City University of Hong Kong

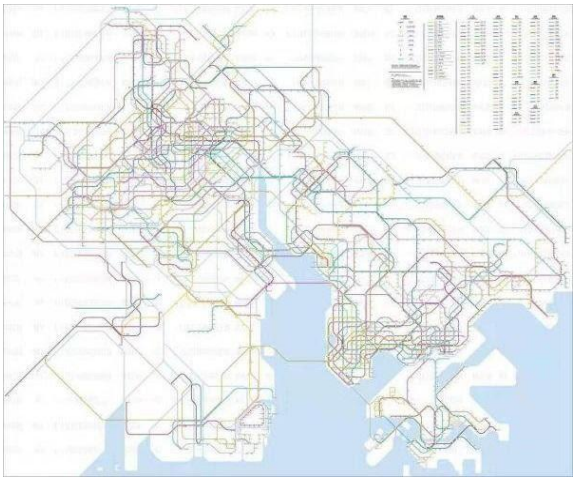
Department of Computer Science

CS3343 Software Engineering Practice

2021/22 Semester A

Hong Kong-Shenzhen Metro Route Planning System in Greater Bay Area

Bug Report



Project Group 6

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TABLE OF CONTENTS

1 OVERVIEW **2**

2 TEMPLATE **2**

3 EXPLANATION **2**

3.1 Describe the Bug 3

3.2 Possible Related Components 3

3.3 To Reproduce 3

3.4 Expected Behavior 3

3.5 Screenshots 3

3.6 Environment 3

3.7 Additional Context 3

3.8 Assignees 3

3.9 Communication Between Members 3

4 ISSUES **4**

4.1 Issue #66 4

4.2 Issue #70 5

4.3 Issue #76 6

4.4 Issue #82 7

4.5 Issue #91 8

4.6 Issue #92 9

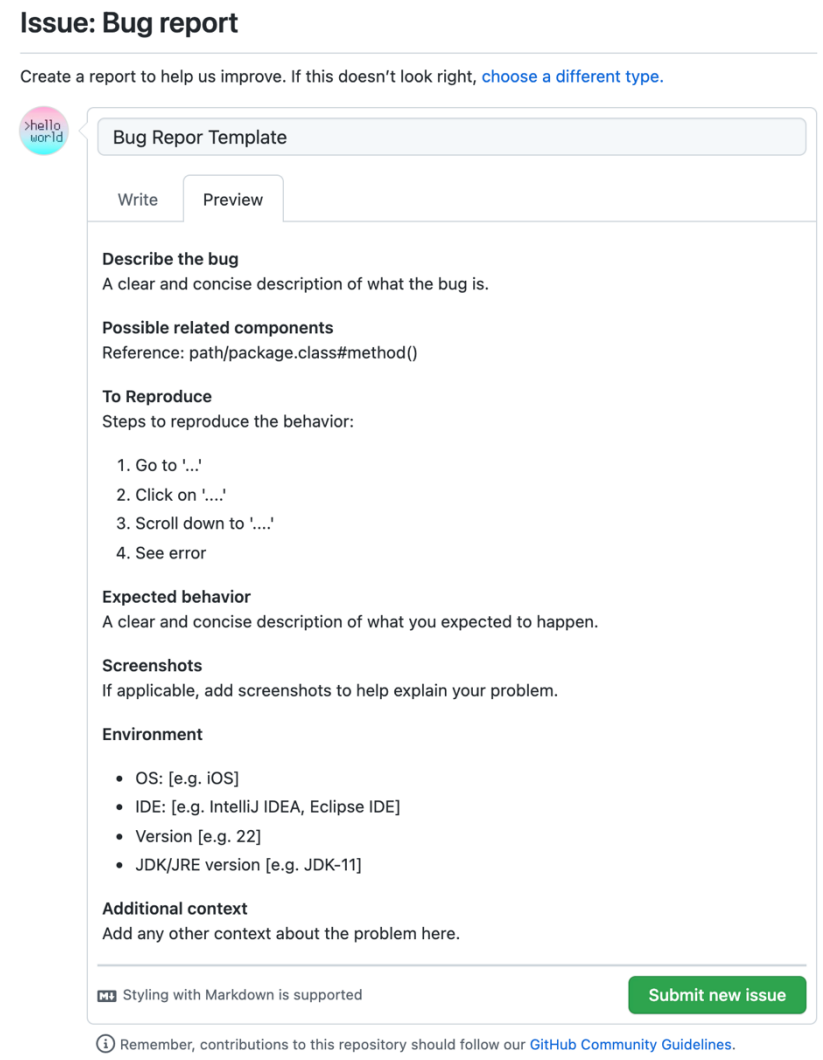
4.7 Issue #93 10

1 OVERVIEW

We use GitHub Issues to manage our bugs. We choose this mainly because it can interact with commits in our GitHub repository, and is helpful for team members to communicate.

We have created a template for bug reporters to submit their bugs. Inserting pictures is allowed. Once a bug is reported, all members can comment on it. After a bug is fixed, we can close it manually or automatically close it in a commit.

2 TEMPLATE



3 EXPLANATION

Here is the detailed explanation of each part of our bug report.

3.1 Describe the Bug

The reporter needs to give a general description of the bug. We recommend it to be clear and concise.

3.2 Possible Related Components

The reporter is expected to predict where the bug might be in our project structure. This is optional because sometimes it is difficult to predict, and sometimes the reporter may not be responsible for the area where the bug occurs.

> *e.g., src/metroSystem.Database*

3.3 To Reproduce

The reporter must give detailed steps on how to reproduce the bug, as this is important for the developer to locate the bug.

3.4 Expected Behavior

The reporter can explain what the program will behave if no bug is present or what is their “ideal” behavior. This is optional.

> *e.g., The station name should be "Jordan" instead of "Jordon".*

3.5 Screenshots

The reporter can paste screenshots of the bug here. This is also optional but recommended.

3.6 Environment

The reporter needs to state the environment where he/she finds the bug. Specially, the OS, IDE, Version, JDK version.

> *e.g., macOS Monterey 12.0.1, IDEA 2021.3, Version 1.0, JDK 17.0.1.*

3.7 Additional Context

This is for the reporter to explain any additional information and is optional.

3.8 Assignees

This is shown in the sidebar on the right. Once a bug is reported, it will be assigned to one or more developers to fix.

3.9 Communication Between Members

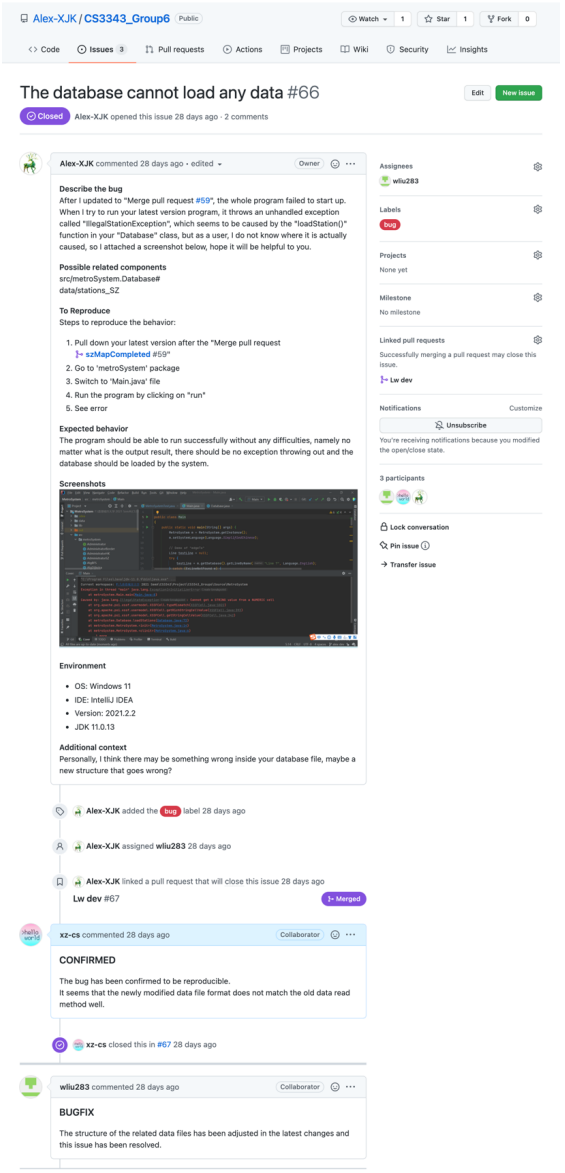
This is a great feature of GitHub Issues. After a bug is reported, members can communicate on the bottom of this bug to express their own ideas or provide additional information.

> *e.g., Alex Xu: "Although there is a bug in 'Least station' criteria, this is normal under 'Least time' criteria."*

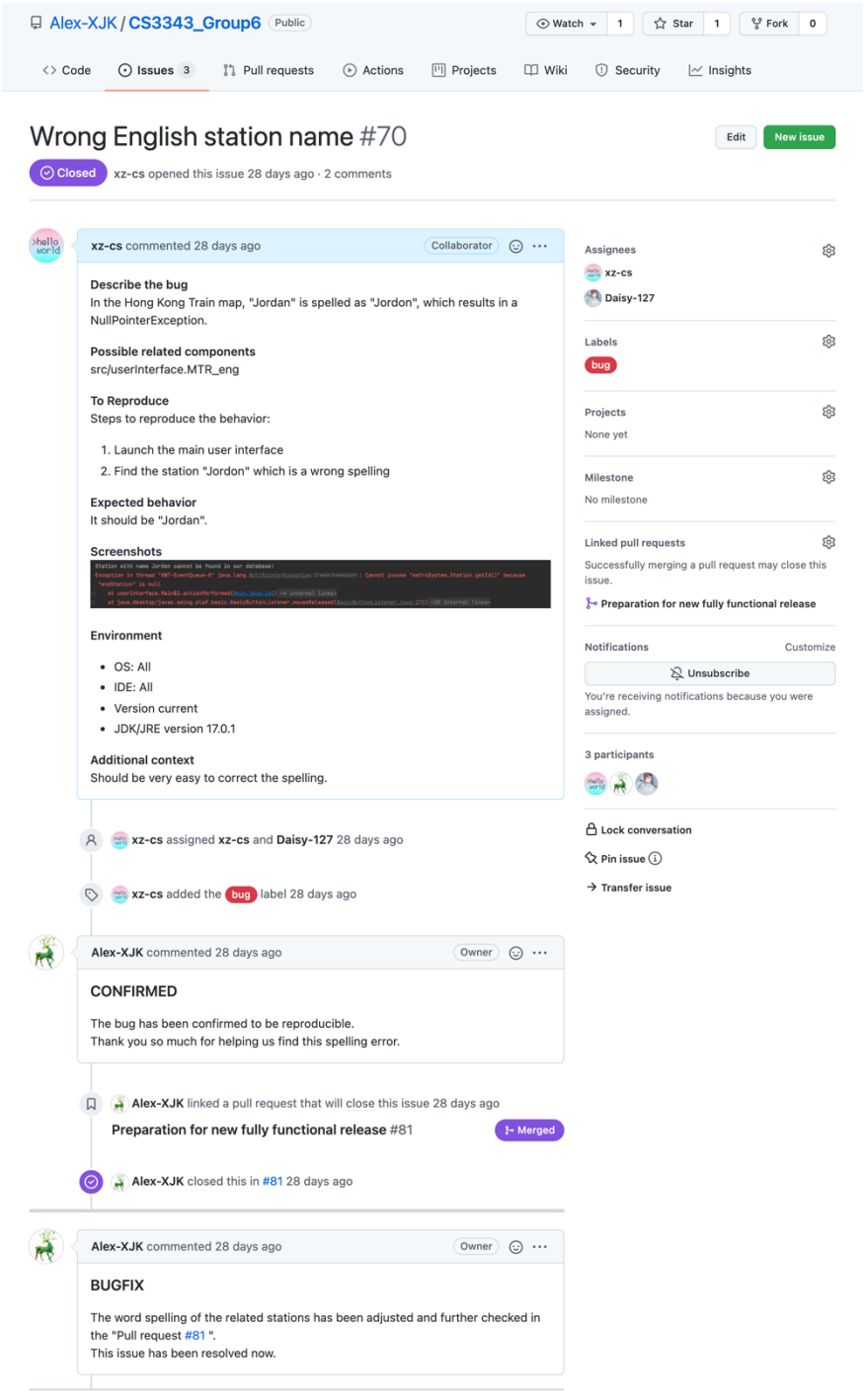
4 ISSUES

We have created 7 issues in GitHub in total. GitHub automatically generates a number for each of them. Here are the screenshots of these issues.

4.1 Issue #66



4.2 Issue #70



Alex-XJK / CS3343_Group6 Public

Watch 1 Star 1 Fork 0

Code Issues 3 Pull requests Actions Projects Wiki Security Insights

Wrong English station name #70

Edit New issue

Closed xz-cs opened this issue 28 days ago · 2 comments

xz-cs commented 28 days ago — Collaborator

Describe the bug
In the Hong Kong Train map, "Jordan" is spelled as "Jordon", which results in a NullPointerException.

Possible related components
src/userInterface.MTR_eng

To Reproduce
Steps to reproduce the behavior:

1. Launch the main user interface
2. Find the station "Jordon" which is a wrong spelling

Expected behavior
It should be "Jordan".

Screenshots

```
Station with name Jordon cannot be found in our database!
Exception in thread "AWT-EventQueue-0" java.lang.NullPointerException Create breakpoint : Cannot invoke "mtrmySystem.Station.getId()" because "endStation" is null
    at userInterface.Main$2.actionPerformed(Main.java:163) <6 internal lines>
    at java.desktop/javax.swing.plaf.basic.BasicButtonListener.mouseReleased(BasicButtonListener.java:277) <38 internal lines>
```

Environment

- OS: All
- IDE: All
- Version current
- JDK/JRE version 17.0.1

Additional context
Should be very easy to correct the spelling.

xz-cs assigned **xz-cs** and **Daisy-127** 28 days ago

xz-cs added the bug label 28 days ago

Alex-XJK commented 28 days ago — Owner

CONFIRMED

The bug has been confirmed to be reproducible.
Thank you so much for helping us find this spelling error.

Alex-XJK linked a pull request that will close this issue 28 days ago

Preparation for new fully functional release #81 Merged

Alex-XJK closed this in #81 28 days ago

Alex-XJK commented 28 days ago — Owner

BUGFIX

The word spelling of the related stations has been adjusted and further checked in the "Pull request #81 ".
This issue has been resolved now.

Assignees: xz-cs, Daisy-127

Labels: bug

Projects: None yet

Milestone: No milestone

Linked pull requests: Successfully merging a pull request may close this issue.
Preparation for new fully functional release

Notifications: Customize
Unsubscribe
You're receiving notifications because you were assigned.

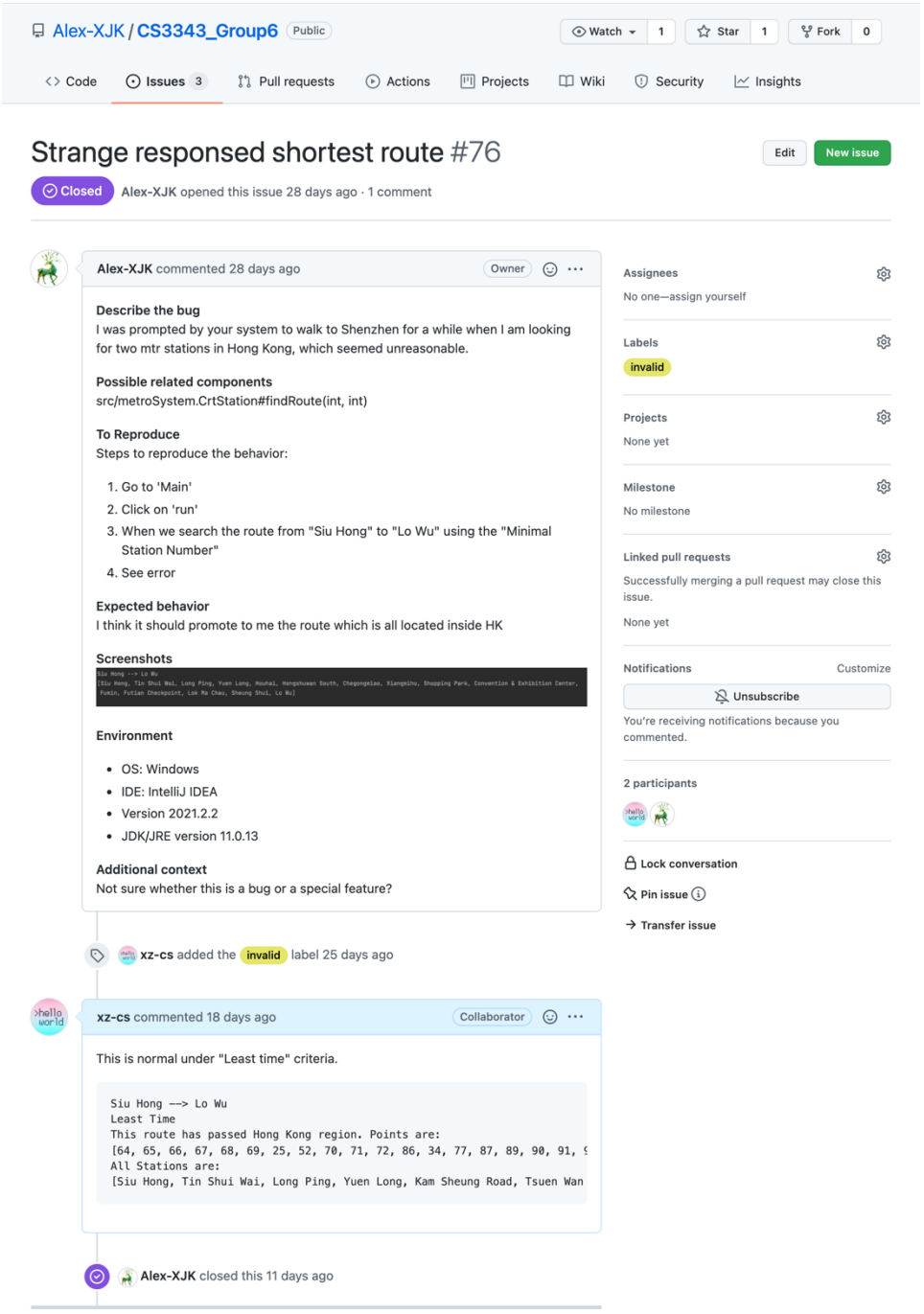
3 participants

Lock conversation

Pin issue

Transfer issue

4.3 Issue #76



Alex-XJK / CS3343_Group6 Public

Watch 1 Star 1 Fork 0

Code Issues 3 Pull requests Actions Projects Wiki Security Insights

Strange responsed shortest route #76

Edit New issue

Closed Alex-XJK opened this issue 28 days ago · 1 comment

Alex-XJK commented 28 days ago — Owner

Describe the bug
I was prompted by your system to walk to Shenzhen for a while when I am looking for two mtr stations in Hong Kong, which seemed unreasonable.

Possible related components
src/metroSystem.CrtStation#findRoute(int, int)

To Reproduce
Steps to reproduce the behavior:

1. Go to 'Main'
2. Click on 'run'
3. When we search the route from "Siu Hong" to "Lo Wu" using the "Minimal Station Number"
4. See error

Expected behavior
I think it should promote to me the route which is all located inside HK

Screenshots

```
Siu Hong --> Lo Wu
[Siu Hong, Tin Shui Wai, Long Ping, Yuen Long, Kam Sheung Road, Tsuen Wan West, Mei Foo, Lai Chi Kok, Cheung Sha Wan, Sham Shui Po, Prince Edward, Mong Kok East, Kowloon Tong, Tai Wai, Sha Tin, Fo Tan, University, Tai Po Market, Tai Wo, Fanling, Sheung Shui, Lo Wu]
```

Environment

- OS: Windows
- IDE: IntelliJ IDEA
- Version 2021.2.2
- JDK/JRE version 11.0.13

Additional context
Not sure whether this is a bug or a special feature?

xz-cs added the invalid label 25 days ago

xz-cs commented 18 days ago — Collaborator

This is normal under "Least time" criteria.

```
Siu Hong --> Lo Wu
Least Time
This route has passed Hong Kong region. Points are:
[64, 65, 66, 67, 68, 69, 25, 52, 70, 71, 72, 86, 34, 77, 87, 89, 90, 91, 9
All Stations are:
[Siu Hong, Tin Shui Wai, Long Ping, Yuen Long, Kam Sheung Road, Tsuen Wan
```

Alex-XJK closed this 11 days ago

Assignees
No one—assign yourself

Labels
invalid

Projects
None yet

Milestone
No milestone

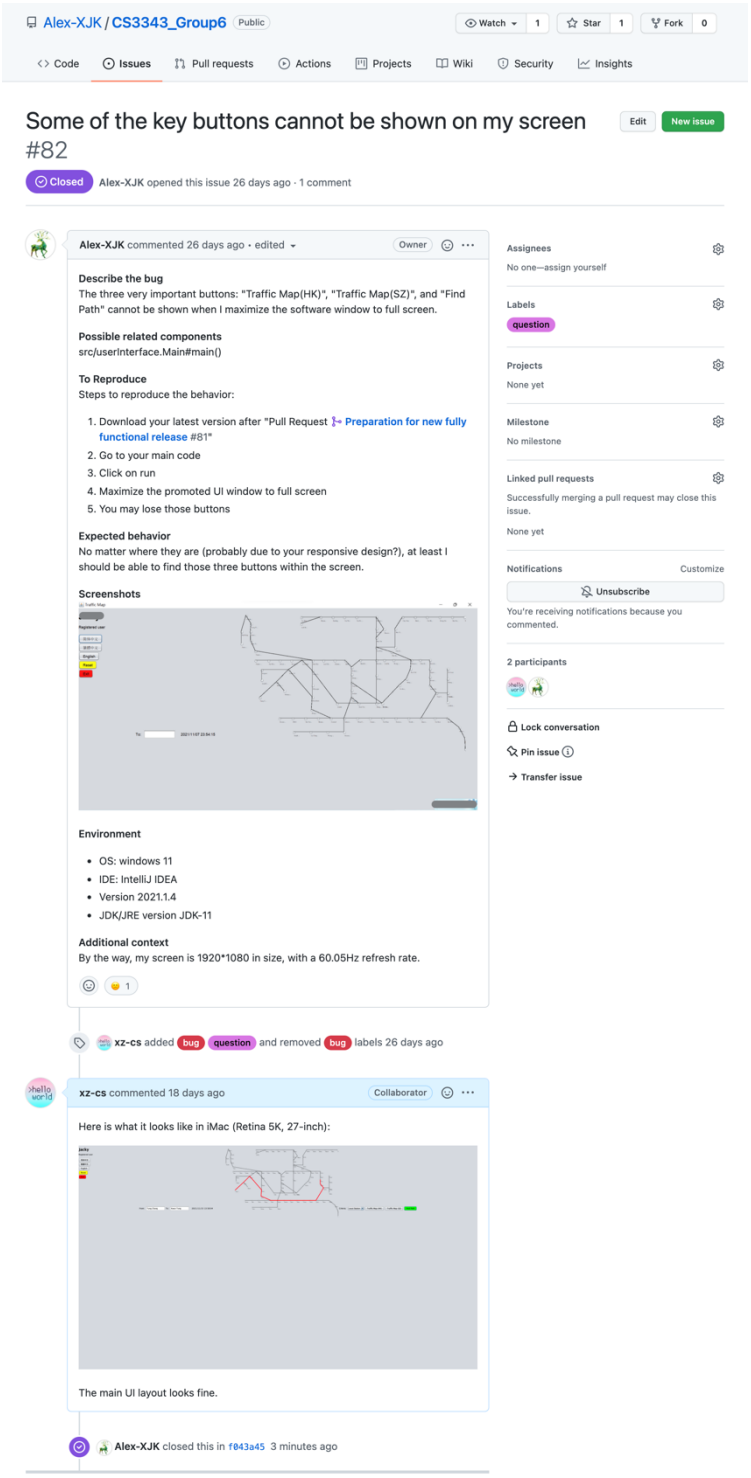
Linked pull requests
Successfully merging a pull request may close this issue.
None yet

Notifications Customize
Unsubscribe
You're receiving notifications because you commented.

2 participants

Lock conversation
Pin issue
Transfer issue

4.4 Issue #82



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Code Issues Pull requests Actions Projects Wiki Security Insights

Some of the key buttons cannot be shown on my screen #82

Edit New issue

Closed Alex-XJK opened this issue 26 days ago · 1 comment

Alex-XJK commented 26 days ago · edited Owner

Describe the bug
The three very important buttons: "Traffic Map(HK)", "Traffic Map(SZ)", and "Find Path" cannot be shown when I maximize the software window to full screen.

Possible related components
src/userInterface.Main#main()

To Reproduce
Steps to reproduce the behavior:

1. Download your latest version after "Pull Request Preparation for new fully functional release #81"
2. Go to your main code
3. Click on run
4. Maximize the promoted UI window to full screen
5. You may lose those buttons

Expected behavior
No matter where they are (probably due to your responsive design?), at least I should be able to find those three buttons within the screen.

Screenshots

Environment

- OS: windows 11
- IDE: IntelliJ IDEA
- Version 2021.1.4
- JDK/JRE version JDK-11

Additional context
By the way, my screen is 1920*1080 in size, with a 60.05Hz refresh rate.

1

Assignees
No one—assign yourself

Labels
question

Projects
None yet

Milestone
No milestone

Linked pull requests
Successfully merging a pull request may close this issue.
None yet

Notifications Customize
Unsubscribe
You're receiving notifications because you commented.

2 participants

Lock conversation
Pin issue
Transfer issue

xz-cs added bug question and removed bug labels 26 days ago

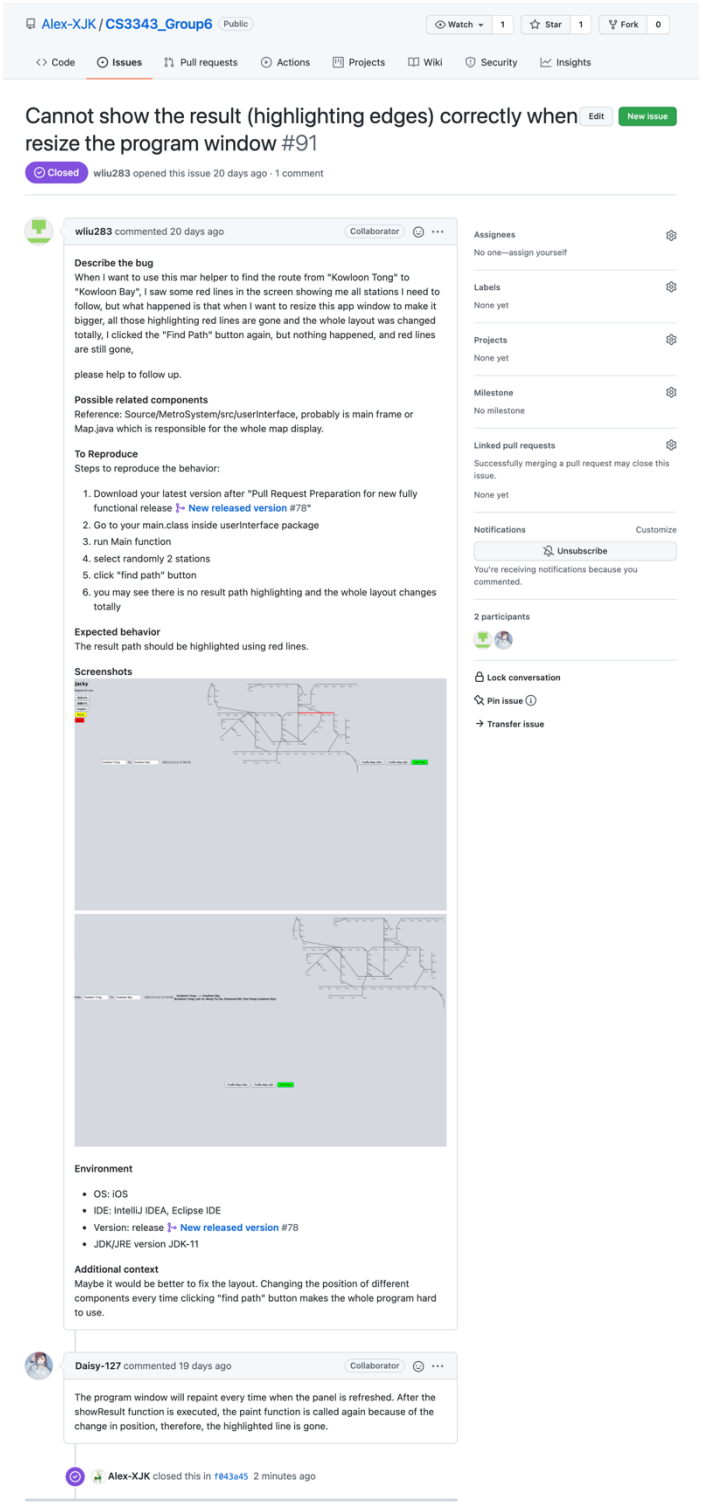
xz-cs commented 18 days ago Collaborator

Here is what it looks like in iMac (Retina 5K, 27-inch):

The main UI layout looks fine.

Alex-XJK closed this in f043a45 3 minutes ago

4.5 Issue #91



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Code Issues Pull requests Actions Projects Wiki Security Insights

Cannot show the result (highlighting edges) correctly when resize the program window #91

Edit New issue

Closed wliu283 opened this issue 20 days ago · 1 comment

wliu283 commented 20 days ago Collaborator

Describe the bug
When I want to use this mar helper to find the route from "Kowloon Tong" to "Kowloon Bay", I saw some red lines in the screen showing me all stations I need to follow, but what happened is that when I want to resize this app window to make it bigger, all those highlighting red lines are gone and the whole layout was changed totally, I clicked the "Find Path" button again, but nothing happened, and red lines are still gone,

please help to follow up.

Possible related components
Reference: Source/MetroSystem/src/userInterface, probably is main frame or Map.java which is responsible for the whole map display.

To Reproduce
Steps to reproduce the behavior:

1. Download your latest version after "Pull Request Preparation for new fully functional release New released version #78"
2. Go to your main.class inside userInterface package
3. run Main function
4. select randomly 2 stations
5. click "find path" button
6. you may see there is no result path highlighting and the whole layout changes totally

Expected behavior
The result path should be highlighted using red lines.

Screenshots

Environment

- OS: iOS
- IDE: IntelliJ IDEA, Eclipse IDE
- Version: release New released version #78
- JDK/JRE version JDK-11

Additional context
Maybe it would be better to fix the layout. Changing the position of different components every time clicking "find path" button makes the whole program hard to use.

Assignees
No one—assign yourself

Labels
None yet

Projects
None yet

Milestone
No milestone

Linked pull requests
Successfully merging a pull request may close this issue.
None yet

Notifications Customize
Unsubscribe
You're receiving notifications because you commented.

2 participants

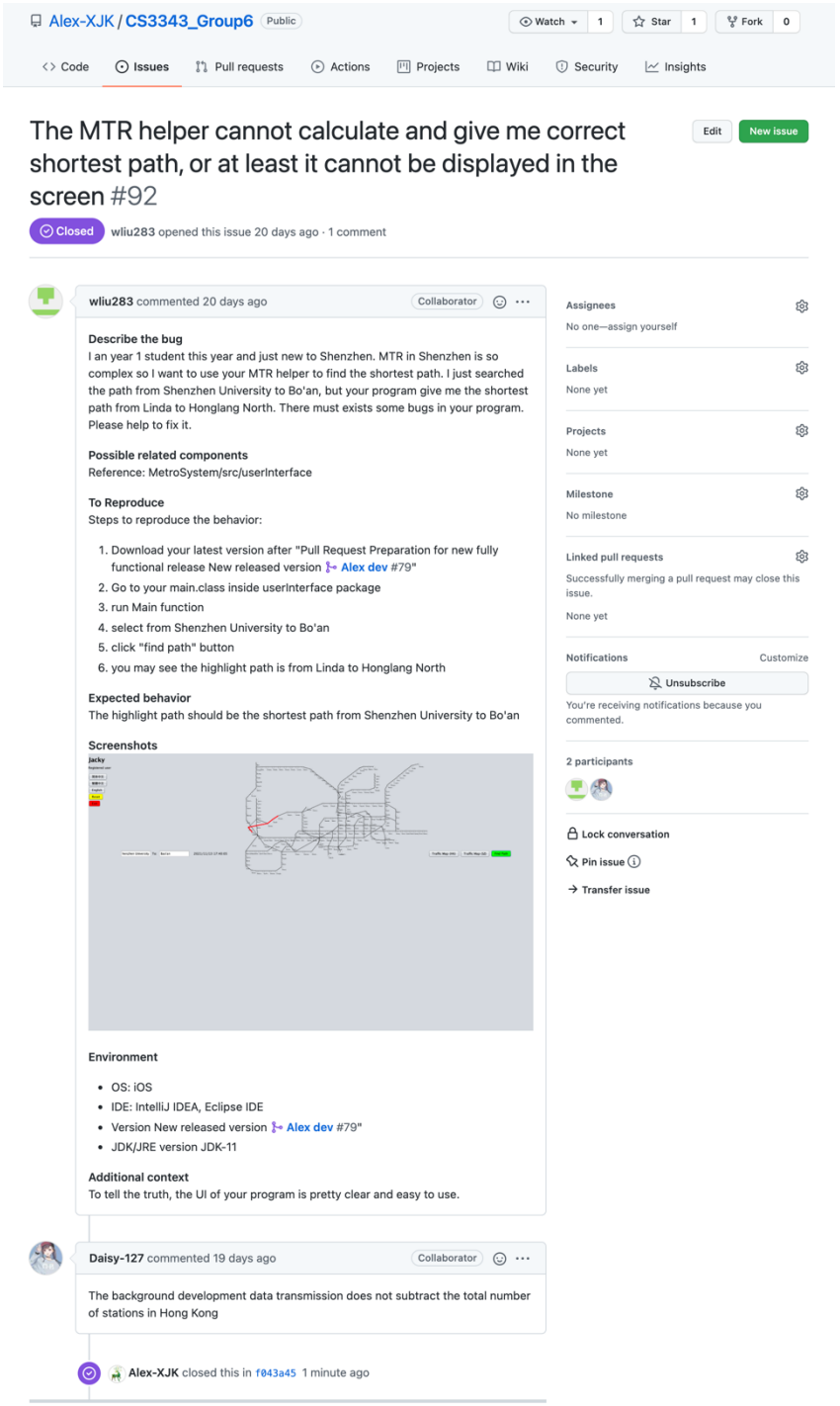
Lock conversation
Pin issue
Transfer issue

Daisy-127 commented 19 days ago Collaborator

The program window will repaint every time when the panel is refreshed. After the showResult function is executed, the paint function is called again because of the change in position, therefore, the highlighted line is gone.

Alex-XJK closed this in f043a45 2 minutes ago

4.6 Issue #92



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Watch 1 Star 1 Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights

The MTR helper cannot calculate and give me correct shortest path, or at least it cannot be displayed in the screen #92

Edit New issue

Closed wliu283 opened this issue 20 days ago · 1 comment

wliu283 commented 20 days ago Collaborator

Describe the bug
I an year 1 student this year and just new to Shenzhen. MTR in Shenzhen is so complex so I want to use your MTR helper to find the shortest path. I just searched the path from Shenzhen University to Bo'an, but your program give me the shortest path from Linda to Honglang North. There must exists some bugs in your program. Please help to fix it.

Possible related components
Reference: MetroSystem/src/userInterface

To Reproduce
Steps to reproduce the behavior:

1. Download your latest version after "Pull Request Preparation for new fully functional release New released version Alex dev #79"
2. Go to your main.class inside userInterface package
3. run Main function
4. select from Shenzhen University to Bo'an
5. click "find path" button
6. you may see the highlight path is from Linda to Honglang North

Expected behavior
The highlight path should be the shortest path from Shenzhen University to Bo'an

Screenshots

Environment

- OS: iOS
- IDE: IntelliJ IDEA, Eclipse IDE
- Version New released version Alex dev #79"
- JDK/JRE version JDK-11

Additional context
To tell the truth, the UI of your program is pretty clear and easy to use.

Daisy-127 commented 19 days ago Collaborator

The background development data transmission does not subtract the total number of stations in Hong Kong

Alex-XJK closed this in f043a45 1 minute ago

Assignees
No one—assign yourself

Labels
None yet

Projects
None yet

Milestone
No milestone

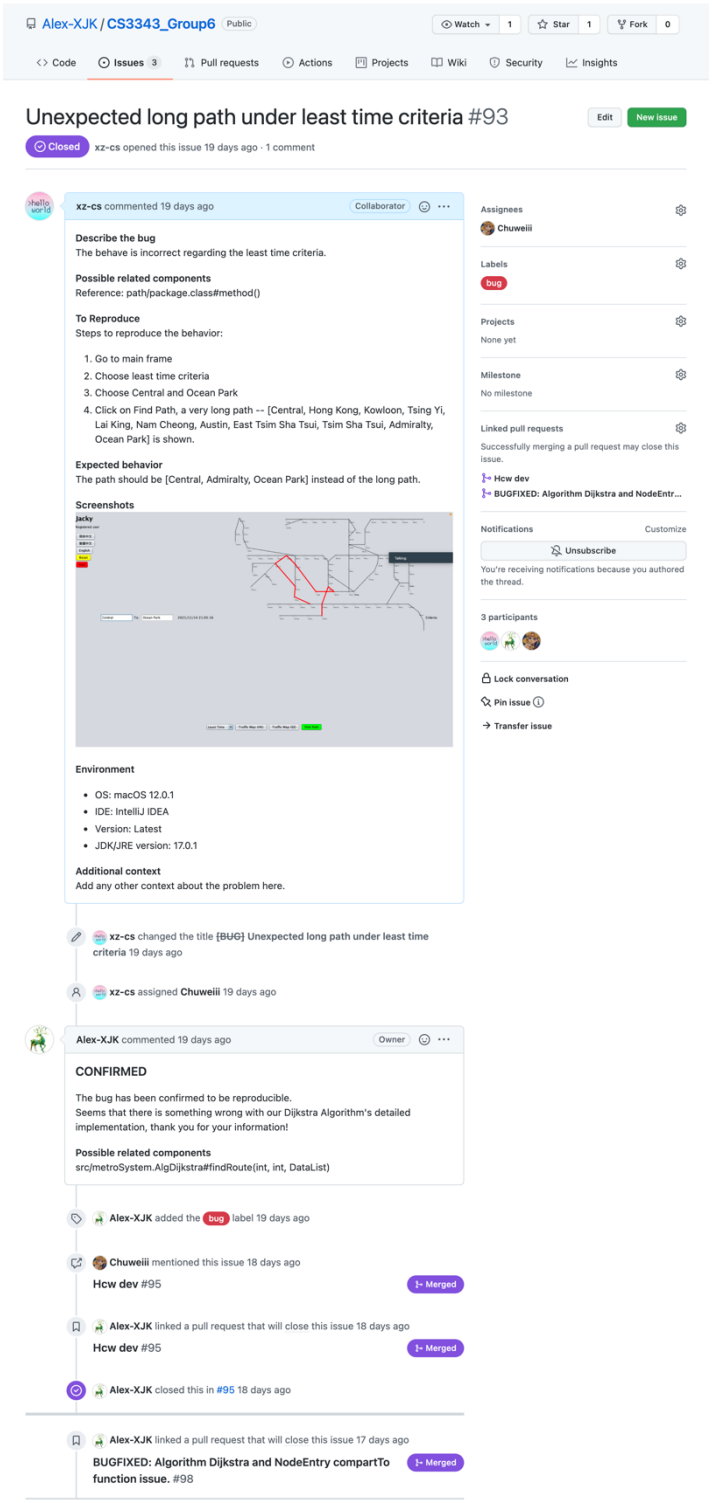
Linked pull requests
Successfully merging a pull request may close this issue.
None yet

Notifications Customize
Unsubscribe
You're receiving notifications because you commented.

2 participants

Lock conversation
Pin issue
Transfer issue

4.7 Issue #93



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Code Issues 3 Pull requests Actions Projects Wiki Security Insights

Unexpected long path under least time criteria #93

Edit New issue

Closed xz-cs opened this issue 19 days ago · 1 comment

xz-cs commented 19 days ago — Collaborator

Describe the bug
The behave is incorrect regarding the least time criteria.

Possible related components
Reference: path/package.class#method()

To Reproduce
Steps to reproduce the behavior:

1. Go to main frame
2. Choose least time criteria
3. Choose Central and Ocean Park
4. Click on Find Path, a very long path -- [Central, Hong Kong, Kowloon, Tsing Yi, Lai King, Nam Cheong, Austin, East Tsim Sha Tsui, Tsim Sha Tsui, Admiralty, Ocean Park] is shown.

Expected behavior
The path should be [Central, Admiralty, Ocean Park] instead of the long path.

Screenshots

Environment

- OS: macOS 12.0.1
- IDE: IntelliJ IDEA
- Version: Latest
- JDK/JRE version: 17.0.1

Additional context
Add any other context about the problem here.

Assignees: Chuweiii

Labels: bug

Projects: None yet

Milestone: No milestone

Linked pull requests: Successfully merging a pull request may close this issue. Hcw dev, BUGFIXED: Algorithm Dijkstra and NodeEntr...

Notifications: Customize — Unsubscribe — You're receiving notifications because you authored the thread.

3 participants

Lock conversation

Pin issue

Transfer issue

xz-cs changed the title ~~[BUG]~~ **Unexpected long path under least time criteria** 19 days ago

xz-cs assigned **Chuweiii** 19 days ago

Alex-XJK commented 19 days ago — Owner

CONFIRMED

The bug has been confirmed to be reproducible.
Seems that there is something wrong with our Dijkstra Algorithm's detailed implementation, thank you for your information!

Possible related components
src/metroSystem.AlgDijkstra#findRoute(int, int, DataList)

Alex-XJK added the bug label 19 days ago

Chuweiii mentioned this issue 18 days ago
Hcw dev #95 Merged

Alex-XJK linked a pull request that will close this issue 18 days ago
Hcw dev #95 Merged

Alex-XJK closed this in #95 18 days ago

Alex-XJK linked a pull request that will close this issue 17 days ago
BUGFIXED: Algorithm Dijkstra and NodeEntry compartTo function issue. #98 Merged