SQLCAA Instructions

SQLCAA is a computer-assisted assessment tool developed to assess learners' skills in creating SQL statements. The tool requires learners to place their SQL statements within a downloadable code file so that these statements can be automatically marked and general feedback generated. Below are detail instructions on how to get started and use the tool to complete an assessment.

Should you have any problems or issues accessing or using the tool, contact Nigel Beacham (n.beacham@abdn.ac.uk).

Getting Started

SQLCAA runs on any platform using the Ruby interrupter. Access to a pre-installed version of Ruby is available via the University's VDI resource or on computer systems in the University's labs. Having accessed the VDI resource, your device operates similar to computer systems in the University labs.

Further details about accessing the VDI resource is available in the Useful Links section below.

Downloading assessments files

Before accessing the VDI resource, download the assessment zip file into a new folder called sql on your home H: drive and extract the files contained. When completed you should see the following two files.

- wiki05-geocaching-01 - blank.rb
- wiki05-geocaching-01.db

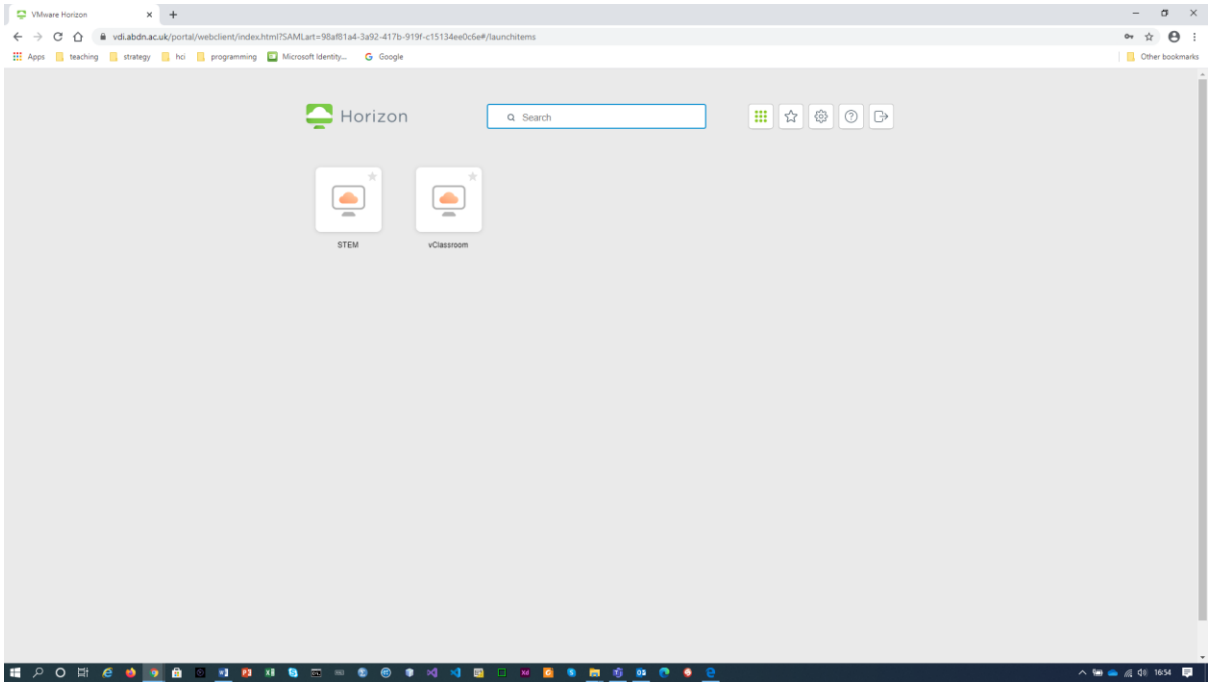
Placing these files on your H: drive will mean that you can access them via the VDI resource covered in the next section.

Accessing the VDI System

You can access the VDI resource via your web browser (https://vdi.abdn.ac.uk/portal/webclient/index.html#/) or by downloading and installing the VMware Horizon Client. Further details are available in the Useful Links section below.

You should access the VDI resource using your University username and password. Enter code may also be required.

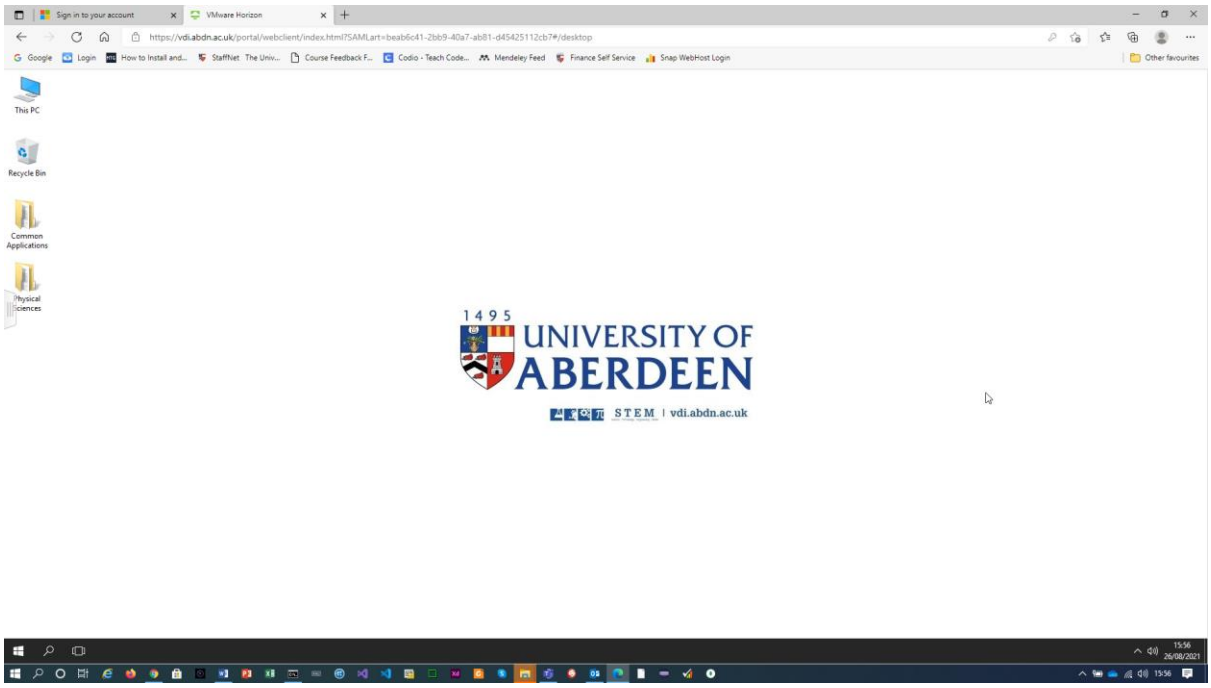
Having logged in you should see the following two icons.



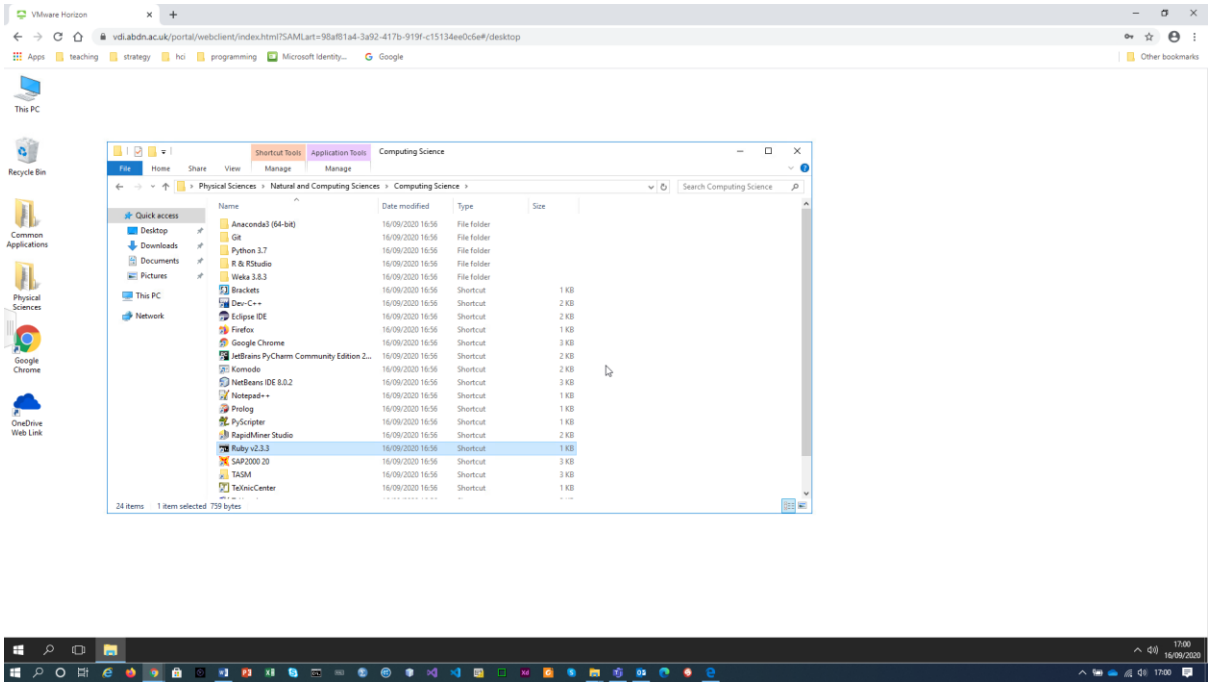
Selecting the STEM icon will load a virtual desktop with all the required software. This may take time.

Alternatively, downloading and installing the VMware Horizon Client can improve the performance of accessing the VDI resource. This is especially useful if you plan to use the VDI resource often.

Having started the virtual desktop, you should see the following screen.

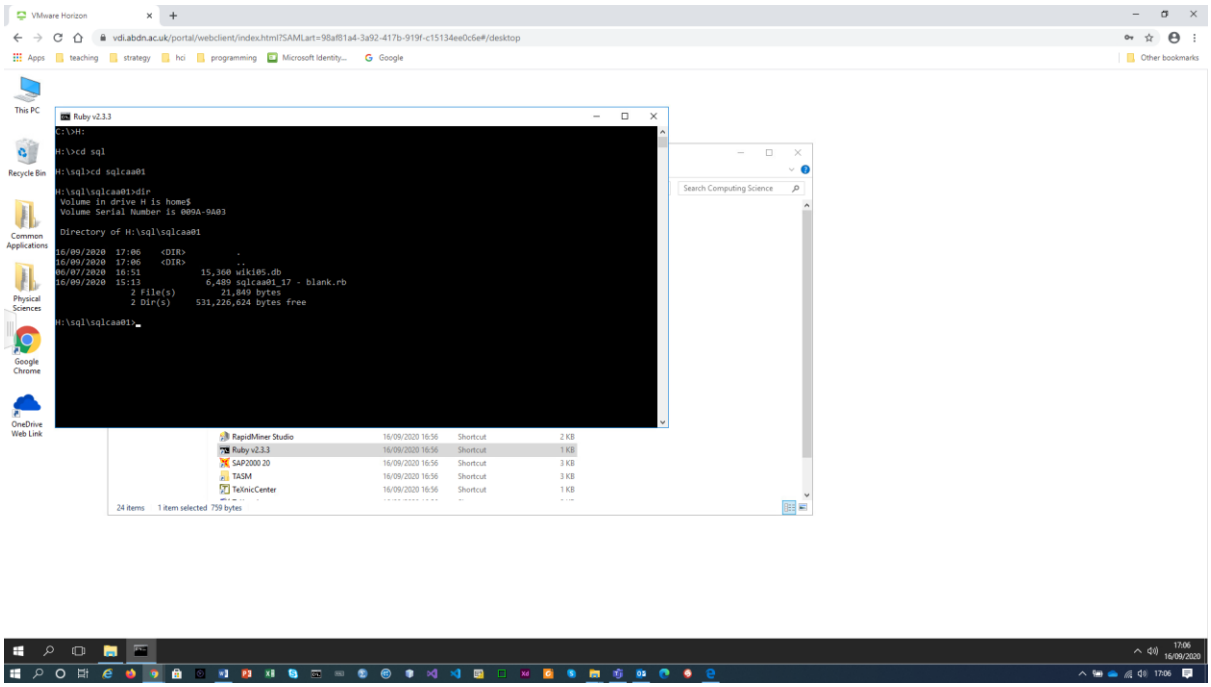


Selecting the Physical Sciences folder, followed by the Natural and Computing Science and then Computing Science folders, you should see the following tools.



The highlighted icon is the Ruby interrupter needed to automatically mark your SQL statements.

Selecting the Ruby v2.3.3 icon should open a new terminal window as shown below.



As you can see in the terminal window above, the zip file was saved in a new folder called sql and when extracted created a subfolder called sqlcaa.

To access the two files on your home H: drive, type in the following commands into the terminal window.

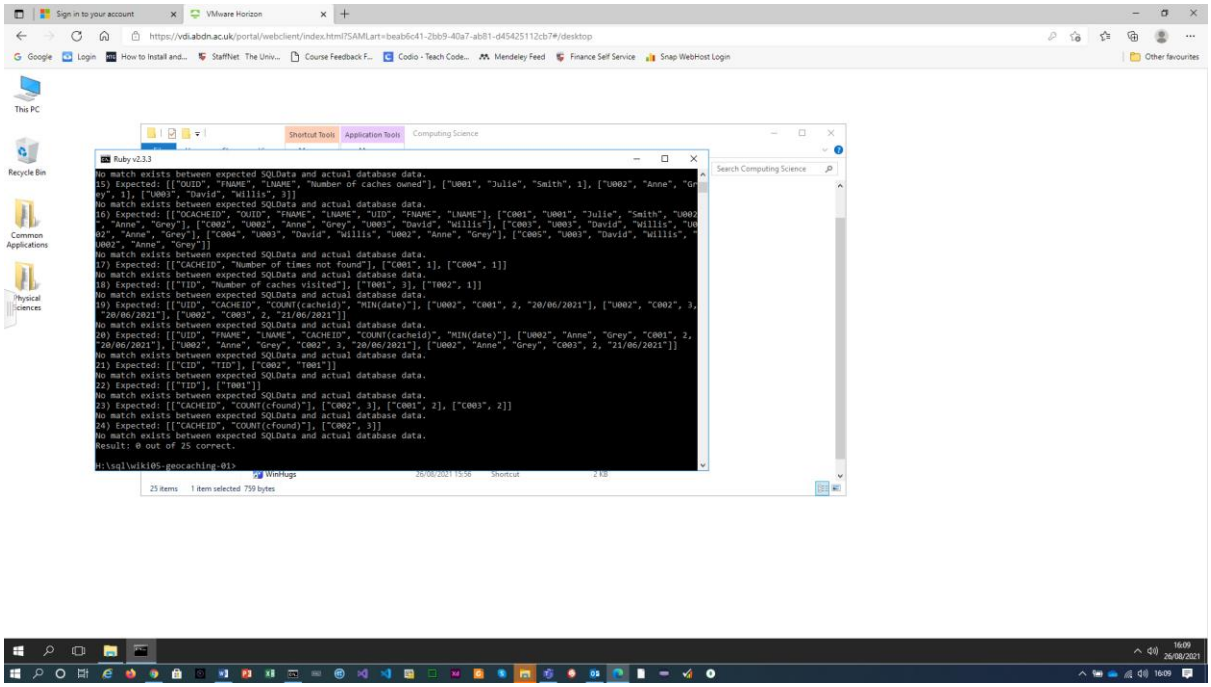
- h:
- cd sql
- cd wiki05-geocaching-01

- dir

The command to run the Ruby interrupter and automatically mark the blank sql statements is as follows.

- ruby wiki05-geocaching-01 – blank

This should show the following results.



You are now ready to make changes to the code file by inserting your SQL statement answers.

Inserting SQL Statement Answers

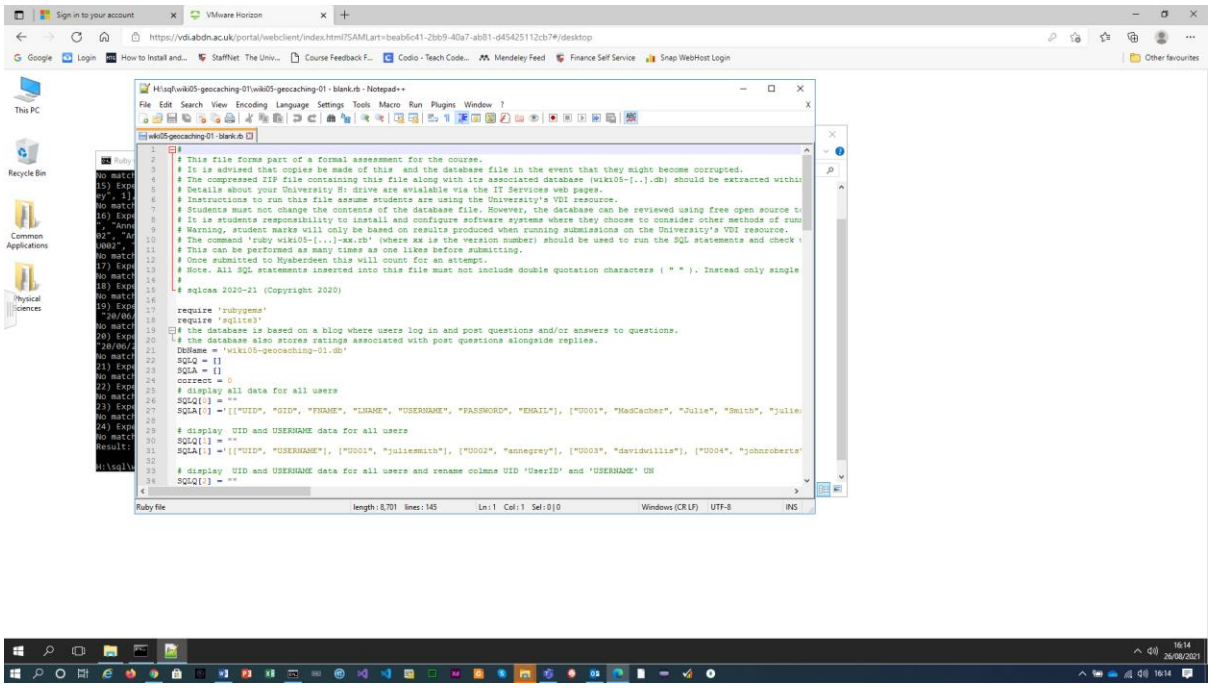
Before opening the wiki05geocaching-01 – blank.rb file using Notepad++, consider making a copy of the file. This will give you a backup in case things go wrong.

When opening the file you will see Ruby code. You do not need to learn how to code in Ruby.

In the code, you will see the following commands spread throughout. It is these commands where you are to insert your SQL statement answers.

- SQLQA[0] = “ ”
- SQLQA[1] = “ ”
- SQLQA[2] = “ ”
- SQLQA[3] = “ ”
- SQLQA[4] = “ ”
- SQLQA[5] = “ ”
- SQLQA[6] = “ ”
- SQLQA[7] = “ ”
- SQLQA[8] = “ ”
- SQLQA[9] = “ ”

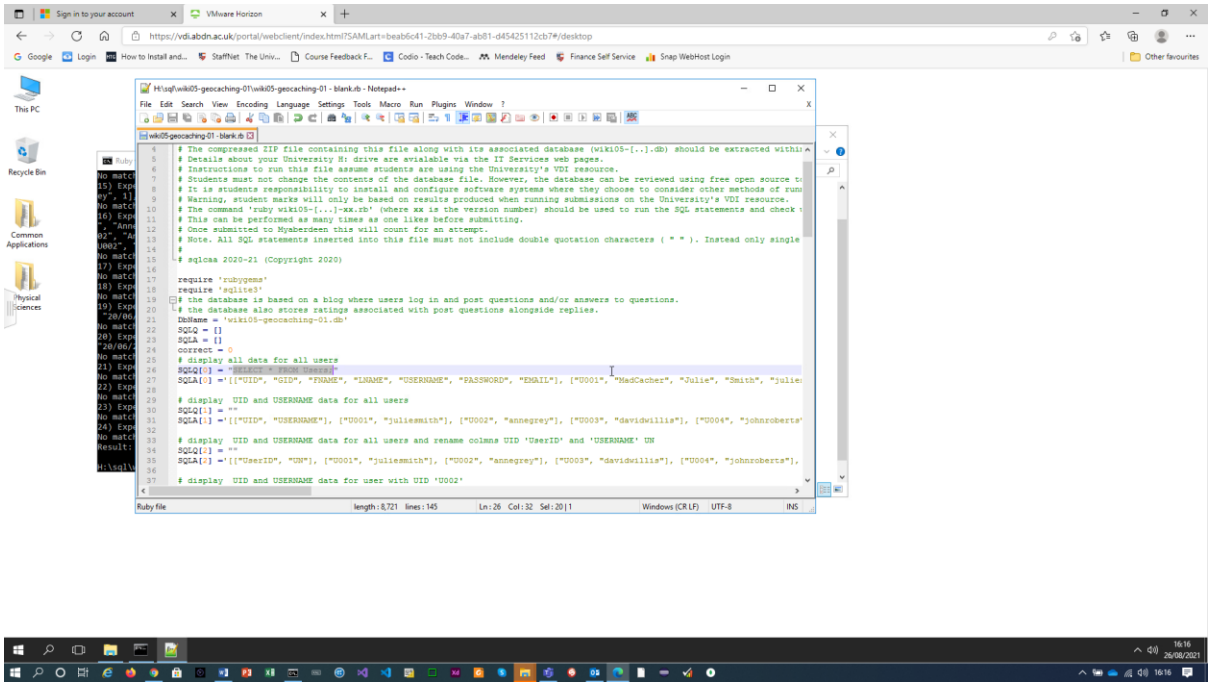
- SQLQA[10] = “ ”
- SQLQA[11] = “ ”
- SQLQA[12] = “ ”
- SQLQA[13] = “ ”
- SQLQA[14] = “ ”
- SQLQA[15] = “ ”
- SQLQA[16] = “ ”
- SQLQA[17] = “ ”
- SQLQA[18] = “ ”
- SQLQA[19] = “ ”
- SQLQA[20] = “ ”
- SQLQA[21] = “ ”
- SQLQA[22] = “ ”
- SQLQA[23] = “ ”
- SQLQA[24] = “ ”

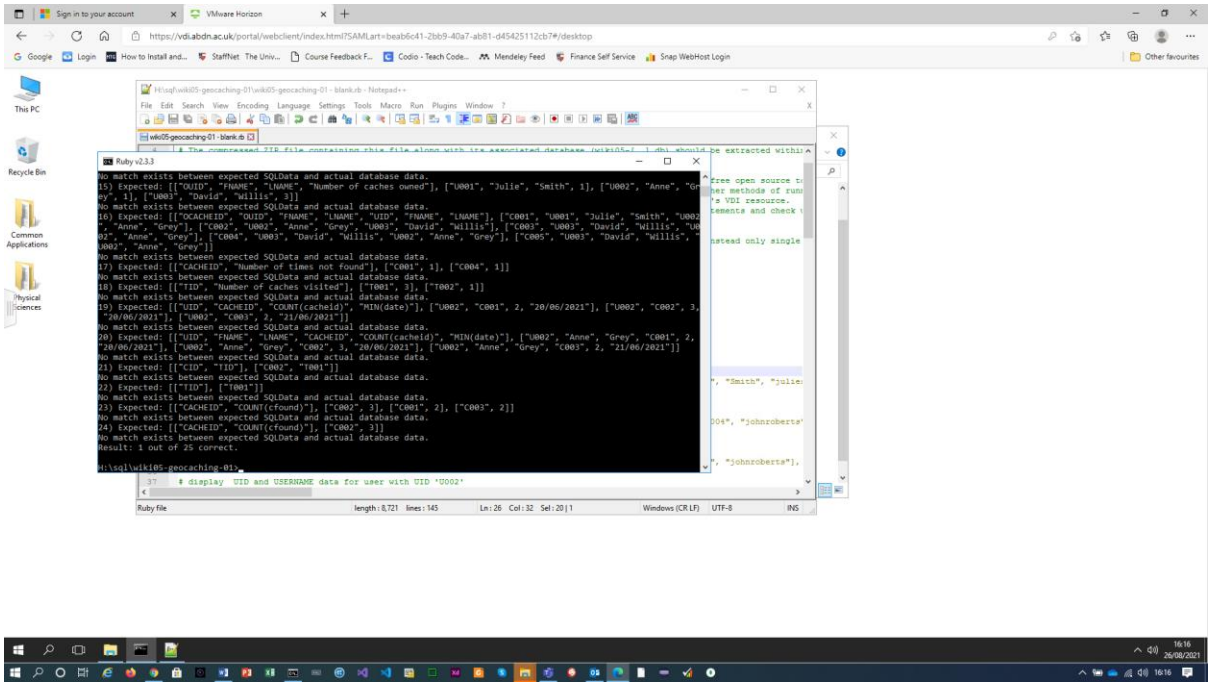


So, if you insert the following SQL statement between the double quotes of the first command as follows, when you save the file and then run the Ruby interrupter and automatically mark the blank sql statements, you will see the first item passes.

- SQLQA[0] = “SELECT * FROM Users; ”

You should then continue repeating this for each of the remaining items until all the items pass.





Again, it is advisable to make copies of the code file each time you make a change so in the event of the file contains errors you can recover the previous version.

Marking the SQL Statements and General Feedback

Having entered correct SQL statements for each of the items you should see all the items pass.

At each stage, you will notice that feedback is provided highlighting the results that the computer is expecting and what your SQL statement answer actually produced.

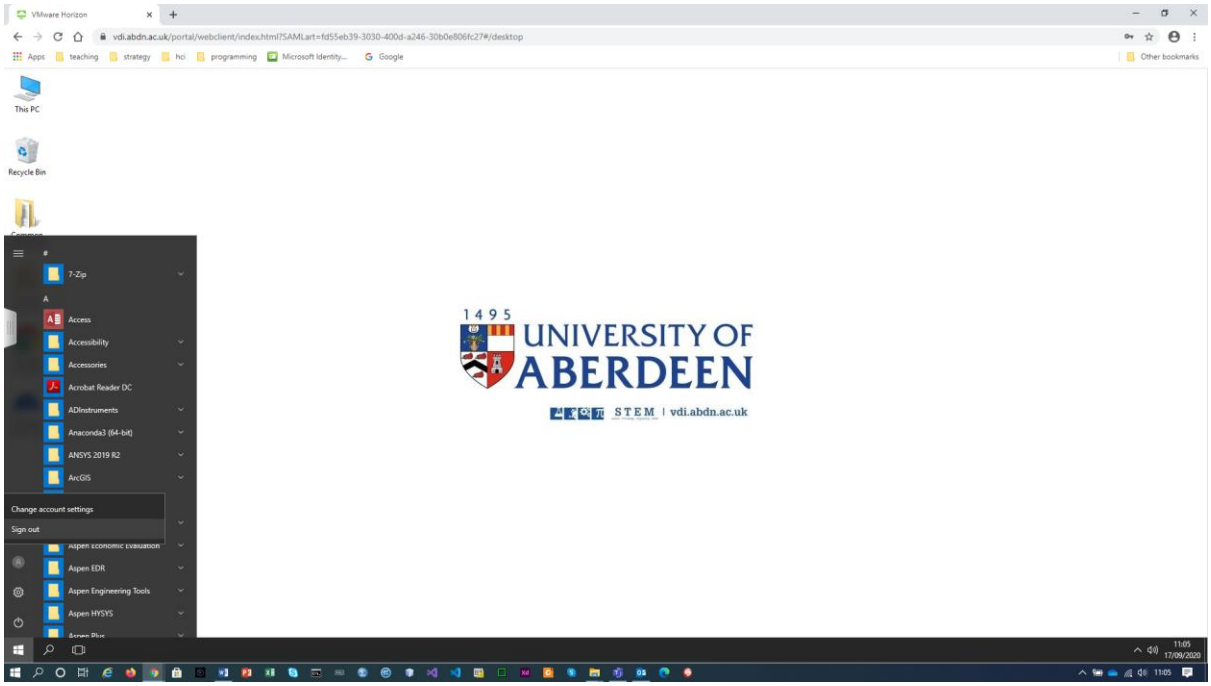
The tool aligns these to make it easier to see where differences exist.

For those items where no SQL statement answer has been provided, the tool just confirms what is expected.

Closing Down

Please remember to close down all the open windows in the virtual desktop before logging off.

To log off the Desktop select Sign out item from the personal option under the main Windows Start icon.



Remember that your files will still reside on your home H: drive for you to access and submit.

Well done.

Useful Links

DB Browser, https://sqlitebrowser.org/

Home drives, https://www.abdn.ac.uk/it/service-portfolio/sc-pc-filestore.php

SQLite Database, https://www.sqlite.org/index.html

Ruby, https://www.ruby-lang.org/en/

VDI, https://www.abdn.ac.uk/toolkit/systems/remote-access/

VMware Horizon Client, https://my.vmware.com/en/web/vmware/downloads/info/slug/desktop_end_user_computing/vmware_horizon_clients/2006