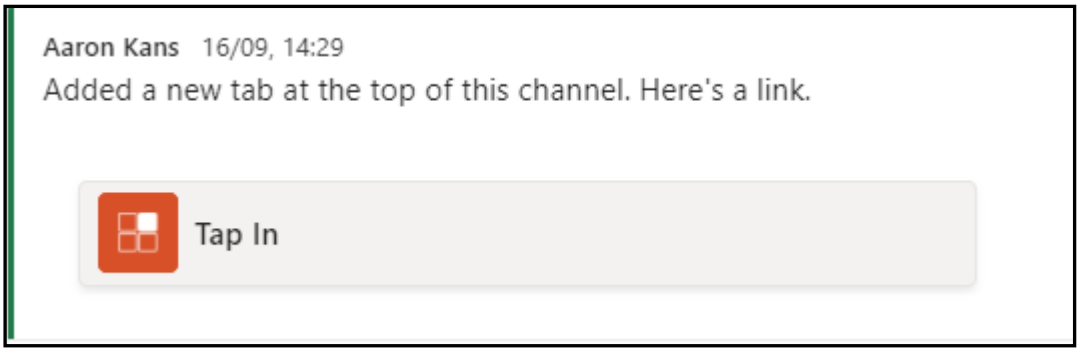
Before your lab session, make sure you have:

- **watched** the WEEK 10 lecture videos on the **CD/CN4001 Moodle Site** by clicking here
- **logged on** to the live lecture Q&A on **Monday 10-11am** via the **CD4001/CN4001 Teams** site by clicking here.
- When joining the Q&A on Teams, please make sure you click the **Tap-In** button at the top of the **General channel** at 10am (link here):



Then check your timetable to find out the day/time/location of your lab session.

If you have permission from your course leader to study remotely, follow these instructions to access your remote lab (Tuesday 4-6pm):

1. *Go to the ON-LINE LAB (Tue 4-6) channel on your **CN4001/CD4001 Software Development Microsoft Teams** site by clicking here.*
2. *Wait for your tutor to start the lab session. To join the session, click on the "**Join**" button that will appear when your tutor starts the session.*

JDoodle

To open the web-based Java IDE called **JDoodle** click here

In the default **MyClass** program provided, delete the default code in the **main** method and rename the class name to **MagicSquareApp.**

ASSESSED TASK: **4 marks**

For this task we will consider a **magic word square.** A magic word square is a square where a word can be formed from reading each row and each column. For example, the following is a 4 by 4 magic word square:

'P'	**'R'**	**'E'**	**'Y'**
'L'	**'A'**	**'V'**	**'A'**
'O'	**'V'**	**'E'**	**'R'**
'T'	**'E'**	**'N'**	**'D'**

a) In the *main* method write the instruction to declare and initialize a 2D array, **magicSquare**, to hold the words illustrated in the diagram above.

b) Write a method, **displaySquare**, that accepts and displays the **magicSquare** array - and write the instruction in **main** to call this method.

c) Write a method, **displayRow**, that accepts the **magicSquare** array and a row number and displays the word in that row - and write the instruction in **main** to call this method with a row number of 2.

Hint: Remember to take 1 off the row number to get back to the correct array index

d) Write a method, **displayColumn**, that accepts the **magicSquare** array and a column number and displays the word in that column - and write the instruction in **main** to call this method with a column number of 4.

Hint: Remember to take 1 off the column number to get back to the correct array index

e) Add some Javadoc comments into this program

f) Download he **MagicSquareApp.java** file from **JDoodle** and upload to **Moodle** via your **submission link**.