Test Documentation for London Underground Ticketing System

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# Prerequisites

* The system is running Windows 10
* The system has NetBeans 12.0 installed
* The system has Tomcat server 8.0 installed
* Tomcat server has been linked to NetBeans (follow readme.md instructions for help)

# Test Procedure 1

## Purpose

This test procedure will test the customer side of the web application. It will test if a ticket can be bought by entering: a start date, start zone and end zone. It will also test if a price is calculated correctly for said ticket. This test procedure will also ensure the gate will only open with a valid ticket.

## TP1

|  |  |  |
| --- | --- | --- |
| **TP** | **Test Instructions** | **Pass / Fail** |
| 1.1 | Right click on project-web-client and select run. Ensure a webpage appears containing an image of a London underground gate and links to several different webpages. |  |
| 1.2 | Click the link to buy a ticket “ticketMachine.jsp”. Ensure a new page is loaded containing – top to bottom – 2 drop down boxes, 4 text boxes, 2 buttons and a big text area. |  |
| 1.3.1 | Click on the first drop-down box and ensure the list of stations in londonStations.xml is the same as the ones in the drop-down box. |  |
| 1.3.2 | Do the same for the second drop down box |  |
| 1.4 | The “valid from time” box should be editable and have the current time and date from when the web page was first opened. |  |
| 1.5.1 | Select any 2 stations in the dropdown box. Type in “test” into the valid from time and press the “checkout” button. An error message should appear in red underneath “Generate new ticket” stating the date/time was not valid. |  |
| 1.5.2 | Go back to the index page (start page) of the web app and click “ticketMachine.jsp” again. Keep the start station and end station on “—Select--" and press the “Checkout” button. An error message should appear in same place as last stating the stations aren’t valid. |  |
| 1.5.3 | Select a station for “Start Station” and keep end station on “--select--”. The same error message should appear as before stating the stations aren’t valid. |  |
| 1.5.4 | Select a station for “End Station” and keep start station on “--select--”. The same error message should appear as before stating the stations aren’t valid. |  |
| 1.5 | Select “Abbey Road” for start station and “Balham” for end station. Keep the “valid from time” to as it was when page loaded. Click “checkout” button. Start station and End station should clear and “price” should be updated. The value should be “£2.5” or “£5.0”. The value shouldn’t be editable. |  |
| 1.6.1 | For card number enter “111”. Click buy ticket. An error message should appear stating the card is invalid. |  |
| 1.6.2 | For card number enter “test”. Click buy ticket. The same error message should appear. |  |
| 1.7 | For card number enter “12345678901”. Click buy ticket. Printed ticket text area should be populated with xml the same as [Annex 2](#_Annex_2_–). The issue date and rate may be different due to time differences. |  |
| 1.8 | Copy the printed ticket and go back to the index page. Click openGate.jsp. Ensure a new web page opens which contains a big text area a button and “gate locked” in big red writing. |  |
| 1.9 | Paste the printed ticket into the text area. Click open gate button and gate locked should change to gate open in green. |  |
| 1.10.1 | Edit the cost in the printed ticket to 1.0. click open gate button. The text should revert to gate locked and be red. |  |
| 1.10.2 | Revert the price to 2.5 and change the rate to PEAK. Click the open gate button. The text should not be changed. |  |
| 1.10.3 | Revert rate to OFFPEAK and edit the issue date to be 1 day more this will be the last number representing the date. For exampled 2021-01-03 you would change the 03 to 04. Then click the open gate button. The text shouldn’t change. |  |
| 1.10.4 | Revert the date back and change the number of zones to 2 and click the open gate button. The text shouldn’t change. |  |
| 1.10.5 | Revert the number of zones back to 1 and delete the last character from the encrypted hash before the “=”. Click open gate and the text shouldn’t change. |  |
| 1.10.6 | Revert the hash back and remove the last character of ID. Click open gate button and the text shouldn’t change. |  |
| 1.10.7 | Revert the ID and click the open gate button. The text should change to gate open. |  |
|  | Return to localhost:8080/projectwebfacade-client/ |  |

## TP1 Comments

|  |  |
| --- | --- |
|  | |
| Pass / Fail |  |

# Test Procedure 2

## Purpose

The purpose of this test procedure is to test the UI for changing the pricing schedule.

## TP2

|  |  |  |
| --- | --- | --- |
| **TP** | **Test Instructions** | **Pass / Fail** |
| 2.1 | Click on Scheduler.jsp. Ensure a new webpage opens containing 4 text boxes and a button. |  |
| 2.2 | Wait 10 seconds, the page should refresh. |  |
| 2.3.1 | The first text box “current pricing off peak” should not be editable |  |
| 2.3.2 | The second text box “current pricing peak” should not be editable |  |
| 2.4 | The top 2 text boxes should have values in them 2.5 the first and 5.0 the second. |  |
| 2.5.1 | In enter new peak pricing enter “test”. Press change pricing(s) button. An error message should appear at the top of the page stating there was an issue with the new pricing. |  |
| 2.5.2 | Remove “test” from enter peak pricing and put it in new off-peak pricing. Click the change pricing(s) button and the error message should still be displayed. |  |
| 2.5.3 | Enter “test” in both text boxes and click the button. The error message should not clear. |  |
| 2.6 | Enter 89 in peak pricing and click the button. Wait for the page to auto-refresh and the current peak pricing should change to 89. |  |
| 2.7 | Enter 89 in off-peak pricing and click the button. Wait for the page to auto-refresh and the current off-peak pricing should change to 89. |  |
| 2.8 | Enter 2.5 in off-peak text box and 5.0 to peak text box. Press the button. Wait for the page to refresh and the peak text box should change to 5.0 and the off-peak text box should change to 2.5. |  |
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## TP2 Comments

|  |  |
| --- | --- |
|  | |
| Pass / Fail |  |

# Test Procedure 3

## Purpose

The purpose of this test procedure is to test the creation, deletion and editing of stations.

## TP3

|  |  |  |
| --- | --- | --- |
| **TP** | **Test Instructions** | **Pass / Fail** |
| 3.1 | If you ran both web apps earlier there should be another tab on your web browser called Station controller start page. If not go back to NetBeans and right click project-web and press run. The page should then open. The page should have 4 links and an image of station gates. |  |
| 3.2 | Click on stationList.jsp a new web page should open it should have 12 buttons: create new station, delete all stations, show all zones, zone 1 – 9. Underneath those should be a complete list of stations with their zone, modify station button and delete station buttons. |  |
| 3.3 | Wait 20 seconds and the page should auto-refresh |  |
| 3.4 | Scroll through the station list and compare against LondonStation.xml they should match. |  |
| 3.5 | Click through zone 1 – 9 buttons and ensure the stations listed are within the corresponding zones. |  |
| 3.6 | Click create new station button, it should take you to another web page with green text stating the station has been created, please update station name. |  |
| 3.7 | Enter “test” in station name and click update station name button. The green text should change to station name updated from <original name> to test. |  |
| 3.8 | Replace zone 0 with test and press update station zone. An error message should appear where the green text currently is saying there is an issue with updating the zone. |  |
| 3.9 | Replace test in zone with 1 and click update station zone button. The error message should clear, and green text should replace it stating the zones been updated. |  |
| 3.10 | Click the button return to station list button. |  |
| 3.11 | The previous webpage should open, scroll to the bottom of the page and the created station should be at the very bottom. |  |
| 3.12 | Click modify station button, it should take you back to the web page to edit the name and zone. |  |
| 3.13 | Click return to station list button. Scroll to the bottom of the page and press the delete station button next to the test station. The message station deleted: test should be in green at the top of the page. If the page auto-refreshed there will now be an error as it tries to delete a page that doesn’t exist. |  |
|  | Return to the index page (the first page when running the app) |  |

## TP3 Comments

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| Pass / Fail |  |

# Test Procedure 4

## Purpose

The purpose of this test procedure is to test the creation, deletion and modification of ticket machines.

## TP4

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| **TP** | **Test Instructions** | **Pass / Fails** |
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# Annex 1 - Stations

An XML document containing the stations can be found in the same folder as this Test Document.

# Annex 2 – Ticket XML

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<ticket>

<startStation>Abbey Road</startStation>

<cost>2.5</cost>

<encryptedHash>bCXe4+yoj0/ZUqvG3+mvvjRvdRkjeZo67ipF/pmgDc+i2dRmvFnCv+LXRLs2Tk061jRY9ySwu4G1lZ0/Ecrll4/gPmLktZwv1W0Phu477YzKf53WS6ijtx6B46f/R4cYN52qF/L8L4w8eEBC0n5lE5c+5YUWV9w/r3r4zCzfLOs=</encryptedHash>

<rate>OFFPEAK</rate>

<issueDate>2021-01-03T12:53:54Z</issueDate>

<numberOfZones>1</numberOfZones>

<Id>8d43d89e-abbd-4899-be17-1085f99d0203</Id>

</ticket>