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

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 is worth 25% of the overall mark for BCSE101

This test has 4 pages including the cover sheet

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Institute of Canterbury
Ara rau, taumata rau

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 project contained in the `BloodBankJS` directory (and all sub-directories) from Moodle onto your local drive.

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 three `Donor` using the `addDonor` method that exists in the `Hospital` class

ID	FirstName	LastName	BloodType
98343532	John	Goff	O+
19348855	Barack	Jiabao	A+
34551873	Phil	Key	AB-

    (3 marks)

3. Write a `getDonors` method for Hospital class that displays only the `lastName`, `firstName` and `bloodType` of all the Donors.
    (Note that the other data for them should not be displayed).

    The required output is:

    ```
    Jiabao, Barack. [A+]
    Key, Phil. [AB-]
    Goff, John. [O+]
    ```

    NOTE: Punctuation and spacing and ORDER must also be as shown above.
    Hint:
    You WILL need to use `\n` *in your methods.*
    You WILL need to call the .sortDonors method in Hospital.

    (3 marks)

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

    (3 marks)

5. In the `setup` method of the `Controller` class write code to create the following Donation, using the `addDonation` method that has been created previously.
NOTE You will have to use the findDonor() in the Hospital class

```
Donor ID        Date            Amount
98343532        13 Nov 2009      500
98343532        17 Jan 2006      600
98343532        22 Feb 2007      400
19348855        18 Oct 2009      1000
19348855        27 Jan 2009      600
19348855        26 Feb 2008      200
34551873        19 Oct 2009      750
```

(3 marks)

6. Write a **Boolean** get method named `isLarge()` for `Donation` class that returns true if the amount donated is equal to or greater than 600 units and false otherwise.

(2 marks)

7. Write a `getLargeDonations()` method for the `Hospital` class that first lists the `Donor`'s `lastName`, `firstName` and `bloodType` and then lists underneath the dates and sizes of each Donation which was 600 or more units. This method must call the method created in the previous question.

The required output is:

```
Jiabao, Barack. [A+]
27 January 2009=600
18 October 2009=1000

Key, Phil. [AB-]
19 October 2009=750

Goff, John. [O+]
17 January 2006=600
```

NOTE: The order shown above is the required order. Punctuation and spacing must also be as shown above.
Hint: You WILL need to use `\n and space` in your method.

(2 marks)

How to Submit your Completed Test Schema
- When you have finished the test, zip the files in the \src directory and put them into 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 the files has not been loaded into digital drip box while you are in the room your test will not be marked.