# Student's Guide to CS2040 Online Quiz

a) **Please use a proper laptop or the desktop in the labs for the quiz and not use a tablet/smartphone as there are some operations for certain questions which is not supported on a tablet/smartphone.**

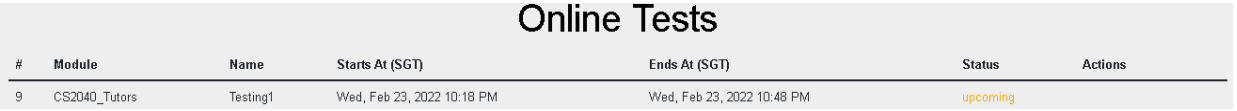
b) Wait for instructions from your lab TA to begin the online quiz (it will start at 45 minutes past the start of your lab session, e.g if your lab starts at 2pm the quiz will start at 2:45pm). He will ask you all to start preparing around 5-10 minutes before the start of the quiz

c) The online quiz is open book but not open internet so you can have any physical notes/books or digital notes (which must be in pdf form) but not access any internet page other than the page for the visualgo quiz. You can also bring blank paper as rough paper for your usage during the quiz.

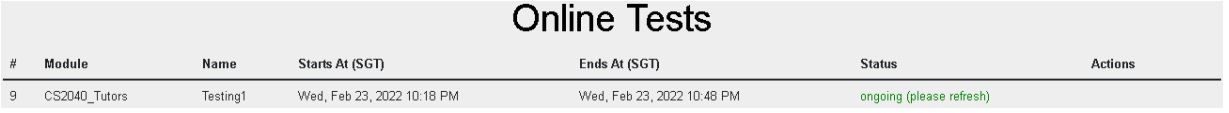
d) Open **Chrome/Firefox** and make sure it is full-screened and no other window is opened except virtual calculator (non-programmable type) and pdf reader for notes if you need them. Physical non-programmable calculator is also ok. Some students have apps to directly draw on their laptop screen, these apps are also allowed.

e) In the browser, log into visualgo and type the following link https://visualgo.net/tests or click on your account name and click on “tests” under the drop-down menu.

f) You should see something like the following

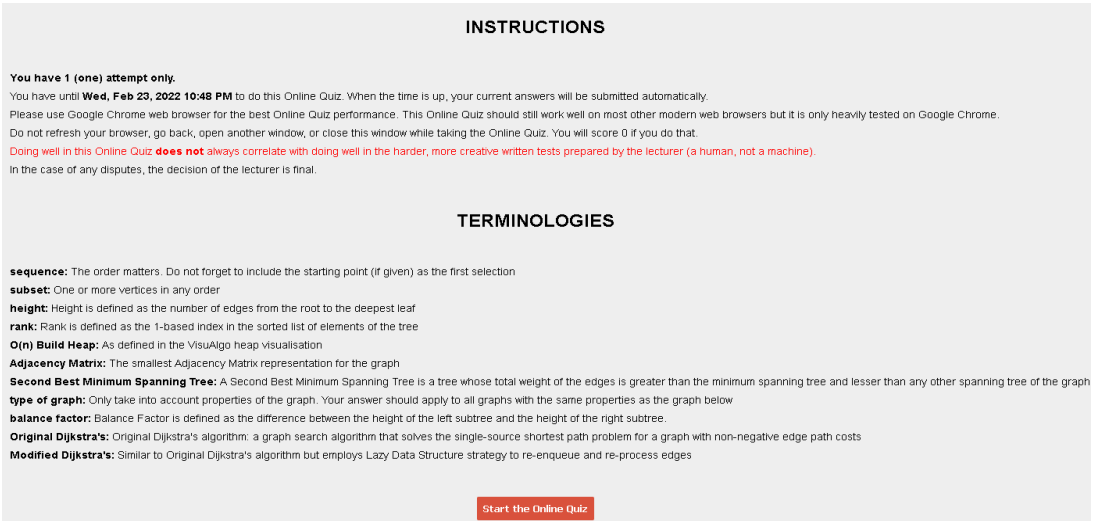



g) Once the start time is reached, you should see the following




h) Refresh and click “Take test” to go to the page to start the quiz

i) You will now see a page with the following instructions, read through it now so you won't need to read it during the online quiz itself to save time.



**INSTRUCTIONS**

**You have 1 (one) attempt only.**
You have until **Wed, Feb 23, 2022 10:48 PM** to do this Online Quiz. When the time is up, your current answers will be submitted automatically.
Please use Google Chrome web browser for the best Online Quiz performance. This Online Quiz should still work well on most other modern web browsers but it is only heavily tested on Google Chrome.
Do not refresh your browser, go back, open another window, or close this window while taking the Online Quiz. You will score 0 if you do that.
Doing well in this Online Quiz **does not** always correlate with doing well in the harder, more creative written tests prepared by the lecturer (a human, not a machine).
In the case of any disputes, the decision of the lecturer is final.

**TERMINOLOGIES**

**sequence:** The order matters. Do not forget to include the starting point (if given) as the first selection
**subset:** One or more vertices in any order
**height:** Height is defined as the number of edges from the root to the deepest leaf
**rank:** Rank is defined as the 1-based index in the sorted list of elements of the tree
**O(n) Build Heap:** As defined in the VisuAlgo heap visualisation
**Adjacency Matrix:** The smallest Adjacency Matrix representation for the graph
**Second Best Minimum Spanning Tree:** A Second Best Minimum Spanning Tree is a tree whose total weight of the edges is greater than the minimum spanning tree and lesser than any other spanning tree of the graph
**type of graph:** Only take into account properties of the graph. Your answer should apply to all graphs with the same properties as the graph below
**balance factor:** Balance Factor is defined as the difference between the height of the left subtree and the height of the right subtree.
**Original Dijkstra's:** Original Dijkstra's algorithm: a graph search algorithm that solves the single-source shortest path problem for a graph with non-negative edge path costs
**Modified Dijkstra's:** Similar to Original Dijkstra's algorithm but employs Lazy Data Structure strategy to re-enqueue and re-process edges

Start the Online Quiz

j) Click on "Start the Online Quiz" to start the quiz

k) Note that you have **only 1 try**, make sure you have answered all the questions before you submit.

l) After you finish your quiz**,** you can continue doing your lab assignment.