Progress 2

**Unit Test Case X (UTC-0X):** getNearestHelpPlace(double userLatitude,double userLongitude,Integer categoryId) :HelpPlace

**Class name:** HelpPlaceServiceImplTest **Test Data:** Test Data1,2,3 in appendix A

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Case** | **Description** | **Input** | | | **Expected Result** | | | | | | | | |
| **User’s latitude** | **User’s longitude** | **Category’s Id** | **Help place object** | | | | | | | | |
| **Name** | **Address** | **District** | **Province** | **Zip code** | **Phone Number** | **Latitude** | **Longitude** | **Category** |
| 1 | Test find nearest help place by input category’s ID which is in database | 18.789643 | 98.969758 | 1 | Maharaj Nakorn Chiang Mai Hospital | 10 Suthep Rd | Mueang Chiang Mai | Chiang Mai | 50200 | 053947700 | 18.789602 | 98.974209 | Hospital |
| 2 | Test find nearest help place by input category’s ID which is not in database | 18.789643 | 98.969758 | 8 | null | | | | | | | | |

**Unit Test Case X (UTC-0X):** getHelpPlacesInScope(double userLatitude, double userLongitude, double scope)**:**List<HelpPlace>

**Class name:** HelpPlaceServiceImplTest **Test Data:** Test Data1,3 in appendix A

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Case** | **Description** | **Input** | | | **Expected Result** |
| **User’s latitude** | **User’s longitude** | **Scope(meter)** | **List of help place object** |
| **ID** |
| 1 | Test get help place by input scope which have help place locate | 18.789643 | 98.969758 | 1000 | 1 |
| 2 | Test get help place by input scope which have help place locate | 18.789643 | 98.969758 | 4000 | 1,2 |
| 3 | Test get help place by input scope which no have help place locate | 18.789643 | 98.969758 | 1 | Empty List |

**Unit Test Case X (UTC-0X):** getLatitudeDistance(double latitude)**:**double

**Class name:** HelpPlaceServiceImplTest **Test Data:** Test Data3 in appendix A

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expected Result** |
| **Latitude** | **Latitude surface distance** |
| 1 | Test get latitude surface distance by input latitude | 18.789643 | 110649.0 |
| 2 | Test get latitude surface distance by input latitude | 19.912221 | 110649.0 |

**Unit Test Case X (UTC-0X):** getLongitudeDistance(double longitude)**:**double

**Class name:** HelpPlaceServiceImplTest **Test Data:** Test Data3 in appendix A

|  |  |  |  |
| --- | --- | --- | --- |
| **Case** | **Description** | **Input** | **Expected Result** |
| **Latitude** | **Longitude surface distance** |
| 1 | Test get longitude surface distance by input latitude | 18.789602 | 107551.0 |
| 2 | Test get longitude surface distance by input latitude | 19.912221 | 107551.0 |

**Unit Test Case X (UTC-0X):** findDistance(double la1, double long1, double la2, double long2)**:**double

**Class name:** HelpPlaceServiceImplTest **Test Data:** Test Data1,3 in appendix A

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Case** | **Description** | **Input** | | | | **Expected Result** |
| **Place 1 Latitude** | **Place 1 Longitude** | **Place 2 Latitude** | **Place 2 Longitude** | **Distance (meter)** |
| 1 | Test get distance between two places by input latitude and longitude | 18.789643 | 98.969758 | 18.789602 | 98.974209 | 478.7309966661931 |
| 2 | Test get distance between two places by input latitude and longitude | 18.789643 | 98.969758 | 19.912221 | 99.832526 | 155044.92200234122 |

**Appendix A**

* Test Data 1

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Help Place Object** | | | | | | | | | |
| **ID** | **Name** | **Address** | **District** | **Province** | **Zip code** | **Phone Number** | **Latitude** | **Longitude** | **Category** |
| 1 | Maharaj Nakorn Chiang Mai Hospital | 10 Suthep Rd | Mueang Chiang Mai | Chiang Mai | 50200 | 053947700 | 18.789602 | 98.974209 | Hospital |
| 2 | Lanna Hospital | Chang Phuak | Mueang Chiang Mai | Chiang Mai | 50300 | 053999758 | 18.812723 | 98.991151 | Hospital |
| 3 | Lampang Hospital | Tambon Phrabat | Amphoe Mueang Lampang | Lampang | 52000 | 054237400 | 18.285378 | 99.506305 | Hospital |
| 4 | Chiang Rai Police Station | Rattanakeat Road | Mueang Chiang Rai | Chiang Rai | 57000 | 053603100 | 19.912221 | 99.832526 | Police Station |
| 5 | Ruangchai Yon Garage | Outer Ring Road | Saraphi District | Chiang Mai | 50000 | 053242999 | 18.750651 | 99.055108 | Garage |

* Test Data 2

|  |  |
| --- | --- |
| **Category Object** | |
| **ID** | **Name** |
| 1 | Hospital |
| 2 | Police Station |
| 3 | Garage |

* Test Data 3

|  |  |  |
| --- | --- | --- |
| **User Location** | | |
| **Name** | **Latitude** | **Longitude** |
| Chiangmai Neurological Hospital | 18.789643 | 98.969758 |