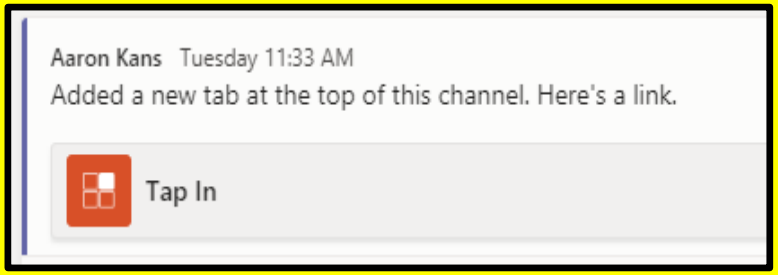
CD/CN4001: Topic 8 Lab

ON CAMPUS

Tap in* with your ID card in a *UEL lab

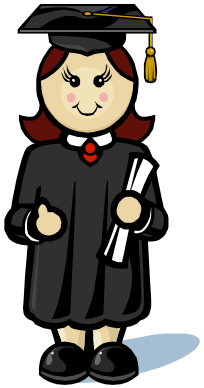
REMOTE

Click on the Tap in tab in the General channel of the Teams site



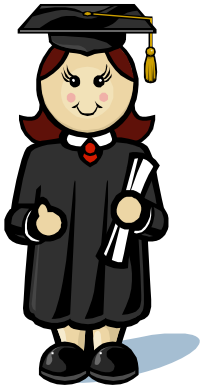
Object-Oriented Programming: Lecture Review

Object-oriented programming…

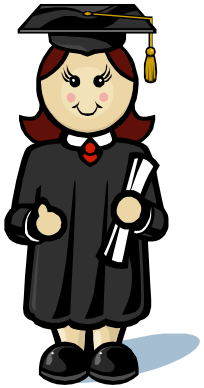


Object-Oriented Programming: Lecture Review

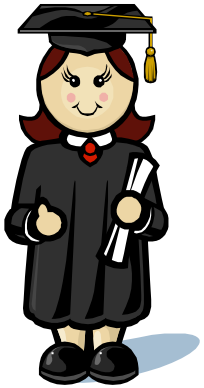
.. views the program as a collection of objects..



.. rather than a collection of methods.

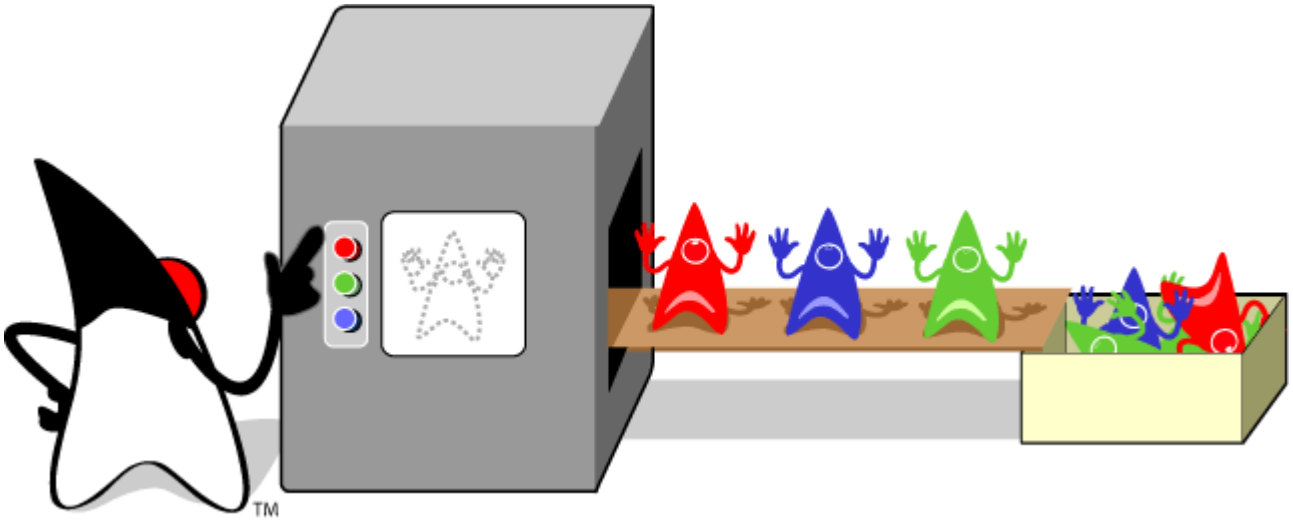


Objects contain methods AND data!



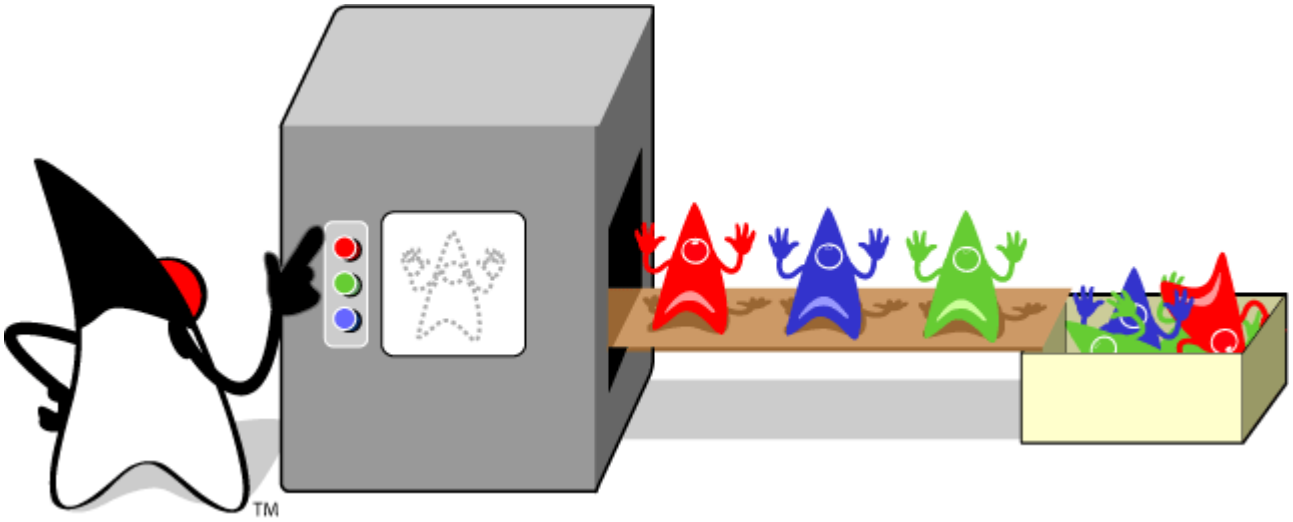
Object-Oriented Programming: Lecture Review

Classes....



Object-Oriented Programming: Lecture Review

..are **blueprints** for objects.



Object-Oriented Programming: Lecture Review

Today we will use the BankAccount class, written for you, to create BankAccount objects

BankAccount

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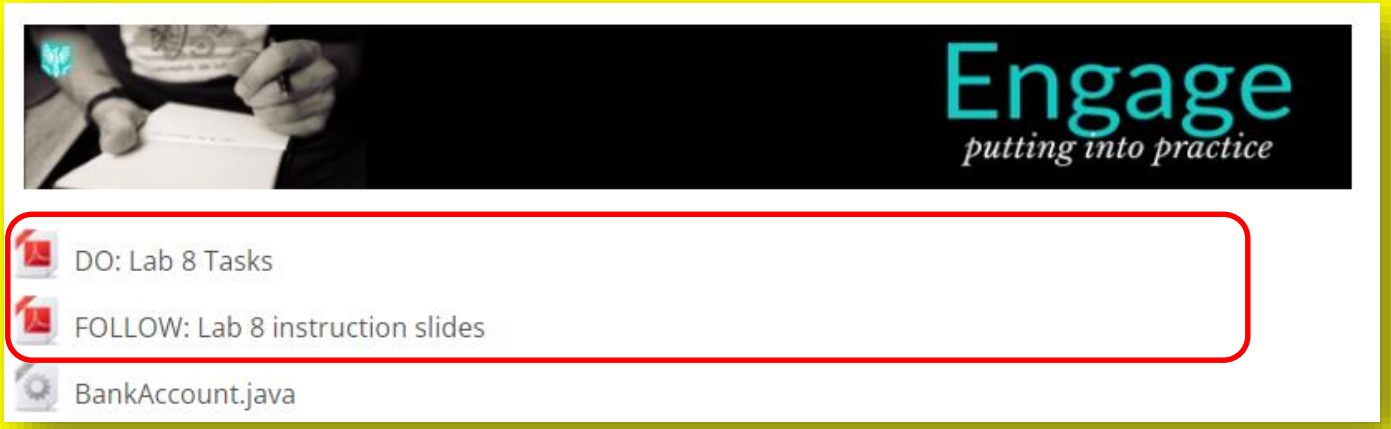

Open the lab 8 tasks/instruction slides

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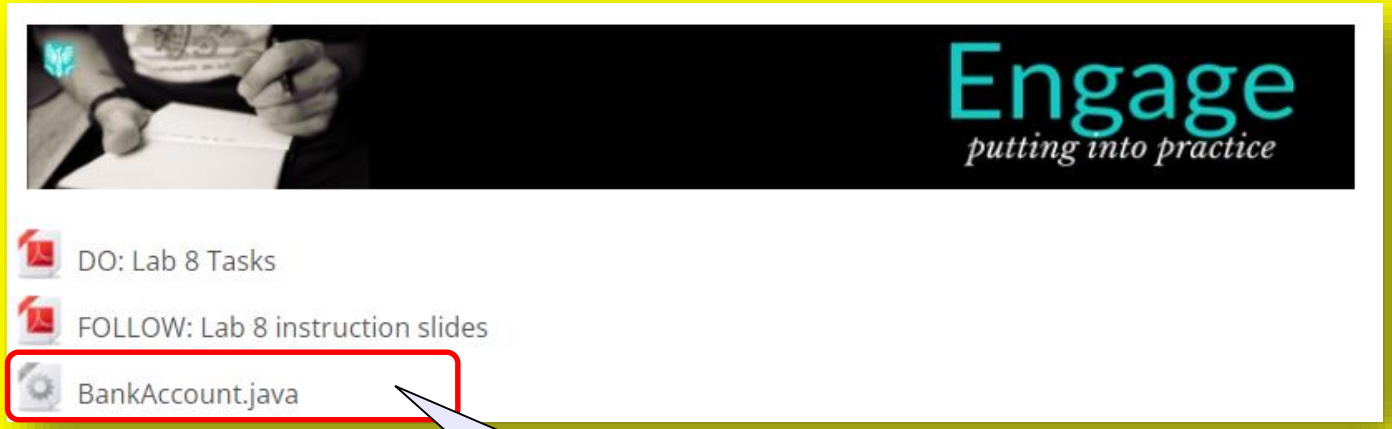

*Download the **BankAccount.java** file to your machine*

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a) **Toggle to the Advanced Java IDE this week.**

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b) In the default MyClass program provided, delete the default code in the main method and rename the class name to BankApp

/MyClass.java

```
1  public class BankApp
2  {
3      public static void main(String args[])
4      {
5
6      }
7  }
```

Now change the name of the file

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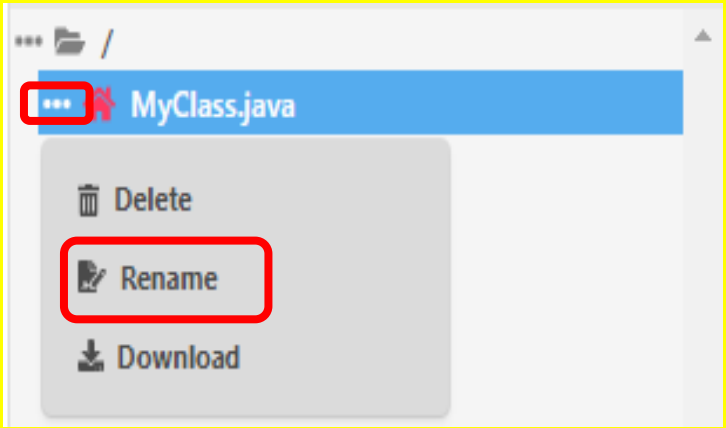
c) Select the 3 dots by the name of the file and select the Rename option



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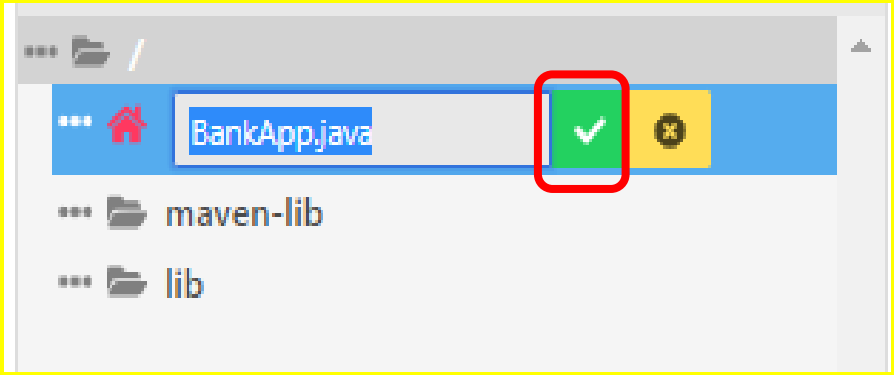
d) **Change the name to BankApp and click the tick:**



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e) You will write today's code in this BankApp file, but it needs access to the BankAccount file that you have downloaded...

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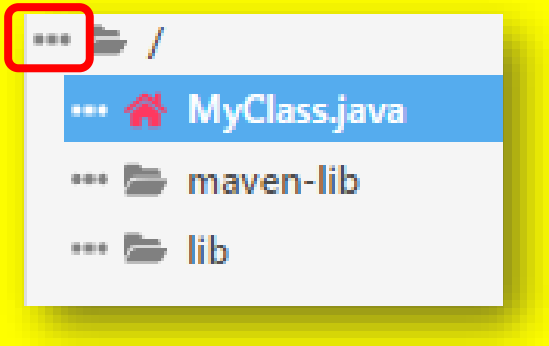
e) So, upload the BankAccount file to the same project folder by selecting the 3 dots by the Main Folder icon



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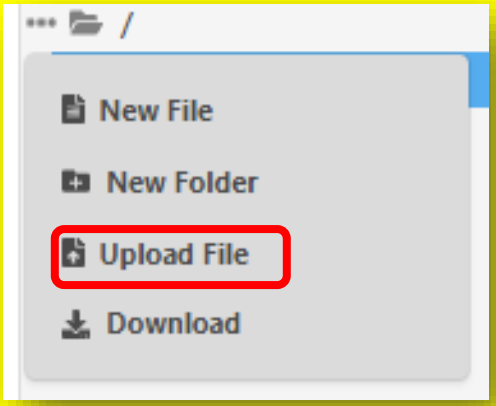
f) Select **Upload File** and upload the **BankAccount.java** file



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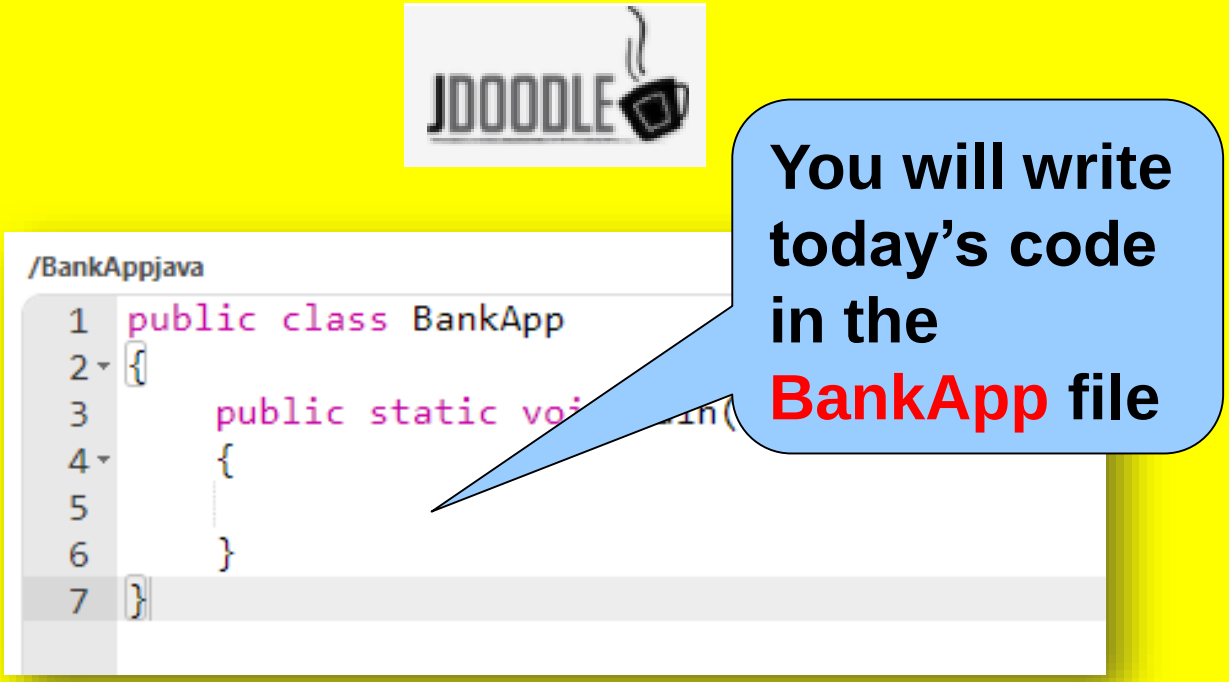

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/BankAppjava

```
1  public class BankApp
2  {
3      public static void main(String args[])
4      {
5
6      }
7  }
```

DO NOT TOUCH THE BankAccount file

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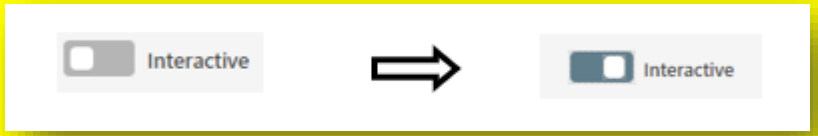
To allow for user input slide the Interactive slider to the on position.



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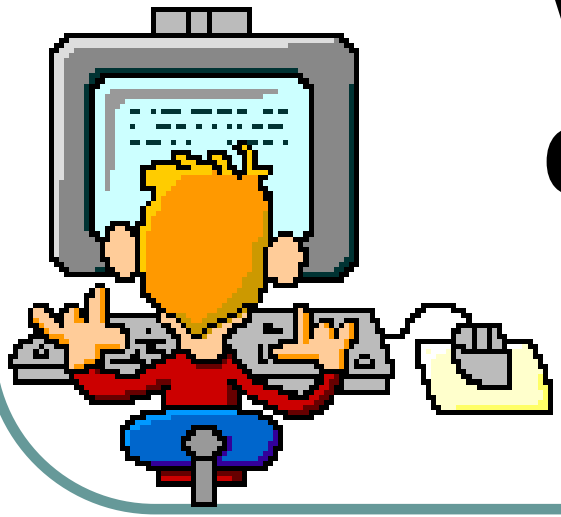
NOW – let's tackle this week's practical class.



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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"**

CD/CN4001: Topic 8 Lab

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"

YOU HAVE 10 MINUTES!!!

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TIME'S UP!!

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b) In the **BankApp** class, write a method, **displayAccount**, that accepts a **BankAccount** object and displays the account's, **number**, **name** and **balance**.

YOU HAVE 10 MINUTES!!!

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TIME'S UP!!

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c) Modify the **main** method so that it calls the **displayAccount** method twice, once with **acc1** and once with **acc2**.

YOU HAVE 5 MINUTES!!!

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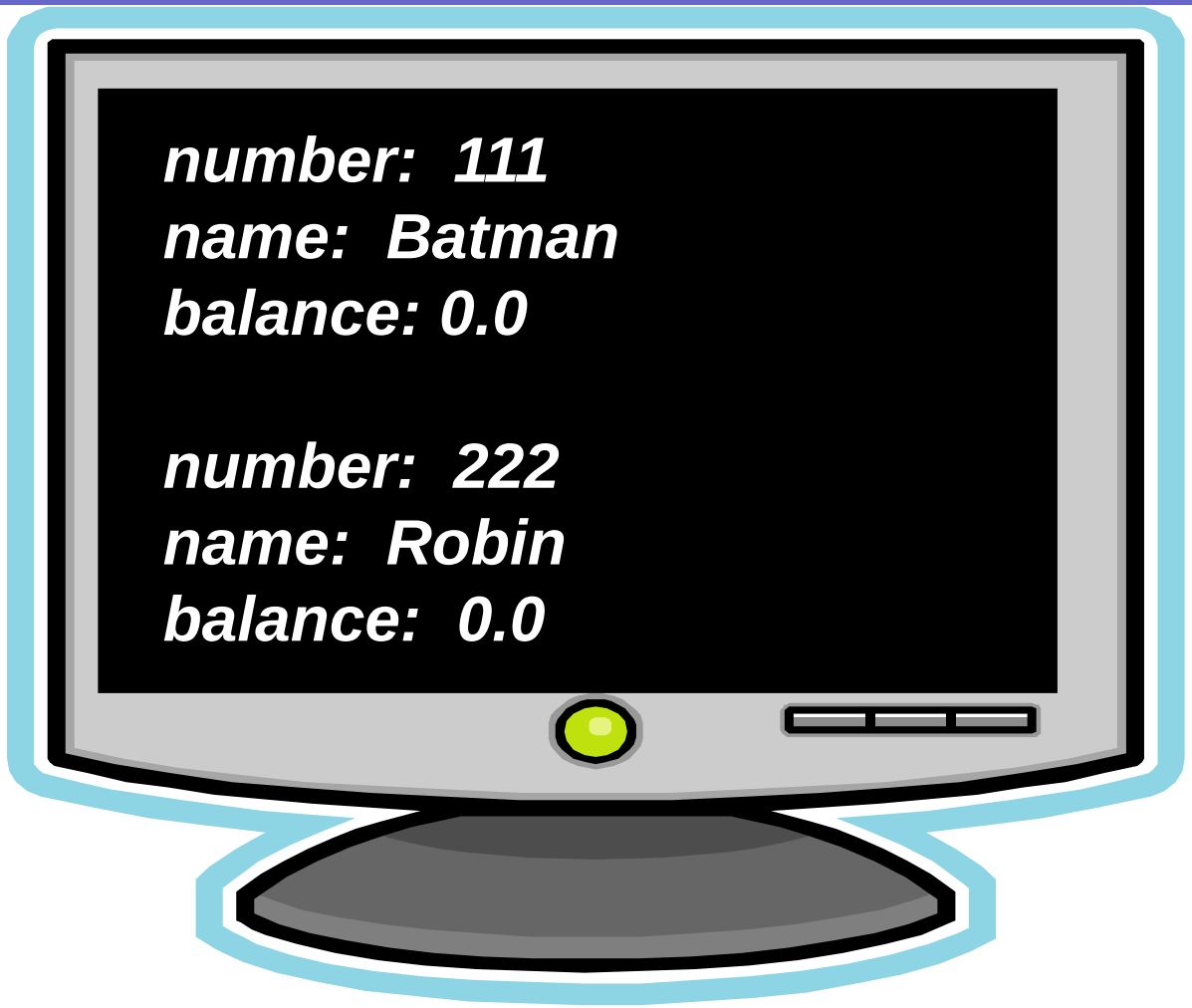
TIME'S UP!!

CD/CN4001: Topic 8 Lab



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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.

YOU HAVE 8 MINUTES!!!

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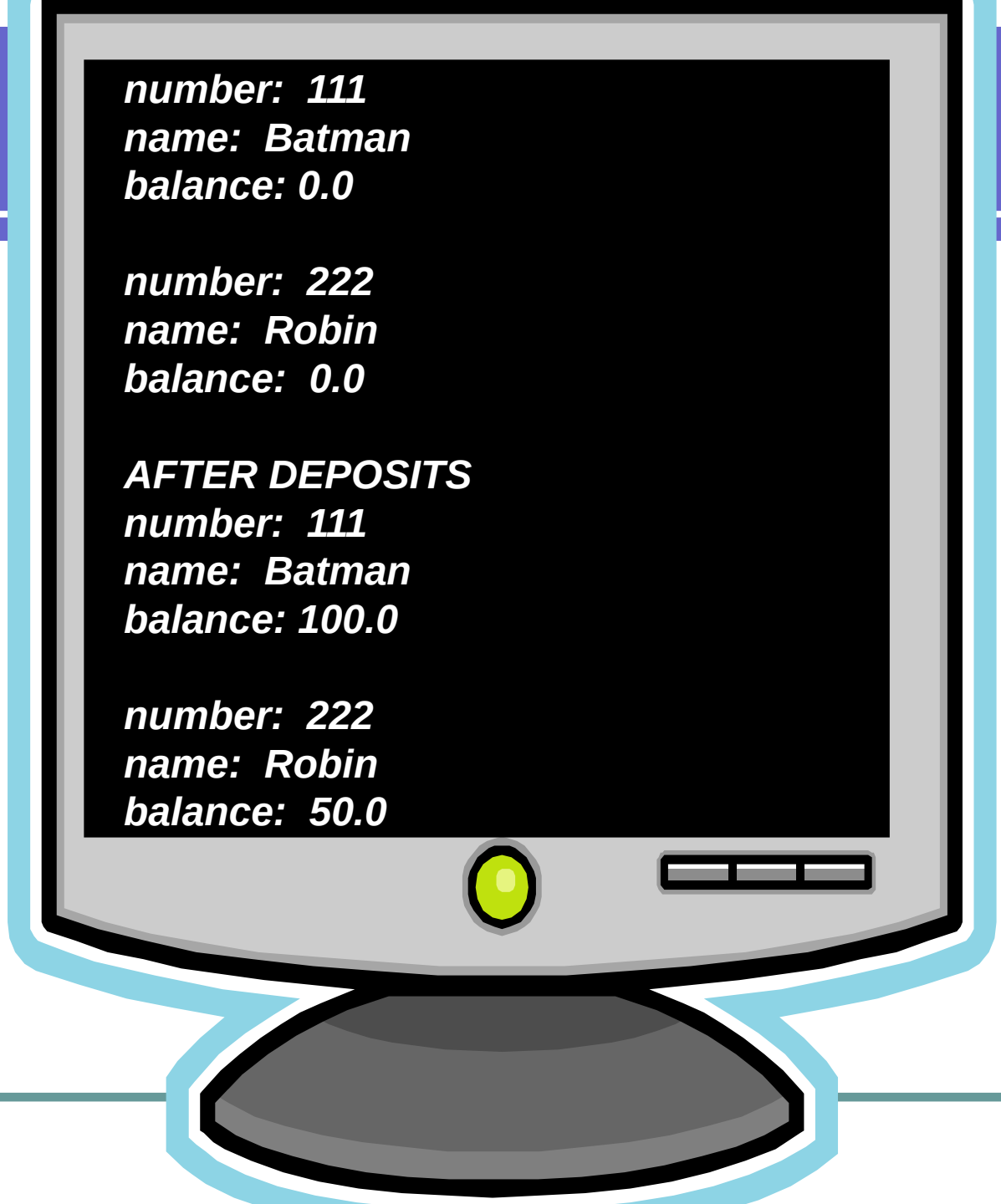
TIME'S UP!!


number: 111
name: Batman
balance: 0.0
number: 222
name: Robin
balance: 0.0
AFTER DEPOSITS
number: 111
name: Batman
balance: 100.0
number: 222
name: Robin
balance: 50.0

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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.

YOU HAVE 8 MINUTES!!!

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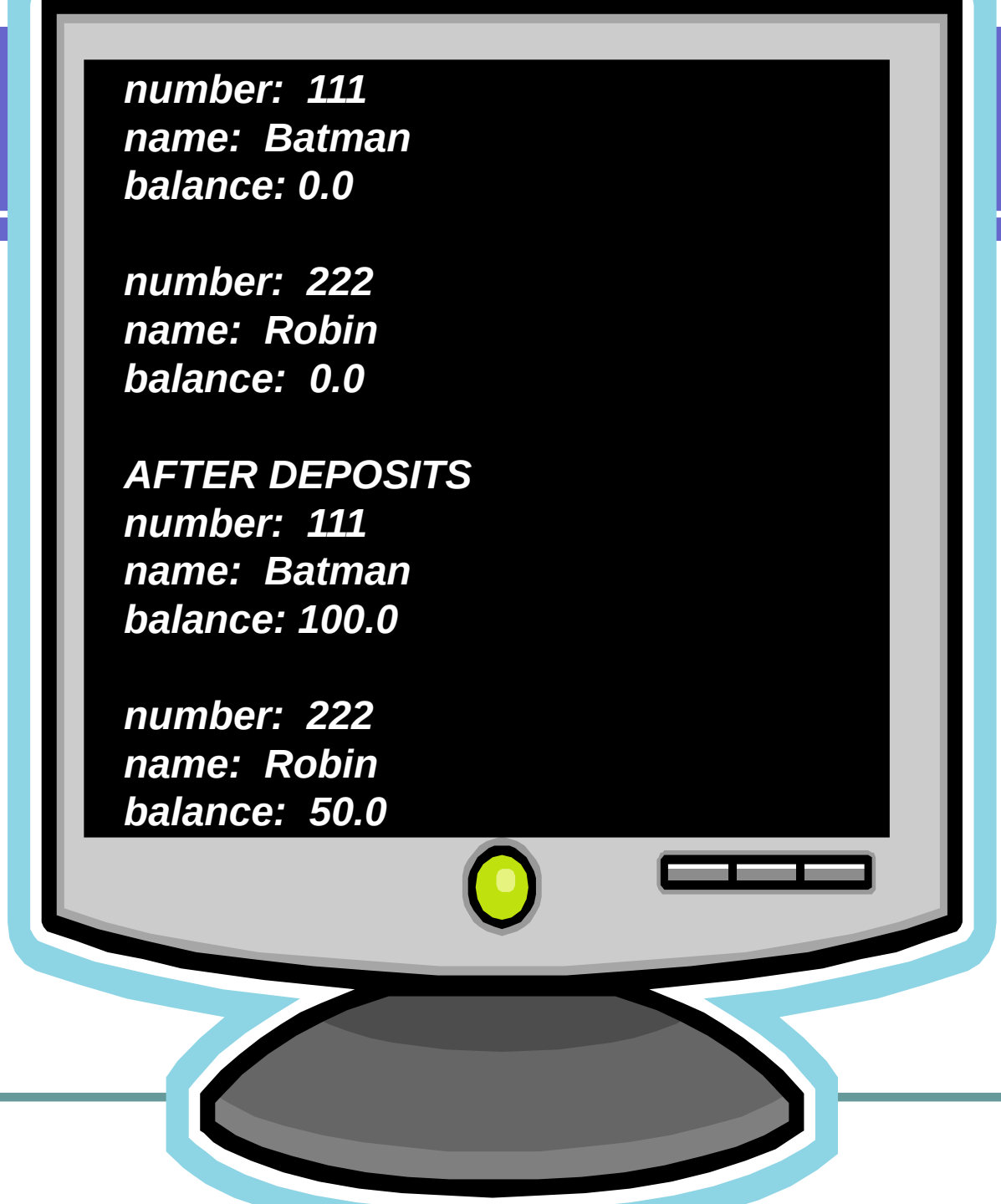
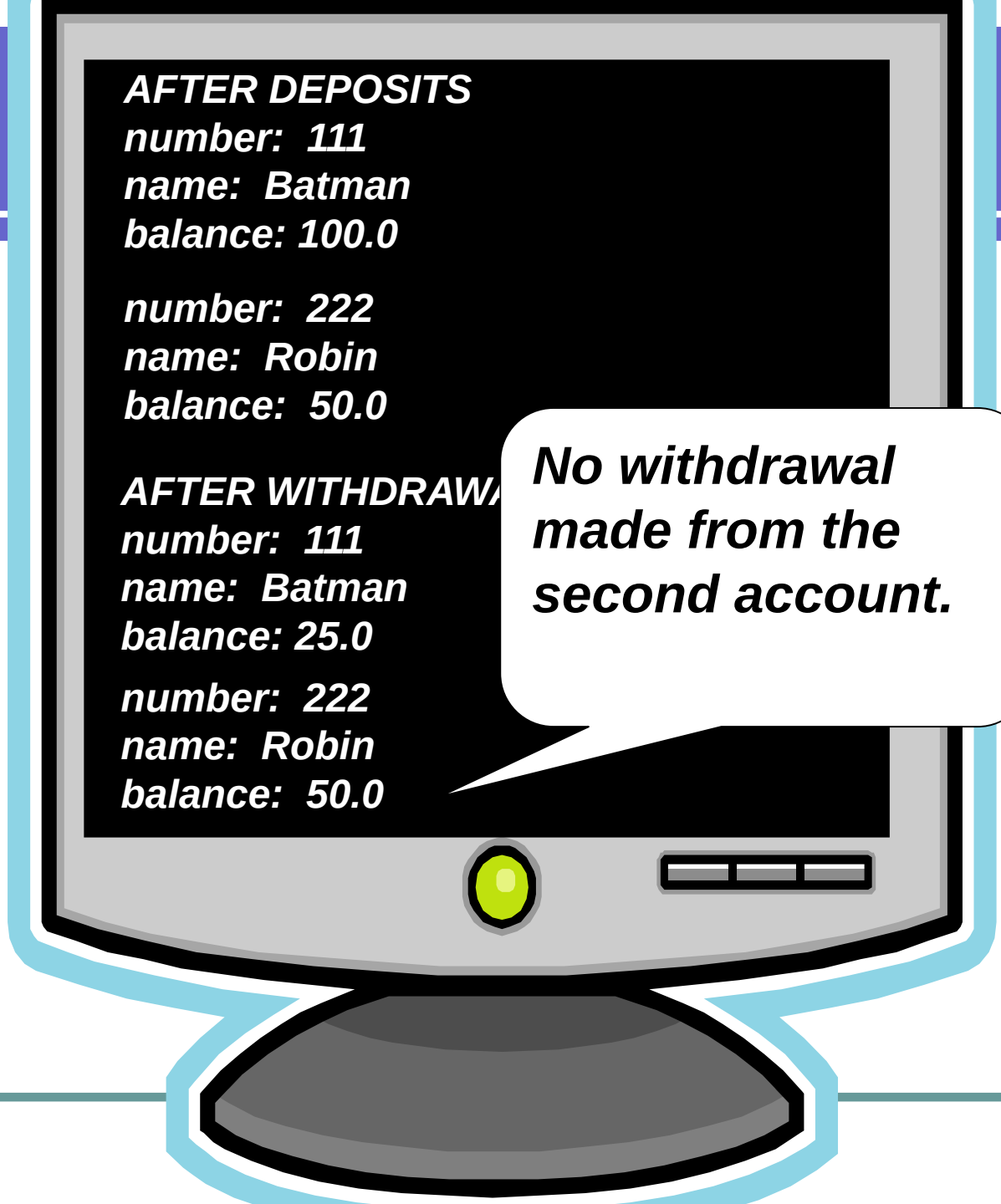
TIME'S UP!!


number: 111
name: Batman
balance: 0.0
number: 222
name: Robin
balance: 0.0
AFTER DEPOSITS
number: 111
name: Batman
balance: 100.0
number: 222
name: Robin
balance: 50.0


AFTER DEPOSITS
number: 111
name: Batman
balance: 100.0
number: 222
name: Robin
balance: 50.0
AFTER WITHDRAWA
number: 111
name: Batman
balance: 25.0
number: 222
name: Robin
balance: 50.0
No withdrawal made from the second account.

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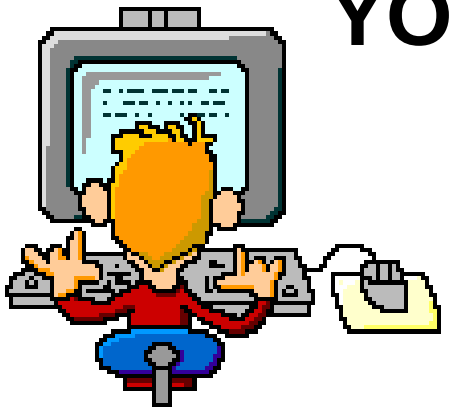
f) Add some Javadoc comments at the top of this program



YOU HAVE 5 MINUTES!!!

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TIME'S UP!!

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```
import  java.util.*;
/**         Program to process BankAccount objects
 *          @author Aaron Kans
*           @version 3/11/2020
*/
public class BankApp
{
        public static void main(String[ ] args)
        {
            // Program code here

        }
}
```

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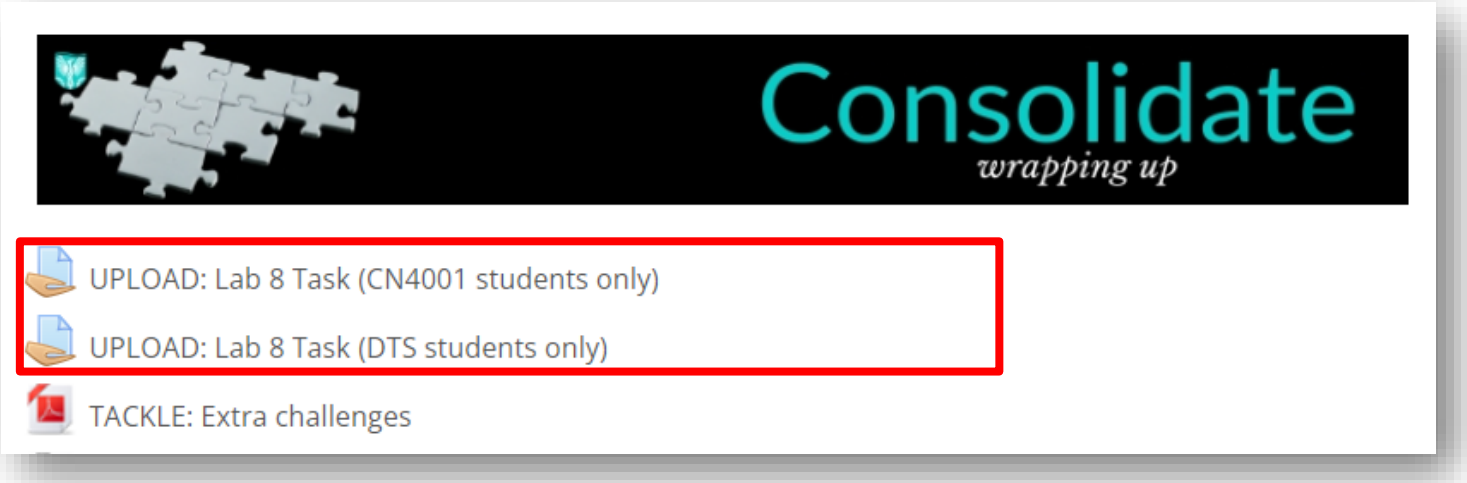

Download the BankApp.java file from JDoodle and Upload to Moodle via the appropriate submission link (NOT the BankAccount.java file).

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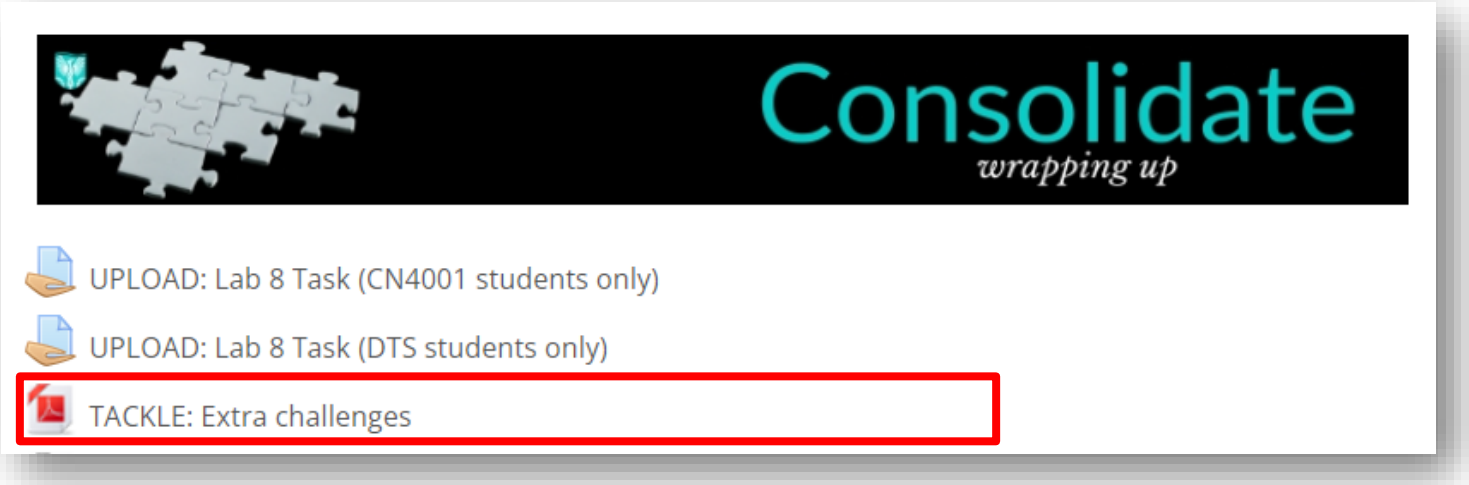

Spend the rest of the time in this practical working on the extra challenges.