Test

Test ActivityDaoImpl

Aim of the test:

Developers can interact with the activity database.

Progress:

Progess-Sprint 2 Fix API Test

Requirment:

GA-BoxJelly requirments 5 (test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.6 testFindAllByAccessToken	We can find all activity by userAccessToken	1. created data by our own. 2. get the data from api. 3. compare the content.	Data0	the result of API is same as the result get by our creating	Pass
T02	R5.6 testSelectActivityDetailsByAccessToken	We can find all activity details by userAccessToken	1. created data by our own. 2. get the data from api. 3. compare the content.	Data1	the result of API is same as the result get by our creating	Pass
T03	R5.6 testInsertActivity	we can insert the activity to database.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data2	the result of API is same as the result get by our creating	Pass
T04	R5.6 testInsertActivityDetails	We can insert activity details to database.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data3	the result of API is same as the result get by our creating	Pass
T05	R5.6 testSelectActivityDetailsByActivityId	We can get the activity details by activity ID	1. created data by our own. 2. get the data from api. 3. compare the content.	Data1	the result of API is same as the result get by our creating	Pass
T06	R5.6 testSelectActivityDetailsByAccessTokenAndType	We can get the specific activities by userAccessToken and type.	1.created data by our own. 2. get the data from api. 3. compare the content.	Data1	the result of API is same as the result get by our creating	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

data 0:


```
"[{\n" +
" \"durationInSeconds\": 10,\n" +
" \"averageSpeedInMetersPerSecond\": 0.233,\n" +
" \"averageHeartRateInBeatsPerMinute\": 92,\n" +
" \"distanceInMeters\": 2.42,\n" +
" \"activityName\": \"Running\",\n" +
" \"userId\": \"898329394\",\n" +
" \"deviceName\": \"forerunner935\",\n" +
" \"averagePaceInMinutesPerKilometer\": 71.53076,\n" +
" \"activityId\": 10,\n" +
" \"startTimeInSeconds\": 1650191523,\n" +
" \"userAccessToken\": \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\",\n" +
" \"startTimeOffsetInSeconds\": 36000,\n" +
" \"maxPaceInMinutesPerKilometer\": 6.8956003,\n" +
" \"maxHeartRateInBeatsPerMinute\": 95,\n" +
" \"summaryId\": \"8654408419\",\n" +
" \"maxSpeedInMetersPerSecond\": 2.417,\n" +
" \"activityType\": \"RUNNING\"\n" +
"}]"
```


data 1:


```
"[\n" +
        "{\n" +
        "  \"summary\": {\n" +
        "    \"durationInSeconds\": 10,\n" +
        "    \"averageSpeedInMetersPerSecond\": 1.362,\n" +
        "    \"averageHeartRateInBeatsPerMinute\": 88,\n" +
        "    \"distanceInMeters\": 13.39,\n" +
        "    \"activityName\": \"Running\",\n" +
        "    \"deviceName\": \"forerunner935\",\n" +
        "    \"steps\": 4,\n" +
        "    \"averageRunCadenceInStepsPerMinute\": 25.09375,\n" +
        "    \"averagePaceInMinutesPerKilometer\": 12.236906,\n" +
        "    \"activityId\": 10,\n" +
        "    \"startTimeInSeconds\": 1650195177,\n" +
        "    \"startTimeOffsetInSeconds\": 36000,\n" +
        "    \"maxPaceInMinutesPerKilometer\": 4.8676014,\n" +
        "    \"maxHeartRateInBeatsPerMinute\": 93,\n" +
        "    \"maxRunCadenceInStepsPerMinute\": 138,\n" +
        "    \"maxSpeedInMetersPerSecond\": 3.424,\n" +
        "    \"activityType\": \"RUNNING\"\n" +
        "  },\n" +
        "  \"activityId\": 10,\n" +
        "  \"userAccessToken\": \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\",\n" +
        "  \"summaryId\": \"10-detail\",\n" +
        "  \"laps\": [\n" +
        "    {\n" +
        "      \"startTimeInSeconds\": 1650195177\n" +
        "    }\n" +
        "  ],\n" +
        "  \"userId\": \"898329394\",\n" +
        "  \"samples\": [\n" +
        "    {\n" +
        "      \"startTimeInSeconds\": 1650195177,\n" +
        "      \"timerDurationInSeconds\": 0,\n" +
        "      \"movingDurationInSeconds\": 0,\n" +
        "      \"heartRate\": 84,\n" +
        "      \"elevationInMeters\": 33.20000076293945,\n" +
        "      \"speedMetersPerSecond\": 0,\n" +
        "      \"clockDurationInSeconds\": 0,\n" +
        "      \"stepsPerMinute\": 0,\n" +
        "      \"airTemperatureCelcius\": 32,\n" +
        "      \"totalDistanceInMeters\": 0,\n" +
        "      \"latitudeInDegree\": -37.813,\n" +
        "      \"longitudeInDegree\":144.96\n" +
        "    },\n" +
        "    {\n" +
        "      \"startTimeInSeconds\": 1650195178,\n" +
        "      \"timerDurationInSeconds\": 1,\n" +
        "      \"movingDurationInSeconds\": 0,\n" +
        "      \"heartRate\": 86,\n" +
```

```
"      \"elevationInMeters\": 33.20000076293945,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 1,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.815,\n" +
"      \"longitudeInDegree\":144.95\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195182,\n" +
"      \"timerDurationInSeconds\": 5,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
"      \"heartRate\": 129,\n" +
"      \"elevationInMeters\": 31.799999237060547,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 5,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.816,\n" +
"      \"longitudeInDegree\":144.94\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195185,\n" +
"      \"timerDurationInSeconds\": 8,\n" +
"      \"movingDurationInSeconds\": 3,\n" +
"      \"heartRate\": 129,\n" +
"      \"elevationInMeters\": 31,\n" +
"      \"speedMetersPerSecond\": 3.4240000247955322,\n" +
"      \"clockDurationInSeconds\": 8,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 6.539999961853027,\n" +
"      \"latitudeInDegree\": -37.817,\n" +
"      \"longitudeInDegree\":144.93\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195187,\n" +
"      \"timerDurationInSeconds\": 10,\n" +
"      \"movingDurationInSeconds\": 5,\n" +
"      \"heartRate\": 112,\n" +
"      \"elevationInMeters\": 31,\n" +
"      \"speedMetersPerSecond\": 3.4240000247955322,\n" +
"      \"clockDurationInSeconds\": 10,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 13.390000343322754,\n" +
"      \"latitudeInDegree\": -37.818,\n" +
"      \"longitudeInDegree\":144.92\n" +
"    }\n" +
"  ]\n" +
"}\n" +
"]"
```

data 2:

```
"{\n" +
"  \"durationInSeconds\": 10,\n" +
"  \"averageSpeedInMetersPerSecond\": 0.233,\n" +
"  \"averageHeartRateInBeatsPerMinute\": 92,\n" +
"  \"distanceInMeters\": 2.42,\n" +
"  \"activityName\": \"Walking\",\n" +
"  \"userId\": \"898329394\",\n" +
"  \"deviceName\": \"forerunner935\",\n" +
"  \"averagePaceInMinutesPerKilometer\": 71.53076,\n" +
"  \"activityId\": 11,\n" +
"  \"startTimeInSeconds\": 1650191523,\n" +
"  \"userAccessToken\": \"7e88865e-eb7d-47c8-8418-80cd24bbd4e6\",\n" +
"  \"startTimeOffsetInSeconds\": 36000,\n" +
"  \"maxPaceInMinutesPerKilometer\": 6.8956003,\n" +
"  \"maxHeartRateInBeatsPerMinute\": 95,\n" +
"  \"summaryId\": \"8654408419\",\n" +
"  \"maxSpeedInMetersPerSecond\": 2.417,\n" +
"  \"activityType\": \"WALKING\"\n" +
"}"
```

data 3:

```
"{\n" +
"  \"summary\": {\n" +
"    \"durationInSeconds\": 10,\n" +
"    \"averageSpeedInMetersPerSecond\": 1.362,\n" +
"    \"averageHeartRateInBeatsPerMinute\": 88,\n" +
```

```
"    \"distanceInMeters\": 13.39,\n" +
"    \"activityName\": \"Walking\",\n" +
"    \"deviceName\": \"forerunner935\",\n" +
"    \"steps\": 4,\n" +
"    \"averageRunCadenceInStepsPerMinute\": 25.09375,\n" +
"    \"averagePaceInMinutesPerKilometer\": 12.236906,\n" +
"    \"activityId\": 11,\n" +
"    \"startTimeInSeconds\": 1650195177,\n" +
"    \"startTimeOffsetInSeconds\": 36000,\n" +
"    \"maxPaceInMinutesPerKilometer\": 4.8676014,\n" +
"    \"maxHeartRateInBeatsPerMinute\": 93,\n" +
"    \"maxRunCadenceInStepsPerMinute\": 138,\n" +
"    \"maxSpeedInMetersPerSecond\": 3.424,\n" +
"    \"activityType\": \"WALKING\"\n" +
"  },\n" +
"  \"activityId\": 11,\n" +
"  \"userAccessToken\": \"7e88865e-eb7d-47c8-8418-80cd24bbd4e6\",\n" +
"  \"summaryId\": \"11-detail\",\n" +
"  \"laps\": [\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195177\n" +
"    }\n" +
"  ],\n" +
"  \"userId\": \"898329394\",\n" +
"  \"samples\": [\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195177,\n" +
"      \"timerDurationInSeconds\": 0,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
"      \"heartRate\": 84,\n" +
"      \"elevationInMeters\": 33.20000076293945,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 0,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.813,\n" +
"      \"longitudeInDegree\":144.96\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195178,\n" +
"      \"timerDurationInSeconds\": 1,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
"      \"heartRate\": 86,\n" +
"      \"elevationInMeters\": 33.20000076293945,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 1,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.815,\n" +
"      \"longitudeInDegree\":144.95\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195182,\n" +
"      \"timerDurationInSeconds\": 5,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
"      \"heartRate\": 129,\n" +
"      \"elevationInMeters\": 31.799999237060547,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 5,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.816,\n" +
"      \"longitudeInDegree\":144.94\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195185,\n" +
"      \"timerDurationInSeconds\": 8,\n" +
"      \"movingDurationInSeconds\": 3,\n" +
"      \"heartRate\": 129,\n" +
"      \"elevationInMeters\": 31,\n" +
"      \"speedMetersPerSecond\": 3.4240000247955322,\n" +
"      \"clockDurationInSeconds\": 8,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 6.539999961853027,\n" +
"      \"latitudeInDegree\": -37.817,\n" +
"      \"longitudeInDegree\":144.93\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195187,\n" +
"      \"timerDurationInSeconds\": 10,\n" +
```

```
"      \"movingDurationInSeconds\": 5,\n" +
"      \"heartRate\": 112,\n" +
"      \"elevationInMeters\": 31,\n" +
"      \"speedMetersPerSecond\": 3.4240000247955322,\n" +
"      \"clockDurationInSeconds\": 10,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 13.390000343322754,\n" +
"      \"latitudeInDegree\": -37.818,\n" +
"      \"longitudeInDegree\":144.92\n" +
"    }\n" +
"  ]\n" +
"}"
```

Test ActivityDataRetrieveController

Aim of the test:

the activity data can be retrieved.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.1 testGetActivityByAccessToken	we can use the user accesstoken to get the activity list	1. created data by our own. 2. get the data from api. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass
T02	R5.1 testGetActivityDetailsByAccessToken	we can use the user accesstoken to get the activity details list	1. created data by our own. 2. get the data from api. 3. compare the content.	Data1	the result of API is same as the result get by our creating	Pass
T03	R5.1 testGetActivityDetailsByActivityId	we can use the activity id to get the activity details list	1. created data by our own. 2. get the data from api. 3. compare the content.	Data1	the result of API is same as the result get by our creating	Pass
T04	R5.1 testGetActivityByAccessTokenAndType	We can use userAccessToken and its type to find activities.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data0	the result of API is same as the result get by our creating	Pass
T05	R5.1 testGetDashboardStatisticsByAccessToken	We can get the Dashboard statistics data by userAccess Token.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data2	the result of API is same as the result get by our creating	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

Data 0:[{
  "durationInSeconds": 10,
  "averageSpeedInMetersPerSecond": 0.233,
  "averageHeartRateInBeatsPerMinute": 92,
  "distanceInMeters": 2.42,
  "activityName": "Running",
  "userId": "898329394",
  "deviceName": "forerunner935",
  "averagePaceInMinutesPerKilometer": 71.53076,
  "activityId": 10,
  "startTimeInSeconds": 1650191523,
  "userAccessToken": "bd5b13a9-9eed-4204-a807-94bf0eb06356",
  "startTimeOffsetInSeconds": 36000,
  "maxPaceInMinutesPerKilometer": 6.8956003,
  "maxHeartRateInBeatsPerMinute": 95,
  "summaryId": "8654408419",
  "maxSpeedInMetersPerSecond": 2.417,
  "activityType": "RUNNING"
}]

Data 1:{
  "summary": {
    "durationInSeconds": 10,
    "averageSpeedInMetersPerSecond": 1.362,
    "averageHeartRateInBeatsPerMinute": 88,
    "distanceInMeters": 13.39,
    "activityName": "Running",
    "deviceName": "forerunner935",
    "steps": 4,
    "averageRunCadenceInStepsPerMinute": 25.09375,
    "averagePaceInMinutesPerKilometer": 12.236906,
    "activityId": 10,
    "startTimeInSeconds": 1650195177,
    "startTimeOffsetInSeconds": 36000,
    "maxPaceInMinutesPerKilometer": 4.8676014,
    "maxHeartRateInBeatsPerMinute": 93,
    "maxRunCadenceInStepsPerMinute": 138,
    "maxSpeedInMetersPerSecond": 3.424,
    "activityType": "RUNNING"
  },
  "activityId": 10,
  "userAccessToken": "bd5b13a9-9eed-4204-a807-94bf0eb06356",
  "summaryId": "10-detail",
  "laps": [
    {
      "startTimeInSeconds": 1650195177
    }
  ],
  "userId": "898329394",
  "samples": [
    {
      "startTimeInSeconds": 1650195177,
      "timerDurationInSeconds": 0,
      "movingDurationInSeconds": 0,
      "heartRate": 84,
      "elevationInMeters": 33.20000076293945,
      "speedMetersPerSecond": 0,
      "clockDurationInSeconds": 0,
      "stepsPerMinute": 0,
      "airTemperatureCelcius": 32,
      "totalDistanceInMeters": 0,
      "latitudeInDegree": -37.813,
      "longitudeInDegree":144.96
    },
    {
      "startTimeInSeconds": 1650195178,
      "timerDurationInSeconds": 1,
      "movingDurationInSeconds": 0,
      "heartRate": 86,
      "elevationInMeters": 33.20000076293945,
      "speedMetersPerSecond": 0,
      "clockDurationInSeconds": 1,
      "stepsPerMinute": 0,
      "airTemperatureCelcius": 32,
      "totalDistanceInMeters": 0,
      "latitudeInDegree": -37.815,
      "longitudeInDegree":144.95
    },
    {

```
    "startTimeInSeconds": 1650195182,
    "timerDurationInSeconds": 5,
    "movingDurationInSeconds": 0,
    "heartRate": 129,
    "elevationInMeters": 31.799999237060547,
    "speedMetersPerSecond": 0,
    "clockDurationInSeconds": 5,
    "stepsPerMinute": 0,
    "airTemperatureCelcius": 32,
    "totalDistanceInMeters": 0,
    "latitudeInDegree": -37.816,
    "longitudeInDegree":144.94
   },
   {
    "startTimeInSeconds": 1650195185,
    "timerDurationInSeconds": 8,
    "movingDurationInSeconds": 3,
    "heartRate": 129,
    "elevationInMeters": 31,
    "speedMetersPerSecond": 3.4240000247955322,
    "clockDurationInSeconds": 8,
    "stepsPerMinute": 0,
    "airTemperatureCelcius": 32,
    "totalDistanceInMeters": 6.539999961853027,
    "latitudeInDegree": -37.817,
    "longitudeInDegree":144.93
   },
   {
    "startTimeInSeconds": 1650195187,
    "timerDurationInSeconds": 10,
    "movingDurationInSeconds": 5,
    "heartRate": 112,
    "elevationInMeters": 31,
    "speedMetersPerSecond": 3.4240000247955322,
    "clockDurationInSeconds": 10,
    "stepsPerMinute": 0,
    "airTemperatureCelcius": 32,
    "totalDistanceInMeters": 13.390000343322754,
    "latitudeInDegree": -37.818,
    "longitudeInDegree":144.92
   }
  ]
}
```


Data2:

```
"{\n" +
        "    \"userAccessToken\" : \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\",\n" +
        "    \"ttlActivityTimes\" : 3,\n" +
        "    \"ttlRunningTimes\" : 3,\n" +
        "    \"ttlRiddingTimes\" : 0,\n" +
        "    \"ttlSwimmingTimes\" : 0,\n" +
        "    \"ttlActivityTime\" : 0.0,\n" +
        "    \"ttlRunningTime\" : 0.0,\n" +
        "    \"ttlRiddingTime\" : 0.0,\n" +
        "    \"ttlSwimmingTime\" : 0.0,\n" +
        "    \"activityTimeChartMap\" : {\n" +
        "        \"RiddingTime\" : {\n" +
        "            \"actual\" : [\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0\n" +
        "            ],\n" +
        "            \"except\" : [\n" +
        "                90,\n" +
        "                90,\n" +
        "                90,\n" +
        "                90,\n" +
        "                90,\n" +
        "                90,\n" +
        "                90\n" +
        "            ]\n" +
        "        },\n" +
        "        \"AllTime\" : {\n" +
        "            \"actual\" : [\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
```

```
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0\n" +
"            ],\n" +
"            \"except\" : [\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        },\n" +
"        \"SwimmingTime\" : {\n" +
"            \"actual\" : [\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0\n" +
"            ],\n" +
"            \"except\" : [\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        },\n" +
"        \"RunningTime\" : {\n" +
"            \"actual\" : [\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0\n" +
"            ],\n" +
"            \"except\" : [\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        }\n" +
"    },\n" +
"    \"radarActivities\" : {\n" +
"        \"RUNNING\" : {\n" +
"            \"time\" : 0.0,\n" +
"            \"calories\" : 0,\n" +
"            \"distance\" : 7.26,\n" +
"            \"avgSpeed\" : 0.0,\n" +
"            \"peakSpeed\" : 2.417,\n" +
"            \"avgHeartRate\" : 0\n" +
"        },\n" +
"        \"OPEN_WATER_SWIMMING\" : {\n" +
"            \"time\" : 0.0,\n" +
"            \"calories\" : 0,\n" +
"            \"distance\" : 0.0,\n" +
"            \"avgSpeed\" : 0.0,\n" +
"            \"peakSpeed\" : 0.0,\n" +
"            \"avgHeartRate\" : 0\n" +
"        },\n" +
"        \"ROAD_BIKING\" : {\n" +
"            \"time\" : 0.0,\n" +
"            \"calories\" : 0,\n" +
"            \"distance\" : 0.0,\n" +
"            \"avgSpeed\" : 0.0,\n" +
"            \"peakSpeed\" : 0.0,\n" +
"            \"avgHeartRate\" : 0\n" +
"        }\n" +
"    },\n" +
"    \"hearRateZones\" : [\n" +
"        [\n" +
```

```
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ]\n" +
"    ],\n" +
"}\n"
```

Test DashboardStatisticsDao

Aim of the test:

We can interact with the Dashboard database

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.7 testInsertDashboardStatistics	we can insert Dashboard Statistics to database.	1.check if the specific data is null. 2. created data by our own and insert it. 3. get the data from api. 4. compare the content.	Data 0	the result of database is same as the result get by our creating	Pass
T02	R5.7 testSelectDashboardStaticByAccessToken	we can use the user accesstoken to get the dashboard Static data.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data0	the result of API is same as the result get by our creating	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

Data 0:

```
"{\n" +
        "    \"userAccessToken\" : \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\",\n" +
        "    \"ttlActivityTimes\" : 3,\n" +
        "    \"ttlRunningTimes\" : 3,\n" +
        "    \"ttlRiddingTimes\" : 0,\n" +
        "    \"ttlSwimmingTimes\" : 0,\n" +
        "    \"ttlActivityTime\" : 0.0,\n" +
        "    \"ttlRunningTime\" : 0.0,\n" +
        "    \"ttlRiddingTime\" : 0.0,\n" +
        "    \"ttlSwimmingTime\" : 0.0,\n" +
        "    \"activityTimeChartMap\" : {\n" +
        "        \"RiddingTime\" : {\n" +
        "            \"actual\" : [\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0,\n" +
        "                0\n" +
        "            ],\n" +
        "            \"except\" : [\n" +
        "                90,\n" +
        "                90,\n" +
        "                90,\n" +
        "                90,\n" +
```

```
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        },\n" +
"        \"AllTime\" : {\n" +
"            \"actual\" : [\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0\n" +
"            ],\n" +
"            \"except\" : [\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        },\n" +
"        \"SwimmingTime\" : {\n" +
"            \"actual\" : [\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0\n" +
"            ],\n" +
"            \"except\" : [\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        },\n" +
"        \"RunningTime\" : {\n" +
"            \"actual\" : [\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0,\n" +
"                0\n" +
"            ],\n" +
"            \"except\" : [\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90,\n" +
"                90\n" +
"            ]\n" +
"        }\n" +
"    },\n" +
"    \"radarActivities\" : {\n" +
"        \"RUNNING\" : {\n" +
"            \"time\" : 0.0,\n" +
"            \"calories\" : 0,\n" +
"            \"distance\" : 7.26,\n" +
"            \"avgSpeed\" : 0.0,\n" +
"            \"peakSpeed\" : 2.417,\n" +
"            \"avgHeartRate\" : 0\n" +
"        },\n" +
"        \"OPEN_WATER_SWIMMING\" : {\n" +
"            \"time\" : 0.0,\n" +
"            \"calories\" : 0,\n" +
"            \"distance\" : 0.0,\n" +
"            \"avgSpeed\" : 0.0,\n" +
"            \"peakSpeed\" : 0.0,\n" +
"            \"avgHeartRate\" : 0\n" +
"        },\n" +
"        \"ROAD_BIKING\" : {\n" +
```

```
"            \"time\" : 0.0,\n" +
"            \"calories\" : 0,\n" +
"            \"distance\" : 0.0,\n" +
"            \"avgSpeed\" : 0.0,\n" +
"            \"peakSpeed\" : 0.0,\n" +
"            \"avgHeartRate\" : 0\n" +
"        }\n" +
"    },\n" +
"    \"hearRateZones\" : [\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ],\n" +
"        [\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0,\n" +
"            0.0\n" +
"        ]\n" +
"    ],\n" +
"}\n"
```

Test generateRequestTokenSecret

Aim of the test:

We can generate token and its secret and then store to database

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.8 testGenerateRequestTokenSecret	we can generate the token and secret and then store to database.	1. created data by our own. 2. get the data from api. 3. compare the content.	it is randomly generated	generate successfully	Pass

Test developers:

Yuhang Yao, Yukun Li

Test ActivityServiceImpl

Aim of the test:

Activities, activity details can be inserted and be searched with enough information.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.11 selectActivityByAccessToken()	Test functionality and make sure activities can be obtained using accessToken.	1. Copy activities from database 2. Run the function using the accessToken. 3. compare the result of activity lists.	Data 0	The activities obtained using the function is the same as those in the database.	Pass
T02	R5.11 selectActivityDetailsByAccessToken()	Test functionality and make sure activity details can be obtained using accessToken.	1. Copy activity details from database 2. Run the function using the accessToken. 3. compare the result of activity detail lists.	Data 1	The activity details obtained using the function is the same as those in the database.	Pass
T03	R5.11 selectActivityDetailsByActivityId()	Test functionality and make sure activities can be obtained using activityID.	1. Copy activities from database 2. Run the function using the activityID. 3. compare the result of activity lists.	Data 0	The activities obtained using the function is the same as those in the database.	Pass
T04	R5.11 insertActivity()	Test functionality and make sure new activities can be inserted.	1. Make sure the activity to be inserted is not in the database. 2. Run the function to insert. 3. Check if the activity can be found in the database.	new Activity()	The inserted activity is in the database.	Pass
T05	R5.11 insertActivityDetail()	Test functionality and make sure new activity details can be inserted.	1. Make sure the activity detail to be inserted is not in the database. 2. Run the function to insert. 3. Check if the activity details can be found in the database.	new ActivityDetails()	The inserted activity details are in the database.	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

Data 0:

```
"{\n" +
        "  \"durationInSeconds\": 10,\n" +
        "  \"averageSpeedInMetersPerSecond\": 0.233,\n" +
        "  \"averageHeartRateInBeatsPerMinute\": 92,\n" +
        "  \"distanceInMeters\": 2.42,\n" +
        "  \"activityName\": \"Running\",\n" +
        "  \"userId\": \"898329394\",\n" +
        "  \"deviceName\": \"forerunner935\",\n" +
        "  \"averagePaceInMinutesPerKilometer\": 71.53076,\n" +
        "  \"activityId\": 10,\n" +
        "  \"startTimeInSeconds\": 1650191523,\n" +
        "  \"userAccessToken\": \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\",\n" +
        "  \"startTimeOffsetInSeconds\": 36000,\n" +
        "  \"maxPaceInMinutesPerKilometer\": 6.8956003,\n" +
        "  \"maxHeartRateInBeatsPerMinute\": 95,\n" +
        "  \"summaryId\": \"8654408419\",\n" +
        "  \"maxSpeedInMetersPerSecond\": 2.417,\n" +
        "  \"activityType\": \"RUNNING\"\n" +
        "}"
```

Data 1:

```
"{\n" +
"  \"summary\": {\n" +
"    \"durationInSeconds\": 10,\n" +
"    \"averageSpeedInMetersPerSecond\": 1.362,\n" +
"    \"averageHeartRateInBeatsPerMinute\": 88,\n" +
"    \"distanceInMeters\": 13.39,\n" +
"    \"activityName\": \"Running\",\n" +
"    \"deviceName\": \"forerunner935\",\n" +
"    \"steps\": 4,\n" +
"    \"averageRunCadenceInStepsPerMinute\": 25.09375,\n" +
"    \"averagePaceInMinutesPerKilometer\": 12.236906,\n" +
"    \"activityId\": 10,\n" +
"    \"startTimeInSeconds\": 1650195177,\n" +
"    \"startTimeOffsetInSeconds\": 36000,\n" +
"    \"maxPaceInMinutesPerKilometer\": 4.8676014,\n" +
"    \"maxHeartRateInBeatsPerMinute\": 93,\n" +
"    \"maxRunCadenceInStepsPerMinute\": 138,\n" +
"    \"maxSpeedInMetersPerSecond\": 3.424,\n" +
"    \"activityType\": \"RUNNING\"\n" +
"  },\n" +
"  \"activityId\": 10,\n" +
"  \"userAccessToken\": \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\",\n" +
"  \"summaryId\": \"10-detail\",\n" +
"  \"laps\": [\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195177\n" +
"    }\n" +
"  ],\n" +
"  \"userId\": \"898329394\",\n" +
"  \"samples\": [\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195177,\n" +
"      \"timerDurationInSeconds\": 0,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
"      \"heartRate\": 84,\n" +
"      \"elevationInMeters\": 33.20000076293945,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 0,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.813,\n" +
"      \"longitudeInDegree\":144.96\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195178,\n" +
"      \"timerDurationInSeconds\": 1,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
"      \"heartRate\": 86,\n" +
"      \"elevationInMeters\": 33.20000076293945,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 1,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.815,\n" +
"      \"longitudeInDegree\":144.95\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195182,\n" +
"      \"timerDurationInSeconds\": 5,\n" +
"      \"movingDurationInSeconds\": 0,\n" +
```

```
"      \"heartRate\": 129,\n" +
"      \"elevationInMeters\": 31.799999237060547,\n" +
"      \"speedMetersPerSecond\": 0,\n" +
"      \"clockDurationInSeconds\": 5,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 0,\n" +
"      \"latitudeInDegree\": -37.816,\n" +
"      \"longitudeInDegree\":144.94\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195185,\n" +
"      \"timerDurationInSeconds\": 8,\n" +
"      \"movingDurationInSeconds\": 3,\n" +
"      \"heartRate\": 129,\n" +
"      \"elevationInMeters\": 31,\n" +
"      \"speedMetersPerSecond\": 3.4240000247955322,\n" +
"      \"clockDurationInSeconds\": 8,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 6.539999961853027,\n" +
"      \"latitudeInDegree\": -37.817,\n" +
"      \"longitudeInDegree\":144.93\n" +
"    },\n" +
"    {\n" +
"      \"startTimeInSeconds\": 1650195187,\n" +
"      \"timerDurationInSeconds\": 10,\n" +
"      \"movingDurationInSeconds\": 5,\n" +
"      \"heartRate\": 112,\n" +
"      \"elevationInMeters\": 31,\n" +
"      \"speedMetersPerSecond\": 3.4240000247955322,\n" +
"      \"clockDurationInSeconds\": 10,\n" +
"      \"stepsPerMinute\": 0,\n" +
"      \"airTemperatureCelcius\": 32,\n" +
"      \"totalDistanceInMeters\": 13.390000343322754,\n" +
"      \"latitudeInDegree\": -37.818,\n" +
"      \"longitudeInDegree\":144.92\n" +
"    }\n" +
"  ]\n" +
"}\n" ;
```

Test UserServiceImpl

Aim of the test:

Make sure user services function normally.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.12 testLoginCheck()	Test functionality and make sure newly registered user can log in.	1. Register a new user. 2. Make sure the user can log in. 3. Remove the user	Data 0	The contents of testPartner and the userPartner are identical using register and logincheck.	Pass
T02	R5.12 testGetUser()	Test functionality and make sure newly registered user can be obtained.	1. Register a new user. 2. Make sure the user can be found.	Data 0	The contents of testPartner and the userPartner are identical using register and getUser.	Pass
T03	R5.12 testGetUserByToken()	Test functionality and make sure the newly registered user can be found using the access Token.	1. Register a new user. 2. Make sure the user can be found using the accessToken.	Data 0	The contents of testPartner and the userPartner are identical using register and getUserByToken.	Pass
T04	R5.12 testRegister()	Test functionality and make sure newly registered user can log in.	1. Register a new user. 2. Make sure the user can log in. 3. Remove the user	Data 0	The contents of testPartner and the userPartner are identical using register and logincheck.	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

Data 0:

```
testUser = new UserPartner();
testUser.setUsername("testUser");
testUser.setEmail("testUser@gmail.com");
testUser.setPassword("password");
testUser.setToken("token");
testUser.setTokenDate(new Date());
```

Test LoginController

Aim of the test:

Existing users can log in.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.3 testLogin()	Test functionality and make sure existing users can log in.	1. Copy user data from database 2. Log in using the function given username and password. 3. compare the result.	Data 0	the result of API is same as the data in database	Pass
T02	R5.3 testGetaInfo()	Test functionality and make sure user info can be accessed given the Token	1. Copy user data from database 2. Get user info using the given token. 3. compare the result.	Data0	the result of API is same as the user info in database	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

Data 0:

```
"{\n" +
        "    \"userId\" : \"898329415\",\n" +
        "    \"username\" : \"0424\",\n" +
        "    \"fullname\" : \"0424\",\n" +
        "    \"email\" : \"cxvjier@gmail.com\",\n" +
        "    \"password\" : \"$2a$10$mxeHz85HLm5eBUU.9T/6ZeTyMsi4a7CyvMSM9C2hXGe/A0BS3686e\",\n" +
        "    \"token\" : \"523ed521-7e7d-48ed-a08d-28fb12e757b8\",\n" +
        "    \"tokenDate\" : \"2023-04-24T04:00:37.361+0000\",\n" +
        "    \"userAccessSecret\" : \"gHRxkZnGWB6WQKXYl15pMoG4e2uDkr65cYe\",\n" +
        "    \"userAccessToken\" : \"2d7c25b2-27f5-4974-a82f-2a9e41502b9f\"\n" +
        "}\n";
```

Test of Code Cleaning

Aim of the test:

Ensure that the implemented normal functions of the back-end code are not affected by the progress of code cleaning.

Progress

Code cleaning

Requirment:

Requirments 1(Code cleaning)

Test specification

Test Case ID	Requirment	Test Case	Test Steps	Test Data	Expected Result	Pass/ Fail
T01	R1	Log in Testing Account to view Activity List and then view the activity type with the icon, activity name and activity date for this activity.	1) Log in to the testing account. 2) Click the Activities button on the left side. 3) View the activity list.	User ID: 0402 Password AAAAaaaa1111	• The activity list can be shown on the right side. • The event icon, event type, activity name and activity date were loaded successfully.	Pass
T02	R1	View the total distance for this type of activity.	1) View the total distance from the activity list. 2) Click one of the activities, and then view the total distance on the activity detailed page.	Activity Data	• The total distance (km) could be viewed from the activity list. • The total distance (km) could be viewed from the activity detailed page.	Pass
T03	R1	View the total time for this type of activity.	1) View the total time from the activity list. 2) Click one of the activities, and then view the total time on the activity detailed page.	Activity Data	• The total time (xx:yy:zz) could be viewed from the activity list. • The total time (xx:yy:zz) could be viewed from the activity detailed page.	Pass
T04	R1	View the average speed for this type of activity.	1) View the average speed from the activity list. 2) Click one of the activities, and then view the average speed on the activity detailed page.	Activity Data	• The average speed(km/h) could be viewed from the activity list. • The average speed(km/h) could be viewed from the activity detailed page.	Pass
T05	R1	View the ascent or descent distance for this type of activity.	1) View the ascent or descent distance from the activity list. 2) Click one of the activities, and then view the ascent or descent distance on the activity detailed page.	Activity Data	• The ascent or descent distance (m) could be viewed from the activity list. • The ascent or descent distance(m) could be viewed from the activity detailed page.	Pass
T06	R1	View the average heart rate.	1) View the average heart rate from the activity list. 2) Click one of the activities, and then view the average heart rate on the activity detailed page.	Activity Data	• The average heart rate could be viewed from the activity list. • The average heart rate could be viewed from the activity detailed page.	Pass
T07	R1	View the activity in descending order	1) Click the activity button on the left side. 2) The activity is in descending order (latest).	Activity Data	• The descending ordering was displayed success.	Pass

T08	R1	View the sports route on the heatmap for this activity.	1) Click one of the activities from the activity list. 2) The heat map with the sports route will be shown on the detailed page.	Activity Data	• The sports route was loaded successfully • The sports route has its starting point and ending point	Pass
T09	R1	Different levels for heart rate and power with colour and number range.	1) Could be tested with T10 together or tested by console log.	Activity Data	• The heart rate and power have been set into different levels with colour and range.	Pass
T10	R1	View the sports heatmap	1)Click one of the activity 2)The heatmap was loaded success	Activity Data	• The colours are loaded in the heatmap successfully.	Pass
T11	R1	Apply additional functions (zoom in, zoom out, drag) for the heatmap.	1)Click one of the activity 2)Viewing the heatmap 3) Click the "+" button to zoom in and use the "-" button to zoom out 4) Using the mouse directly to drag the map.	Activity Data	• The zoom-in function was loaded successfully. • The zoom-out function was loaded successfully. • The drag function was loaded successfully.	Pass
T12	R1	View a range of data related to the activity through charts (by time).	1) Click one of the activities from the activity list. 2) Four different related charts(Heart Rate, Temperature, Elevation, and Pace/Speed) will be shown on the detailed page.	Activity Data	• The Heart Rate Line chart was loaded successfully • The Temperature Line chart was loaded successfully • The Elevation Line chart was loaded successfully • The Pace/Speed Line chart was loaded successfully	Pass
T13	R1	Chart the graph data by distance.	1) Click the distance/time button on the detailed page 2) View the four different related charts.	Activity Data	• The Heart Rate Line chart was loaded successfully • The Temperature Line chart was loaded successfully • The Elevation Line chart was loaded successfully • The Pace Line chart was loaded successfully	Pass
T14	R1	View the average value on each chart.	1) View the average value on each chart	Activity Data	• The average value can be shown on the graph.	Pass
T15	R1	View Stroke, Cadence and Power rate in Swiming and Cycling activity	1)Click one of the swimming or cycling activities. 2) View the Stroke, Cadence and Power rate chart.	Activity Data	• The Stroke Rate Line chart was loaded successfully • The Cadence Line chart was loaded successfully • The Power Line chart was loaded successfully	Pass
T16	R1	View all the necessary detailed data at the end of the page.	1) Click one of the activities from the activity list. 2) View the detailed data at the end of the detailed page.	Activity Data	• The detailed data could be loaded successfully. It includes Distance, Calories, Heart Rate, Timing, Elevation, and Temperature.	Pass

Test developer

LINGKANG ZHOU

Test of Login/Register page

Aim of the test:

Ensure that the login functionality is working as expected, and that the user can successfully log in to their account using valid credentials; ensure the register process is valid and people will be reminded that they should use valid passwords and email

Progress

Add password constraints in frontend

Requirment:

Requirments 6 (Looking for possible security issues)

Test specification

Test Case ID	Requirment	Test Case	Test Steps	Test Data	Expected Result	Pass/ Fail
T01	R6	Register as a new user with an email address that has already been used	1) click on the register button 2) input user name, email and password	User Name: a Password: 1234aaAA! Email: 121@11.com	• warning shows on the top of the page-"Username or Email already exists!" • user cannot successfully register	Pass
T02	R6	Register as a new user with a non-registered email address	1) click on the register button 2) input user name, email and password	User Name: ab Password: 1234aaAA! Email: 12111@11.com	• successfully registerred tip shows on the top of the page-"successfully registered" • user can successfully register	Pass
T03	R6	Register as a new user with an invalid password	1) click on the register button 2) input user name, email and invalid password	User Name: aba Password: 1234 Email: 12211@11.com	• warning shows on the top of the page -'Password must longer than 8 characters' • user cannot successfully register	Pass
T04	R6	Register as a new user with an invalid password	1) click on the register button 2) input user name, email and invalid password	User Name: aba Password: 11aA1111 Email: 12211@11.com	• warning shows on the top of the page -'Password must contain at least one uppercase letter, one lowercase letter, one number, and one special character.' • user cannot successfully register	Pass

T05	R6	Register as a new user with a valid password	1) click on the register button 2) input user name, email and valid password	User Name: aba Password: 11aA@1111 Email: 12211@11.com	• successfully registerred tip shows on the top of the page-"successfully registered" • user can successfully register	Pass
T06	R6	Login with user name and a valid password	1) input user name and valid password	User Name: ab Password: 1234aaAA!	• successfully login tip shows on the top of the page-"Login success!" • redirect to the dashboard	Pass
T07	R6	Login with user name and a invalid password	1) input user name and invalid password	User Name: ab Password: 1234	• failed login tip shows on the top of the page-"User is not existed or password is incorrect"	Pass

Test developer

XiuyuanZhu

Test RegistryController

Aim of the test:

New users can register.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.5 testRegister()	Test functionality and make sure new users can register	1. Create a new user providing username, fullname, password, etc. in idea 2. Register using the function and using logincheck function to log in the using the username and password. 3. compare the response.	Data 0	After resigter function runs, the info used to register can be used by logincheck function and they return the same response.	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

Data 0:

```
String fullName="testCase";
String userName="testYyh";
String password="testYyhPassword";
String email="testYyh@gmail.com";
```

Test TokenDao

Aim of the test:

We can interact with the Token database.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.9 testSaveRequest Token	we can insert the RequestToken data to database.	1. created data by our own and insert data. 2. get the data from api. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass
T02	R5.9 testFindByToken	we can get the token's information from database.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass
T03	R5.9 testSaveAccess Token	we can insert the userAccessToken to the database.	1. created data by our own and insert it. 2. get the data from debase. 3. compare the content.	Data 1	the result of API is same as the result get by our creating	Pass
T04	R5.9 testDeleteAcces sToken	We can use delete the specific userAccessToken from database.	1. created data by our own. 2. delete the data from api. 3. check if the data is null.	Data 1	After we delete, this specific data would be null	Pass

Test developers:

Yuhang Yao, Yukun Li

Data:

data 0: RequestToken reqToken = new RequestToken("testUser", 123, "testToken", "testSecret", "Not Connected");

data 1:

```
UserPartner testUser = new UserPartner();
testUser.setUsername("testUser");
testUser.setEmail("testUser@gmail.com");
testUser.setPassword("password");
testUser.setToken("token");
testUser.setTokenDate(new Date());
testUser.setUserAccessToken("userAccessToken");
testUser.setUserAccessSecret("userAccessSecret");
```

Test UserDao

Aim of the test:

We can interact with the User database.

Progess:

Sprint 2 Fix API Test

Requirment:

Requirments 5 (Test in sprint 2)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R5.10 testSaveUser	we can insert the user data to database.	1. created data by our own and insert data. 2. get the data from api. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass
T02	R5.10 findUserByUsername	we can get the user information from database by Username.	1. created data by our own. 2. get the data from api. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass
T03	R5.10 findUserByEmail	we can get the user information by his email from database.	1. created data by our own and insert it. 2. get the data from debase. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass
T04	R5.10 updateUser	We can update the user to database.	1. created data by our own. 2. delete the data from api. 3. check if the data is null.	Data 1	After we update, the user would be a different user.	Pass
	R5.10 deleteUserByUsername	we can delete user by specific username	1. create a new user. 2. check if the user has been inserted. 3. delete the user 4. check if the user has been deleted from database	Data 0	After we delete, this specific data would be null	Pass
	R5.10 testSelectUserByToken	we can get the user information by his token.	1. created data by our own and insert it. 2. get the data from debase. 3. compare the content.	Data 0	the result of API is same as the result get by our creating	Pass

Test developers:

Yuhang Yao, Yukun Li

Data :

data 0:

```
testUser = new UserPartner();
testUser.setUsername("testUser");
testUser.setEmail("testUser@gmail.com");
testUser.setPassword("password");
testUser.setToken("token");
testUser.setTokenDate(new Date());
testUser.setUserAccessToken("userAccessToken");
testUser.setUserAccessSecret("userAccessSecret");
```

data 1:

```
testUser = new UserPartner();
testUser.setUsername("testUser");
testUser.setEmail("testUser@gmail.com");
testUser.setPassword("password");
testUser.setToken("token");
testUser.setTokenDate(new Date());

testUser.setUserAccessToken("new access token");
testUser.setUserAccessSecret("new access token secret");
```

Test of Cloud front-end deployment

Aim of the test:

Ensure that the implemented Cloud front-end web works well

Progress

Cloud front-end deployment

Requirment:

Requirments 11(Cloud front-end deployment)

Test specification

Test Case ID	Requirment	Test Case	Test Steps	Test Data	Expected Result	Pass/ Fail
T01	R1	Open the demo Url using a browser.	1)Input the demo Url into browser 2) Press Enter	https://ga-box-jelly-ddbh.vercel.app/#/login	• Coaching Mate Login Form should load successfully	Pass
T02	R1	Log in Testing Account to view Activity List and then view the activity type with the icon, activity name and activity date for this activity.	1) Log in to the testing account. 2) Click the Activities button on the left side. 3) View the activity list.	User ID: 0402 Password AAAAaaaa 1111	• The activity list can be shown on the right side. • The event icon, event type, activity name and activity date were loaded successfully.	Pass
T03	R1	View the total distance for this type of activity.	1) View the total distance from the activity list. 2) Click one of the activities, and then view the total distance on the activity detailed page.	Activity Data	• The total distance (km) could be viewed from the activity list. • The total distance (km) could be viewed from the activity detailed page.	Pass
T04	R1	View the total time for this type of activity.	1) View the total time from the activity list. 2) Click one of the activities, and then view the total time on the activity detailed page.	Activity Data	• The total time (xx:yy:zz) could be viewed from the activity list. • The total time (xx:yy:zz) could be viewed from the activity detailed page.	Pass
T05	R1	View the average speed for this type of activity.	1) View the average speed from the activity list. 2) Click one of the activities, and then view the average speed on the activity detailed page.	Activity Data	• The average speed(km/h) could be viewed from the activity list. • The average speed(km/h) could be viewed from the activity detailed page.	Pass
T06	R1	View the ascent or descent distance for this type of activity.	1) View the ascent or descent distance from the activity list. 2) Click one of the activities, and then view the ascent or descent distance on the activity detailed page.	Activity Data	• The ascent or descent distance (m) could be viewed from the activity list. • The ascent or descent distance (m) could be viewed from the activity detailed page.	Pass
T07	R1	View the average heart rate.	1) View the average heart rate from the activity list. 2) Click one of the activities, and then view the average heart rate on the activity detailed page.	Activity Data	• The average heart rate could be viewed from the activity list. • The average heart rate could be viewed from the activity detailed page.	Pass

T08	R1	View the activity in descending order	1) Click the activity button on the left side. 2) The activity is in descending order (latest).	Activity Data	• The descending ordering was displayed success.	Pass
T09	R1	View the sports route on the heatmap for this activity.	1) Click one of the activities from the activity list. 2) The heat map with the sports route will be shown on the detailed page.	Activity Data	• The sports route was loaded successfully • The sports route has its starting point and ending point	Pass
T10	R1	Different levels for heart rate and power with colour and number range.	1) Could be tested with T10 together or tested by console log.	Activity Data	• The heart rate and power have been set into different levels with colour and range.	Pass
T11	R1	View the sports heatmap	1)Click one of the activity 2)The heatmap was loaded success	Activity Data	• The colours are loaded in the heatmap successfully.	Pass
T12	R1	Apply additional functions (zoom in, zoom out, drag) for the heatmap.	1)Click one of the activity 2)Viewing the heatmap 3) Click the "+" button to zoom in and use the "-" button to zoom out 4) Using the mouse directly to drag the map.	Activity Data	• The zoom-in function was loaded successfully. • The zoom-out function was loaded successfully. • The drag function was loaded successfully.	Pass
T13	R1	View a range of data related to the activity through charts (by time).	1) Click one of the activities from the activity list. 2) Four different related charts(Heart Rate, Temperature, Elevation, and Pace/Speed) will be shown on the detailed page.	Activity Data	• The Heart Rate Line chart was loaded successfully • The Temperature Line chart was loaded successfully • The Elevation Line chart was loaded successfully • The Pace/Speed Line chart was loaded successfully	Pass
T14	R1	Chart the graph data by distance.	1) Click the distance/time button on the detailed page 2) View the four different related charts.	Activity Data	• The Heart Rate Line chart was loaded successfully • The Temperature Line chart was loaded successfully • The Elevation Line chart was loaded successfully • The Pace Line chart was loaded successfully	Pass
T15	R1	View the average value on each chart.	1) View the average value on each chart	Activity Data	• The average value can be shown on the graph.	Pass
T16	R1	View Stroke, Cadence and Power rate in Swiming and Cycling activity	1)Click one of the swimming or cycling activities. 2) View the Stroke, Cadence and Power rate chart.	Activity Data	• The Stroke Rate Line chart was loaded successfully • The Cadence Line chart was loaded successfully • The Power Line chart was loaded successfully	Pass
T17	R1	View all the necessary detailed data at the end of the page.	1) Click one of the activities from the activity list. 2) View the detailed data at the end of the detailed page.	Activity Data	• The detailed data could be loaded successfully. It includes Distance, Calories, Heart Rate, Timing, Elevation, and Temperature.	Pass

Test Reset Password Function

Aim of the test:

Users can reset passwords through email addresses.

Progess:

Reset password function

Requirment:

Requirments 10(Reset password function)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R10.1 Reset password function	Test users can receive email and use the link inside to reset password.	1. Click forget password in the frontend. 2. Enter the email that exists in the database 3. Enter new password. 4. Login Success with new password.	Email address	User can log in with new password and not with the old one.	Pass

Test Disconnect and Change Garmin Account

Aim of the test:

Users can disconnect their Garmin account and change another Garmin account using the same coachingmate account.

Progess:

Disconnect Garmin Connect

Change Garmin connect account

Requirment:

Requirments 8(Disconnect Garmin Connect)

Requirments 9(Change Garmin connect account)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R8.1 Disconnect Garmin account	Test users can disconnect their Garmin account.	1. Log in an account in the frontend. 2. Click disconnect button in the frontend. 3. Show button where users can connect.	Coachingmate account.	The user cannot see the previous activities and can click connect again.	Pass
T02	R9.1 Change Garmin connect account	Test users can change their Garmin account.	1. Log in an account in the frontend. 2. Click disconnect button in the frontend. 3. Click connect button and authorise again.	Coachingmate account & Garmin account.	The user can connect different account and see activities from it.	Pass

Test SMTP Service

Aim of the test:

Users can receive email.

Progess:

Add SMTP email server to the backend

Requirment:

Requirments 13(Add SMTP email server to the backend)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R13.1 coachingmateanalytics/coachingmate /service/email.java	Test users can receive email with the template.	1. Enter email address 2. Click run	Email address	User can receive email with correct content.	Pass

Test fixingt ransferring issue

Aim of the test:

test if the user can still see the account information in fronted consle when they login or register.

Progess:

Fix transferring security issue

Requirment:

Requirments 12(Fix transferring_issue)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R13.1 coachingmateanalytics /coachingmate/controller/ LoginController.java	Test users' information should not exposed in frontend consle.	1. Enter username and password and login then 2. check from browser consle.	username: 0426 password: AAaa11..	the username and password shouldn't show in consle	Pass
T02	R13.1 coachingmateanalytics /coachingmate/controller/ RegistryController.java	Test users' information should not exposed in frontend consle.	1. Enter all their information. 2. check from browser consle.	username: 0525y password: AAaa11..	all information shouldn't show in the fronend.	pass

Test Spring Security Integration

Aim of the test:

test if user can access backend api without JWT.

test if user can ge the JWT when they login.

Progess:

Integrate with Spring Security

Requirment:

Requirments 14(Integrationw with SpringSecurity)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R13.1 coachingmateanalytics /coachingmate /controller/ LoginController.java	User will receive a response that include a token .	1. Enter username and password and login then 2. check from browser to get see if the token is returned in response.	username: 0426 password: AAaa11..	The token should be in response.	Pass
T02	R13.1 coachingmateanalytics /coachingmate /controller/ ActivityDataRetrieveController.java	use postman to test if we can call the backend API without JWT.	1. Enter url: https://coach.myyyhlxy.com/activity/getActivityByAccessToken?accessToken=2d7c25b2-27f5-4974-a82f-2a9e41502b9f with JWT header: JWT 2. check from browser consle.	JWT below	we can get the successful message with the token. And we can get a error message "Need Auth" if we don't have token header.	pass

JWT:(would expire 1 day) eyJhbGciOiJIUzI1NiJ9.
eyJzdWIiOiJ1c2VySWQiLCJwYXNzd29yZCI6IiQyYSQxMCRrNGZGdXFmTUNIN2toRUNzUVhOdHVlSHVMZWZxTy43Sy53cEZ3NVl3V2hiRWROUzhCemwyRyIsInVzZXJuYW1lIjoiMDQyNiIsImlhdCI6MTY4NDU2MzE4MCwianRpIjoiZWYwZGUxZjctNDdmNC00MmU4LWEzYWUtM2QzMjdmYThkMmU2IiwiZXhwIjoxNjg0NjQ5NTgwfQ.vfDlSDCFXDhJTAx9ckEf1UctJCEpMkld7alZTDpF8fo

Test Receiving Data from Garmin

Aim of the test:

Test if users can get real-time activity data from garmin accounts.

Progess:

Receving data from Garmin connect

Requirment:

Requirments 7(Ensure accessibility)

Test specification:

Test Case ID	Requirement	Test case	Test Steps	Test Data	Expected Result	Pass /Fail
T01	R7.1 Receiving Data from Garmin Connect	Test user can get activity data from garmin connect.	1. Connect garmin from frontend. 2. Check if activity data is synced. 3. Add a new activity.	username: 0428 password: AAaa11..	Data is synchronized with garmin and can be added in real time	Pass