## CD/CN4001 LAB SHEET -TOPIC 8 (OBJECT-ORIENTED PROGRAMMING)

## Before your lab session, make sure you have:

- watched the WEEK 8 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 <a href="here">here</a>.
- 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.

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

Go to the Moodle or Teams sites; download and save the **BankAccount.java** file onto your desktop (do not modify this class) then

a) Select the **Advanced Java IDE** interface:



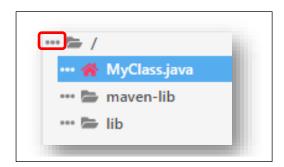
- b) In the default **MyClass** program provided, delete the default code in the **main** method and rename the class name to **BankApp**
- c) Ensure the name of the file in the project folder matches this new name by selecting the **3 dots** against the **MyClass.java** file and select the **Rename** option



d) Change the name to **BankApp** and click the tick:

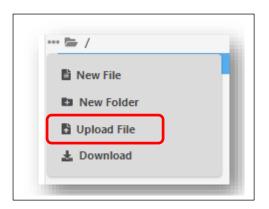


e) You will write today's code in this **BankApp** file, but it needs access to the **BankAccount** file that you have downloaded. So, upload the **BankAccount** file to the same project folder by selecting the **3 dots** by the Main Folder icon



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f) Select **Upload File** and upload the **BankAccount.java** file:



To allow for user input also slide the **Interactive** slider to the **on** position.



## ASSESSED TASK: 4 marks

For this task we will make use of the **BankAccount** class discussed in the lecture.

a) In the **main** method of the **BankApp**, create 2 **BankAccount** objects, **acc1** and **acc2**, with the following account numbers and names:

```
acc1: number: "111" name: "Batman" acc2: number: "222" name: "Robin"
```

- b) In the **BankApp** program, write a method, **displayAccount**, that accepts a **BankAccount** object and displays the account's number, name and balance.
- c) Modify the **main** method so that it calls the **displayAccount** method twice, once with **acc1** and once with **acc2**.
- d) Write instructions in the **main** method to deposit 100 pounds into **acc1** and 50 pounds into **acc2** and then use the **displayAccount** method to display these 2 accounts again.
- e Write instructions in the **main** method to withdraw 75 pounds from **acc1** and also 75 pounds from **acc2** and then use the **displayAccount** method to display these 2 accounts again.
- f) Add some Javadoc comments into this program
- g) Download the **BankApp.java** file only from JDoodle and then upload this file only to **Moodle** via the **submission link**.