed to register controlled Area (Address of the area) | Registerarea () | Error message states that the Address inputted for area is not complete or address is invalid |
| Failed to register controlled Area (Maximum capacity not set) | Registerarea () | Error message states that the maximum capacity area has not been set for the area |
| Failed to register controlled Area (Type of area not set) | Registerarea () | Error message states the type of area has not been set or is invalid |
| Failed to register controlled Area (contact number) | Registerarea () | Error message states the contact number for area owner is not valid |
| Update controlled area info | Updatearea() | The registered area is shown on the system with edit functionality. |
| Unable to update controlled area | Updatearea() | Error message stating controlled area does not exist or area cannot be updated. |
| View registration data | Get controlledAreaInfo() | Display controlled area information on system |
| Unable to view registration data | Get controlledAreainfo() | Error message states that the area information requested does not exist or cannot be viewed |
| Notification | NotifyUser (in: string) | Area owner receives notification from crown pass if tested positive or infection state changed to red |
| Unable to receive notification | NotifyUser (in: string) | Error message states notification cannot be sent to area owner because of no contact details available. |
| Setup staff account | AreaOwner() | Returns staff account |
| Failed to setup staff account | AreaOwner() | Error message states staff account has not been fully setup. |
| View operation state | Get areaCapacity() | Return number of crown pass customers in the area |
| Unable to view operation state | Get areaCapacity() | Error message states number of crown pass holders not available in area |
| Set entry condition | Set vaccinationEntryCondition() | Returns vaccination entry condition set to green. |
| Unable to set entry condition | Set vaccinationEntryCondition() | Error messages states entry condition can only be set to green as default |
| Get area name of controlled area | Get AreaName() | Returns a string representing the name of a controlled area |
| get capacity of controlled area | Get areaCapacity() | Returns an int representing the maximum crownpass customers allowed in a controlled area |
| get registered information of controlled area | Get ControlledAreaInfo() | Returns an list of all information of a controlled area: name, address, type, capacity, contact number. |
| get area Identifier of controlled area | Get areaID() | Returns an int of an area identifier of a controlled area |
| get full address of controlled area | Get AreaAdress() | Returns an array of address information of a controlled area |
| Get infection state entry condition of controlled area | Get infectionEntryConditions() | Returns an EInfectionColour enumerable representing the infection states allowed in a controlled area |
| Get vaccination state entry condition of controlled area | Get vaccinationEntryCondition() | Returns an EVaccinationColour enumerable representing the vaccination states allowed in a controlled area. |
| Set area name of controlled area | Set AreaName(in: string ) | Name of a controlled area field is updated to the string provided |
| Set capacity of controlled area | Set capacity (in: uint32) | Maximum number of crown pass customers in controlled area updated to the value provided |
| Set area identifier of controlled area | Set areaID(controlled area) | Controlled area is set to have a unique identifier by the system automatically |
| Set address of controller | Set areaAddress(controlled area) | Controlled area address is updated to the value provided |
| Set infection state entry condition of controlled area | Set infectionEntryCondition(controlled area) | Controlled area infection state entry condition field is updated to the value provided |
| Set vaccination state entry condition of controlled area | Set vaccinationEntryCondition(controlled area) | Controlled area vaccination state entry condition field is updated to the value provided |

System test plan

Diagram

Description automatically generated



Use case: Set entry conditions for crownpass entry

Scenario 1: check condition on crownpass holder to allow entry to controlled area

|  |  |  |
| --- | --- | --- |
| User | Crownpass system | Database |
| 1. crownpass owner selects set entry condition for controlled area on the system |  |  |
| 2. systems send a HTTP request to the server | 3. crownpass service system receives request to set entry condition for the controlled area |  |
|  | 4. CrownPass service system sends query to database to check entry conditions available for the controlled area | 5. Database receives query. |
|  | 7. CrownPass system service receives data for entry conditions from database. | 6. Database checks data exists. |
|  | 8. crownpass system checks if infection state color is set to green condition |  |
|  | 9. crownpass system send HTTP response |  |
| 10. crownpass owner receives HTTP response |  |  |
| 11. crownpass owner sets entry condition for green vaccination to allow all states to controlled area |  |  |
| 12. crownpass owner sets entry condition for light blue to allow light and dark blue states to enter controlled area |  |  |
| 13. crownpass owner sets entry condition for dark blue to allows only dark blue states to enter controlled area |  |  |
| 14. system shows crownpass owner entry conditions for controlled area allowed message |  |  |

Test case 1:

|  |  |  |  |
| --- | --- | --- | --- |
| Test input | Stored data | Output | Test process |
| infectionEntrycondition | On system: areaID, areaAddress,areaType, areaContact, areaCapacity, infectionEntryCondition | Service report showing areaID, area address, type of area and the entry condition allowed of controlled area | 1. Create an controlled area in database and all fields are filled 2. Select set entry conditions on system 3. Check HTTP request is sent to the crownpass system. 4. Check HTTP request is received 5. Check database returns all infections states to choose from 6. Set infection state to allow 7. Set vaccinations states to allow 8. Check HTTP request is sent to the system 9. Check HTTP response is sent back to user interface 10. Ensure system displays allows vaccination states on controlled area |

Scenario 2: check condition on crownpass holder to deny entry to controlled area

|  |  |  |
| --- | --- | --- |
| User | Crownpass system | Database |
| 1. crownpass owner selects set entry condition for controlled area on the system |  |  |
| 2. systems send a HTTP request to the server | 3. crownpass service system receives request to set entry condition for the controlled area |  |
|  | 4. CrownPass service system sends query to database to check entry conditions available for the controlled area | 5. Database receives query. |
|  | 7. CrownPass system service receives data for entry conditions from database. | 6. Database checks data exists. |
|  | 8. crownpass system checks if infection state color is set to green condition |  |
|  | 9. crownpass system send HTTP response |  |
| 10. crownpass owner receives HTTP error response |  |  |
| 11. crownpass owner sets no entry for all condition not to enter controlled area |  |  |
| 12. system shows crownpass owner entry conditions for controlled area denied for all entry conditions |  |  |

Test case 2:

|  |  |  |  |
| --- | --- | --- | --- |
| Test input | Stored data | Output | Test process |
| infectionEntrycondition | On system: areaID, areaAddress,areaType, areaContact, areaCapacity, infectionEntryCondition | Service report showing areaID, area address, type of area and the entry condition allowed of controlled area | 1. Create an controlled area in database and all fields are filled 2. Select set entry conditions on system 3. Check HTTP request is sent to the crownpass system. 4. Check HTTP request is received 5. Check database returns all infections states to choose from 6. Set infection state to deny 7. Set vaccinations states to deny 8. Check HTTP request is sent to the system 9. Check HTTP response is sent back to user interface 10. Ensure system displays denial of vaccination states on controlled area |