1.

After going through the game quickly in admin mode, I located the bug in the map 0\_nalwor\_forest\_w.  Basically, the problem is exactly what is said in the issue: one teleportation hut sends you to a spot next to the other instead of in front of it and vice versa. Apart from that, the bug should have something to do with the coordination of the two points.

Time estimate:1h; actual time spent: 3h

Related Gitlab comment: https://gitlab.cs.man.ac.uk/comp23311\_2018/stendhal\_S1Team16/issues/1#note\_53238

2.

When executing a function related to teleporting player from one place to another, coordination of destination should be the parameter of this function. At first, I didn’t think of locating the problem elsewhere than .java files, so I tried to locate the problem, at least any class that may have something to do with the problem, in src package. I went through all source files related to teleportation as well as nalwor forest, yet didn’t find any trace of location usage. I then tried my luck in ‘search’ in toolbar, looking for something with ‘nalwor\_forest’, and to my surprise I located a couple of destinations that look just like cause of the bug – in nalwor.xml file. Clearly, the original two exits(inside\_exit and outside\_exit) has their y coordination same as hut next to them, which should not be the case. To get the issue solved, coordination should be change to (84,94) and 114,93) respectively. Yet another problem follows: I had no idea how the project make use of such a file. I discovered that right under the coordination is a class name, and I suppose it should have something to do with xml, but not – at least not directly. I then tried to use CTRL+ALT+H to see call hierarchy. After tracing back the hierarchy for several levels, I discovered

ZoneGroupsXMLServer that is called by onInit() in StendhalRPWorld, in which zones.xml is read into the program. Since zones.xml acts as an index for all map xml files, thus codes in load() method can be used in my own test.

After read coordination from .xml, I need to teleport player to that destination. Class OneWayPortalDestination do not have a method that can do this since being merely a destination its function is restricted, yet it has father class Portal that has setDestination as well as usePortal that both can be helpful. Parameters of setDestination was not really clear for me initially, yet going through call hierarchy of it helps me know they are map name and map reference in xml files respectively; as for use Portal, I just need to create a Player using its construction method and all the components for a transportation in test file are ready. I used assertsEqual and checked coordination of destination by ideal ones for x and y respectively; as there are two destination, I should prepare two corresponding tests.

Time estimate: 2d; actual time spent: 4d2h

Related Gitlab comment: https://gitlab.cs.man.ac.uk/comp23311\_2018/stendhal\_S1Team16/issues/1#note\_54768

3+4

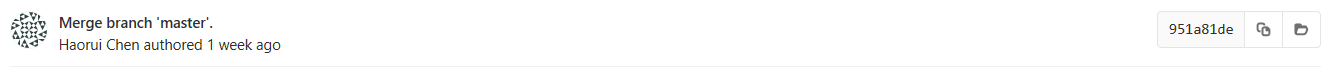
When running newly given test code, coordination are read in by XMLReader first and whether it is successful is checked by a try-catch structure. A test player is set up to use the portal to teleport after destination0 is set. Correctness of destination is verified by assertsEqual at last, and the test should fail for both portal before making changes on coordination.

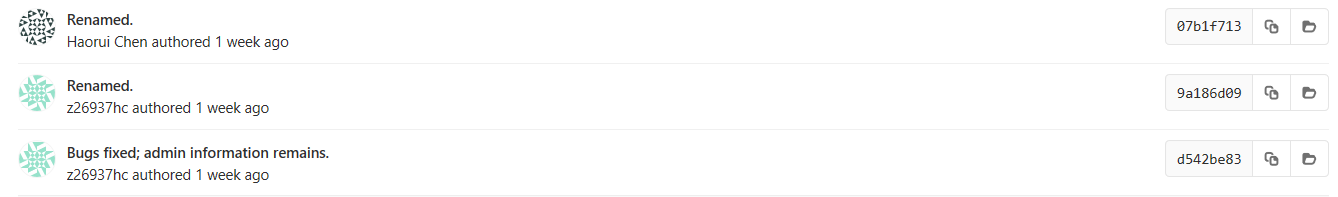
Time estimate: 30m; actual time spent: 1h

Related Gitlab comment: https://gitlab.cs.man.ac.uk/comp23311\_2018/stendhal\_S1Team16/issues/1#note\_54942

5+6+7.

Locating the bug is rather torturing, yet solving it is pretty easy and I have just used the ideal case in tests. Simply go to nalwor.xml and change coords for outside\_exit from (x=87,y=92) to (x=84,y=94); do the same to inside\_exit, from (x=117,91) to (x=114,y=93). Rerun the game, now we can see that player can be teleported to the spot in front of teleport hut as requested in the issue. That’s because corrected coord has been sent to the server thus new destination is used in game, meaning the problem has been solved successfully.





Gitlab commits throughout this issue.

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