

CPIT Department of Computing

Graduate Diploma in Information and Communication Technologies

Bachelor of Information and Communication Technologies

Diploma in Information and Communications Technology

Diploma in Information Technology

BCSE101 – Software Engineering 1A

JavaScript Practical Test

Student Name:

CPIT ID Number:

NOTE: For the purposes of this test you may use textbooks, your notes and any electronic files that are in your area of the network.

This test has 4 pages including the cover sheet



Note that for some questions it may be necessary to write an extra method over and above the method that is asked for.

Copy the zip file containing the test directory (and all sub-directories) from Moodle onto your local drive. Unzip all directories and files.

1. Four classes have been created in this project. Draw a class diagram in the space below showing the classes (including their attributes and methods) and relationships.

(4 marks)

2. In the `setup` method of the `Controller` class write code that to create the following four `BranchOwners` using the `addBranchOwner` method that exists in the `ChocolateFactory` class

ID	FIRST NAME	LAST NAME	GENDER
01	Rachel	Choi	F
03	Donald	Rai	M
02	Seunghyun	Hunter	M
04	Aishwarya	Trump	F

(3 marks)

3. Write a `getBranchOwners` method for `ChocolateFactory` class that displays some of the details of the `BranchOwners`.

The required output is:

```
01. Rachel Choi
02. Seunghyun Hunter
03. Donald Rai
04. Aishwarya Trump
```

Hints:

- *use `\n` in your methods.*
- *call the `.sortBranchOwners` method in `ChocolateFactory`.*

(3 marks)

4. Write an `addBranch` method for the `BranchOwner` class that can be used to create a new `Branch`.
NB. You will need to add some code in the `Branch` class as well.

(3 marks)

5. In the `setup` method of the `Controller` class write code to create the following Tracks, using the `addBranch` method that has been created previously.

HINT: use the `findBranchOwner` method in the `ChocolateFactory` class

OWNER	ID	NAME	LOCATION	PURCHASE DATE
01	401	Mike's Chocolate Shop	Krakatoa Island	27-2-2011
01	402	Cacao Bean	Mt. Everest	12-8-2015
03	389	The Hot Chocolate Shoppe	Sahara Desert	31-3-2013
02	113	Chocolate Therapy	Amazon Rainforest	24-10-2004
04	114	Arriba Chocolate	Siberia	4-3-2009
04	121	The Cacao Walk	Gobi Desert	1-6-2014

(3 marks)

6. Write a **Boolean** get method named `hasTwoBranches` for the `BranchOwner` class that returns `true` if the number of branches that a `BranchOwner` has is two and `false` otherwise.

HINT: Check the value returned by the `length` method of `allMyBranches` Array.

(2 marks)

7. Write a `getThoseWithTwoBranches` method for the `ChocolateFactory` class that first lists the `BranchOwner` details and then lists underneath the details of the `Branches` as shown below. This method must call the method created in the previous question.

The required output is:

```
01. Rachel Choi
    401 Mike's Chocolate Shop, Krakatoa Island.
    402 Cacao Bean, Mt. Everest.
04. Aishwarya Trump
    114 Arriba Chocolate, Siberia.
    121 The Cacao Walk, Gobi Desert.
```

Hints: use `\n` and 4 leading spaces at beginning and 2 spaces after the “,”

(2 marks)

HOW TO SUBMIT YOUR COMPLETED TEST

- When you have finished the test put all the `/src` directory files in the digital drop box on Moodle.
- You must check with one of the tutors that this has been done properly before you leave the room.
- If your work has not been loaded into digital drop box while you are in the room your test will not be marked.