Programming Techniques COSC1284/2050

Tutorial 1

About Myself

- My name is Justin Perrie
- Point of Contact: On the discussion board
- Currently studying a PhD (On leave) in Computer Science at RMIT
- Studied at RMIT and Curtin Universities
- Starting teaching at Code Camp, second year teaching, but my second time teaching PT.
- Worked on a game called Cards of Kanji and currently working on a web RTS.

Agenda

- Housekeeping
  - PT Canvas
  - Setup your laptop for Visual Studio Code for Java Programming
- Tutorial/Lab
  - Read chapters 1 & 2 from the text book
  - Discuss the concepts with your tutor and fellow classmates
  - Complete chapter 1 - Exercises 1 - 3
  - Read the assignment specification.

Exercise 1.1

- Computer scientists have the annoying habit of using common English words to mean something other than their common English meaning. For example, in English, statements and comments are the same thing, but in programs they are different.

  1. In computer jargon, what's the difference between a statement and a comment?

  2. What does it mean to say that a program is portable?

  3. In common English, what does the word compile mean?

  4. What is an executable? Why is that word used as a noun?

Exercise 1.2

- Before you do anything else, find out how to compile and run a Java program.
- Open Visual Studio Code and create a new file.
  - Create and then open folder where you intend to store your programming work, this folder name be anything, but make it meaningful like ‘Java’
  - You can save the file straight away or do it after writing the code, though would recommend saving the file as soon as possible.

1. Type in the hello world program, then compile and run it.

2. Add a print statement that displays a second message after the “Hello, World!”. Say something witty like, “How are you?” Compile and run the program again.

3. Add a comment to the program (anywhere), recompile, and run it again. The new comment should not affect the result.

Exercise 1.3

- It is a good idea to commit as many errors as you can think of, so that you see what error messages the compiler produces. Sometimes the compiler tells you exactly what is wrong, and all you have to do is fix it. But sometimes the error messages are misleading. Over time you will develop a sense for when you can trust the compiler and when you have to figure things out yourself.
- Starting with the hello world program, try out each of the following errors. After you make each change, compile the program, read the error message (if there is one), and then fix the error.

Exercise 1.3 (cont.)

1. Remove one of the open curly braces.
2. Remove one of the close curly braces.
3. Instead of main, write mian.
4. Remove the word static.
5. Remove the word public.
6. Remove the word System.
7. Replace println with Println.
8. Replace println with print.
9. Delete one of the parentheses.
10. Add an extra parenthesis.

Practical Discussion

Conclusion

- Write your own example program to demonstrate the concepts you have learned.
  (Must practice your craft to get good at it!)

- Read the assignment specification.
  - 21st August, 2020 (Friday) 11:59 pm AEST i.e. end of week 5

Additionally instructions for setting up VS Code, while online.

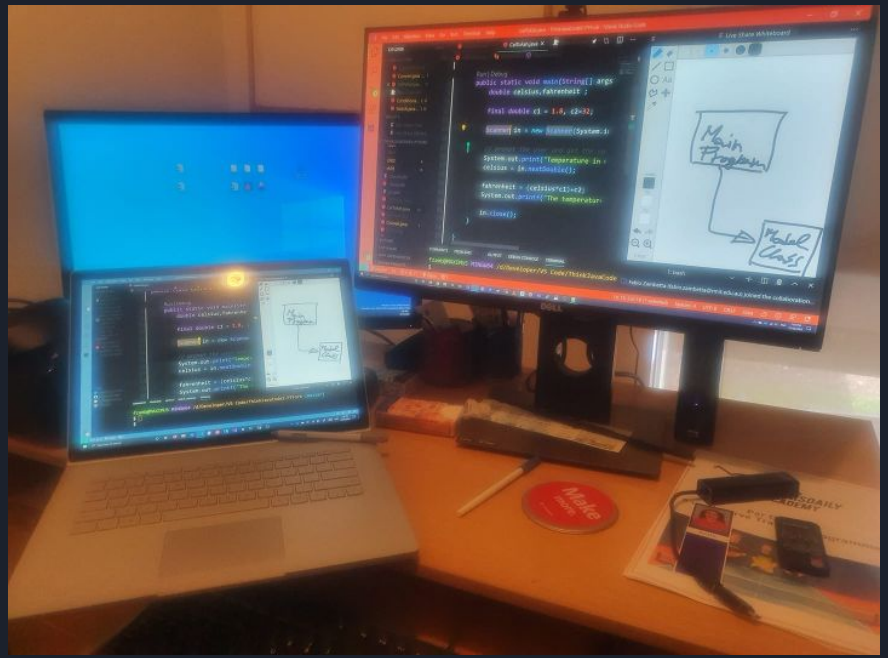
(Doesn’t need to complete by week 1, but should be, by the week of assignment 1 due date.)

Online Instructions (VS Code)

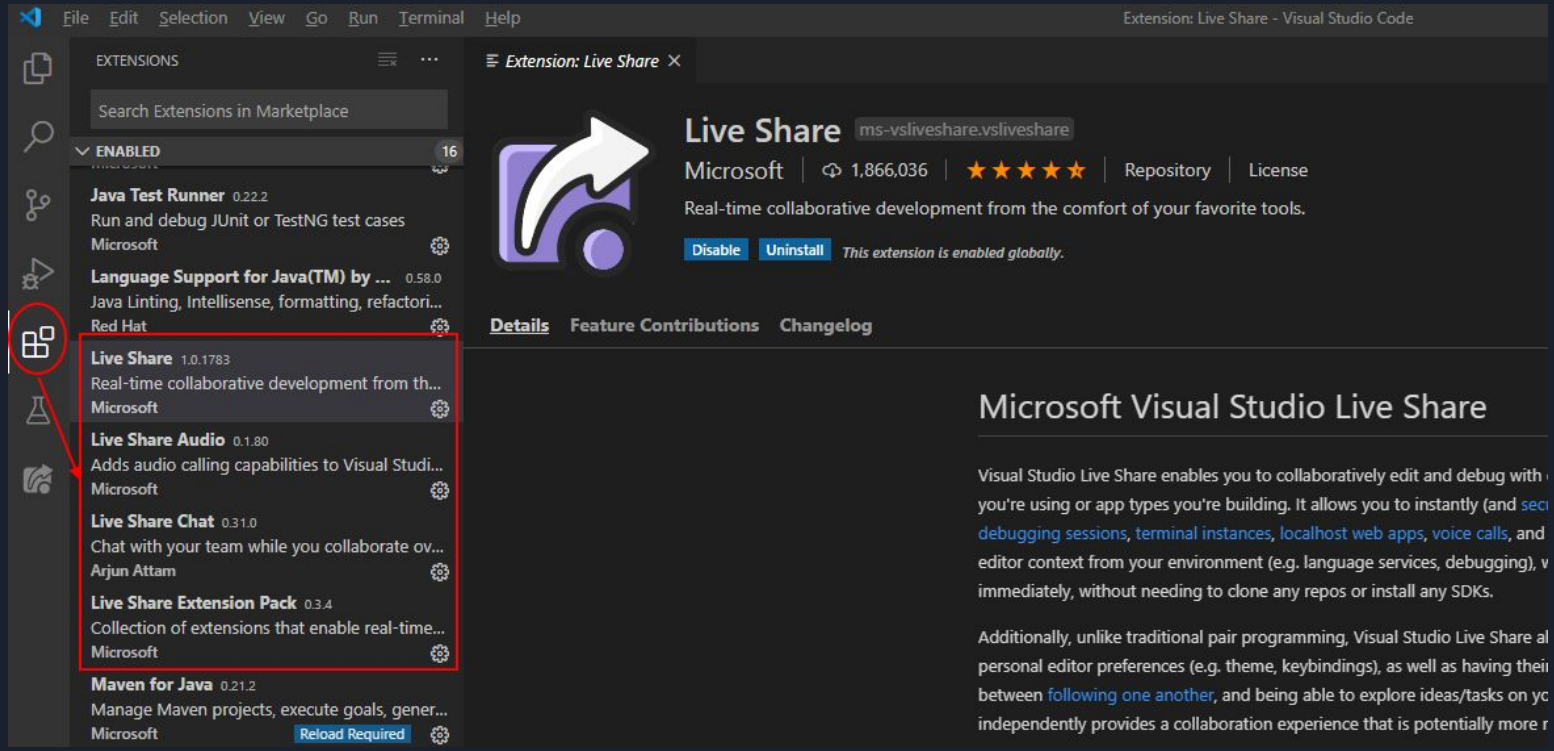
- Assistance to programming will be provided by your tutor via VS Code Live Share
  - Three extensions are needed for VS Code Online Interaction
    - Live Share
    - Live Share Audio
    - Live Share Chat
  - Can be installed via the Live Share Extension Pack or installed individually.
  - Once all extensions are installed, you must restart VS Code to get everything to work.
  - Remember, you need to open the folder where you are storing your code, this true for Live Share too.

Other Useful Extensions for VS Code

- Peacock: Subtly change the color of your Visual Studio Code workspace, comes with Live Share Extension Pack.
- Live Share Whiteboard: All participants can collaboratively draw on the whiteboard, and see each others changes in real-time, installed as separate extension.

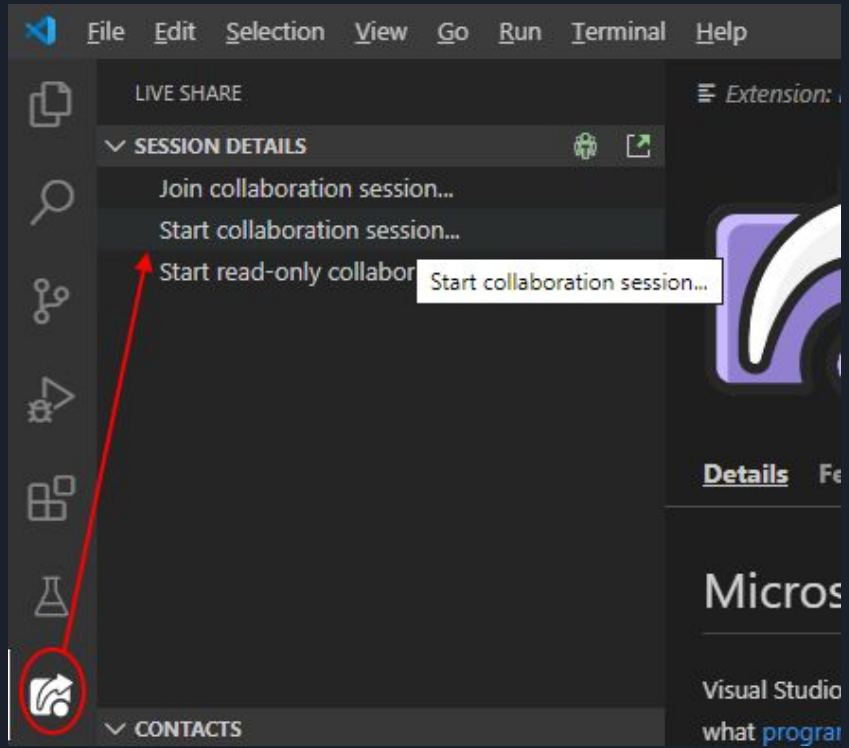


VS Code Live Share Extensions

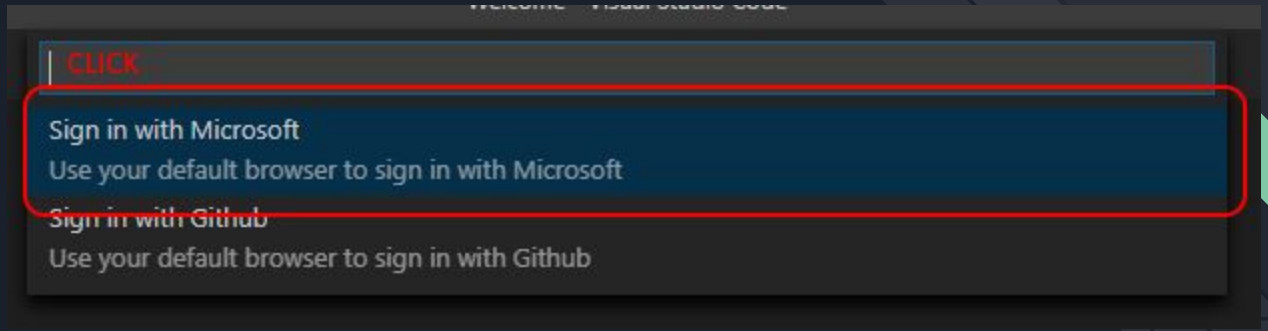


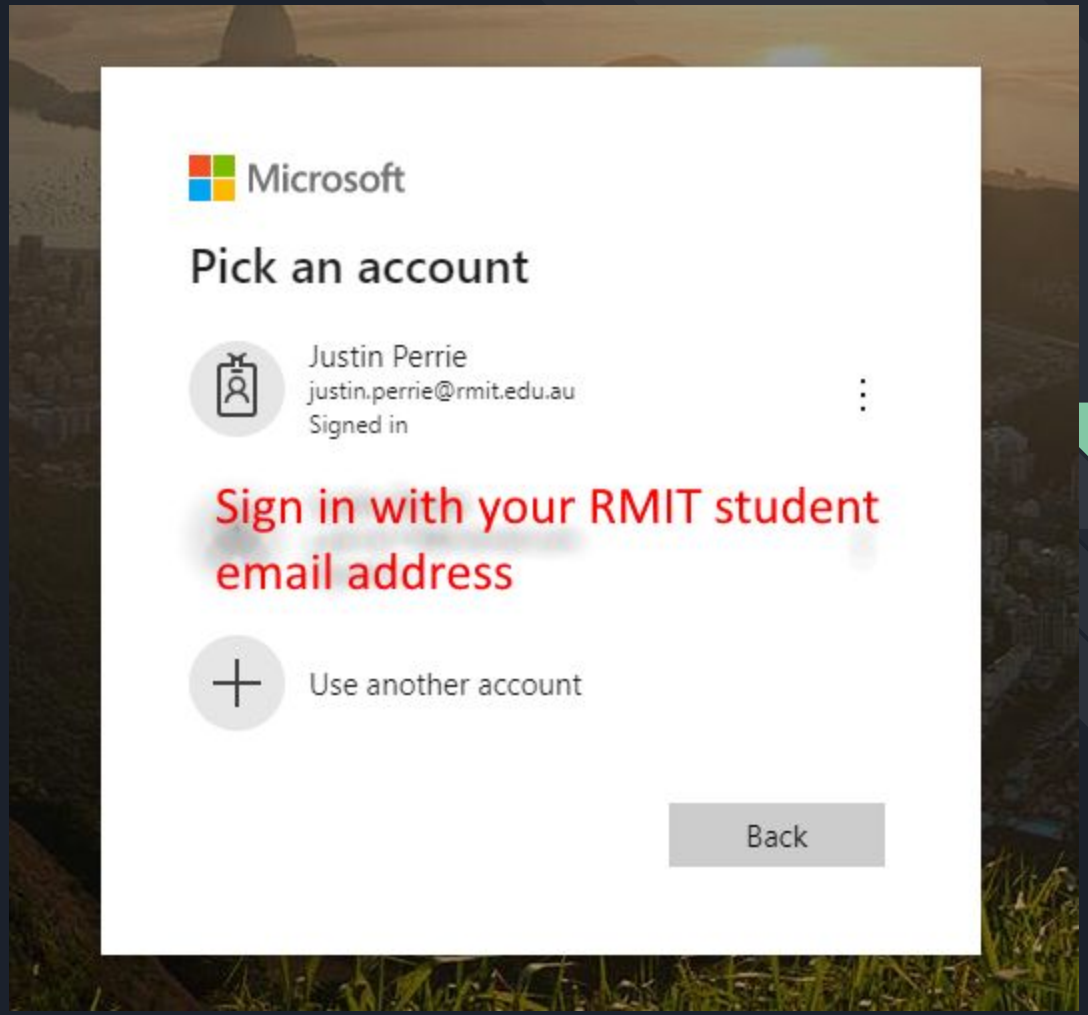
- Restart VS Code and once open,
- then open your code folder.
- You have to open the code that you are already working on, before sharing!

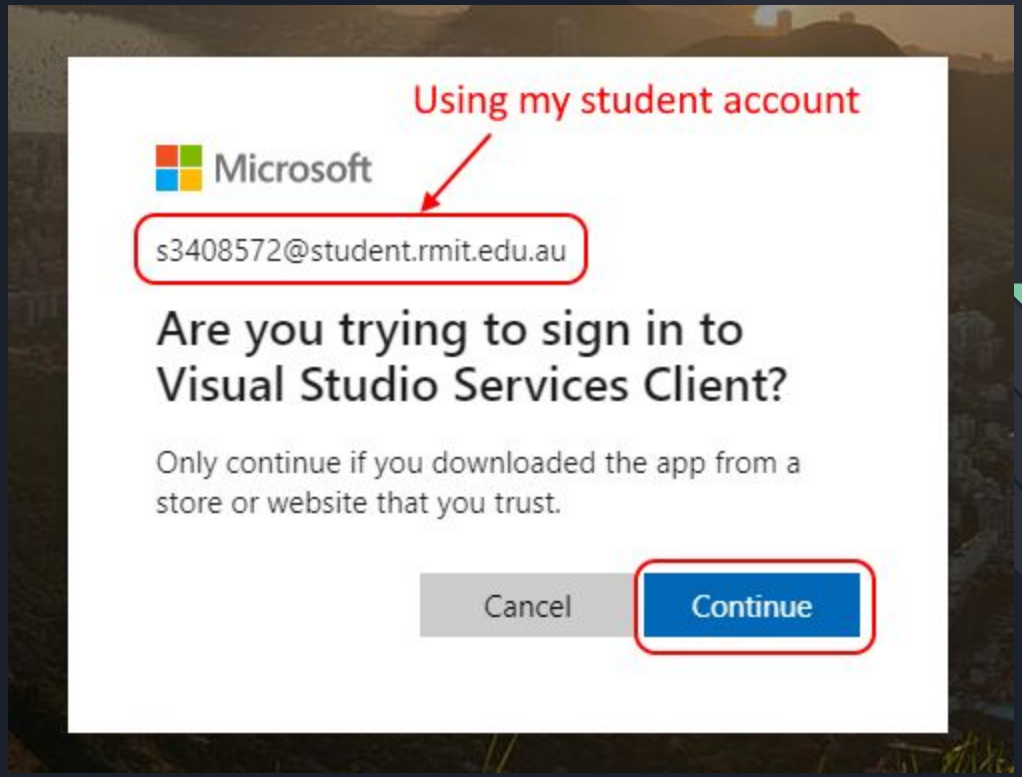
VS Code Live Share - Start Collaboration

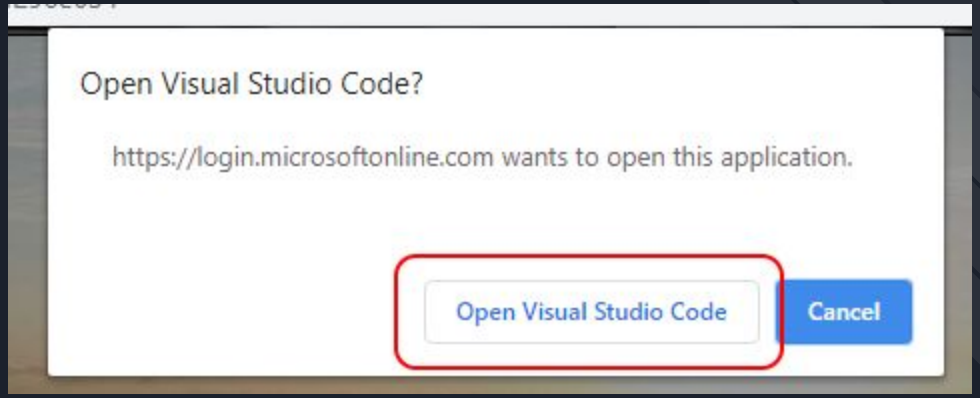


You must sign in with your student email account.

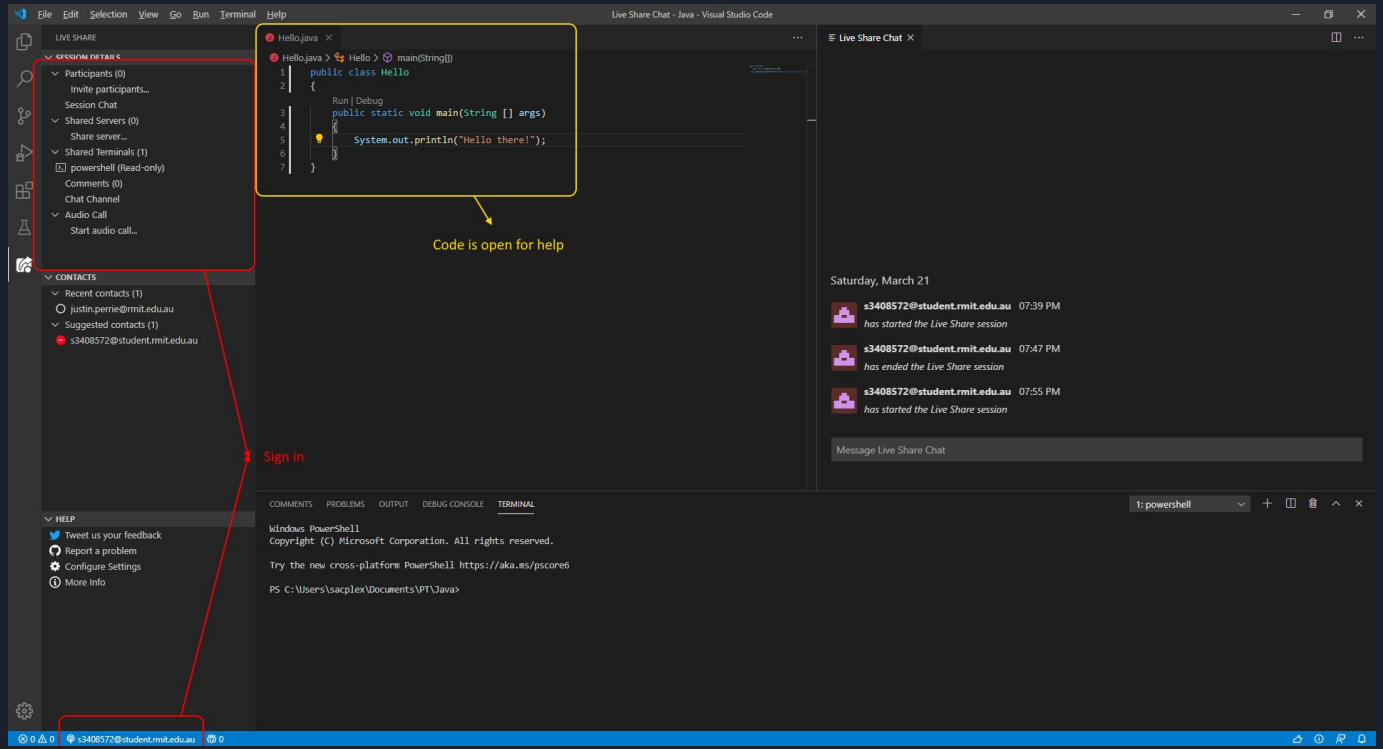

CLICK
Sign in with Microsoft
Use your default browser to sign in with Microsoft
Sign in with Github
Use your default browser to sign in with Github


Microsoft
Pick an account
Justin Perrie
justin.perrie@rmit.edu.au
Signed in
Sign in with your RMIT student email address
Use another account
Back


Using my student account
Microsoft
s3408572@student.rmit.edu.au
Are you trying to sign in to Visual Studio Services Client?
Only continue if you downloaded the app from a store or website that you trust.
Cancel
Continue

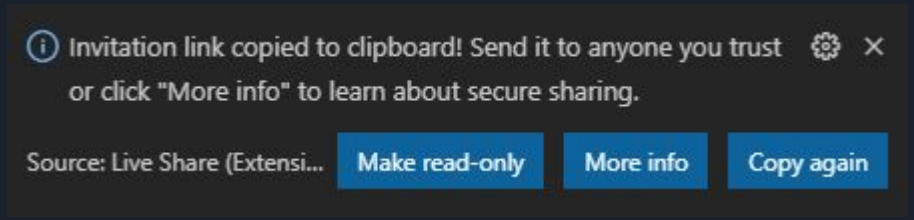

Open Visual Studio Code?
https://login.microsoftonline.com wants to open this application.
Open Visual Studio Code
Cancel

Once signed in, should be like this!

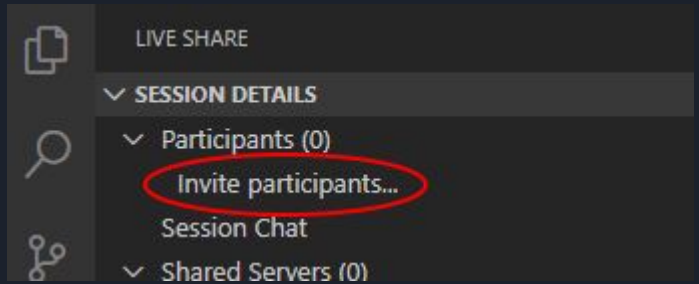


VS Code Live Share - Sending Invitation

- Once connected an invitation link is already stored your computer's memory (the clipboard). You can also copy the link again with this display

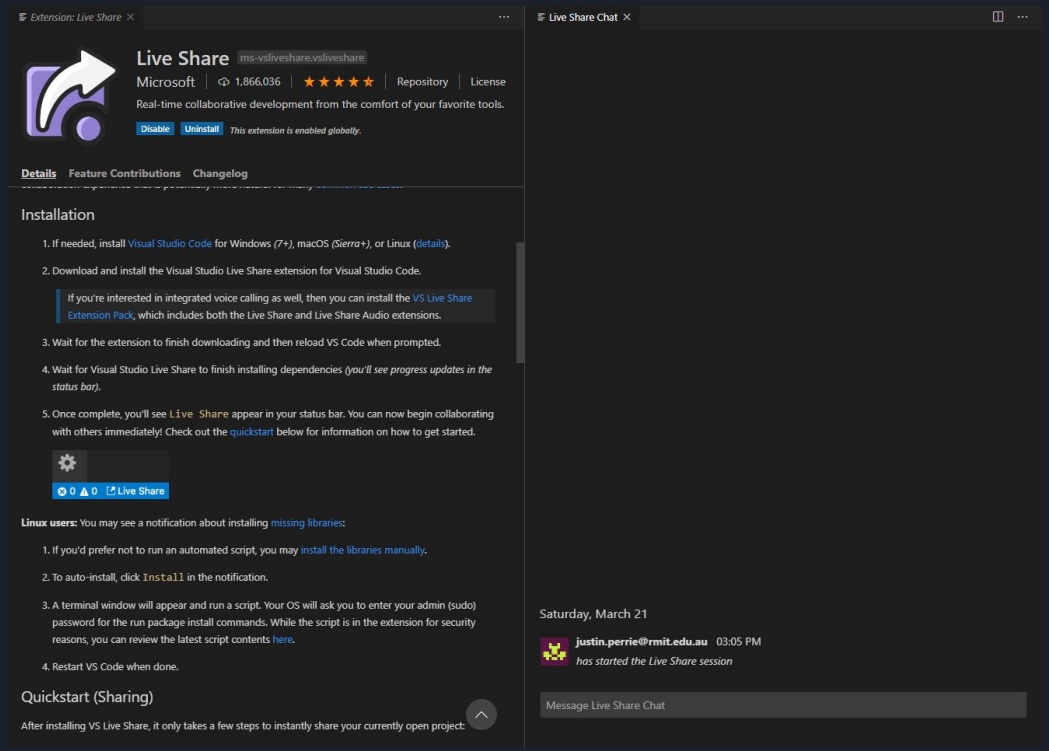


- If the display disappears, click "Invite participants..." on the left

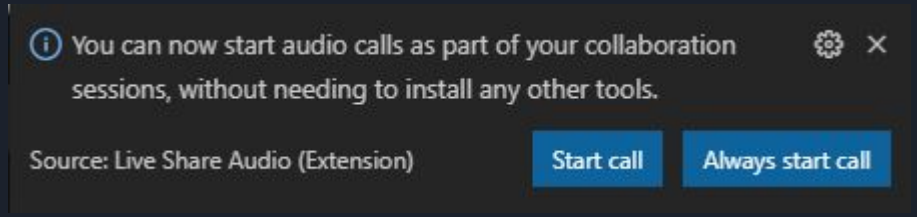


Send the invitation link via teams to your tutor.

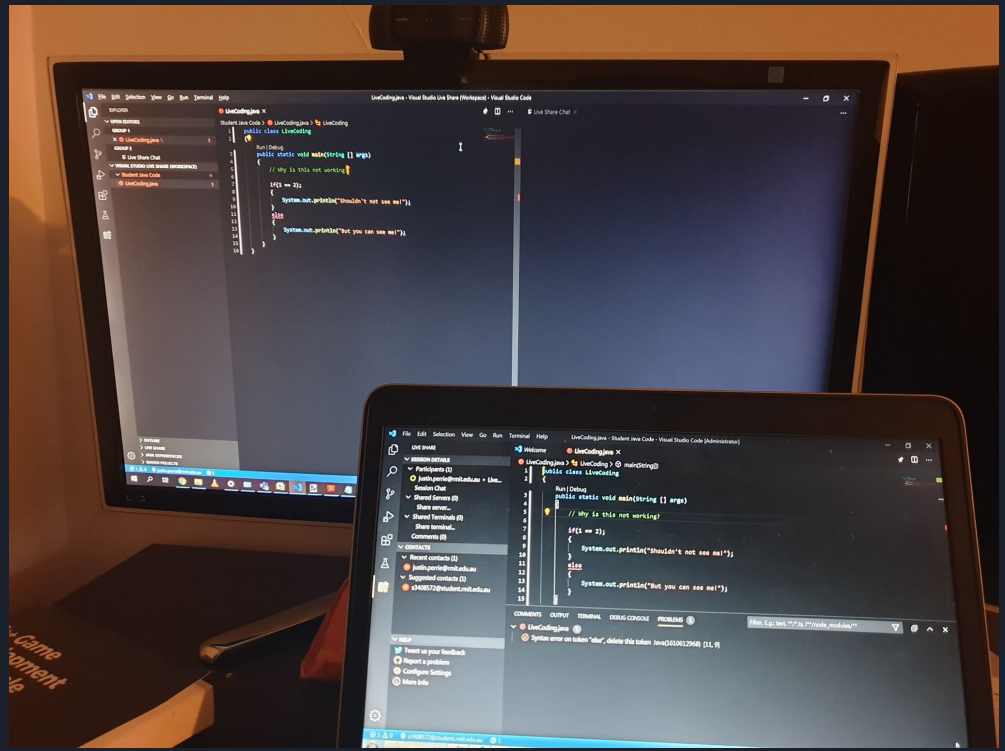
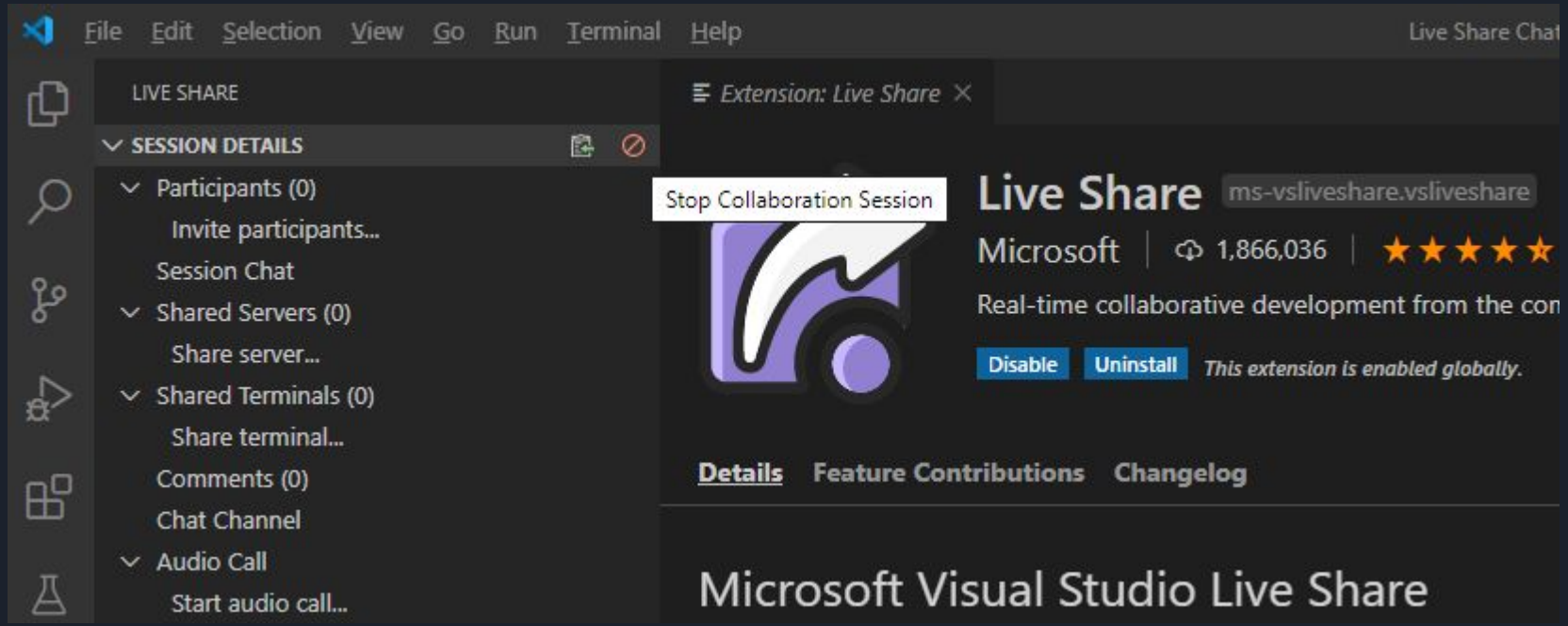
Live Share Chat



Live Share Audio



VS Code Live Share between Staff and Student



Stop collaboration