**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:**

**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

***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 contained 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.

(1 mark)

1. In the setup method of the Controller class write code that to create the following four CatOwner using the addCatOwner method that exists in the Cattery class

**ID First Name Last Name Amount Owed**

7 Ruth George $12.34

23 Casey van Dyke $34.56

4 Temepara Williams $12.56

1. Irene Aitkin $56.12

(2 marks)

1. Write a getCatOwners method for Cattery class that displays only the firstName, lastName and id of all the CatOwners.

***(Note that the other data for them should not be displayed).***

The required output is:

Temepara, Williams [4]

Ruth, George [7]

Casey, van Dyke [23]

Irene, Aitkin [165]

***NOTE: Punctuation and spacing and ORDER must also be as shown above.***

***Hint:***

***You WILL need to use \n and space in your methods.***

***You WILL need to call the .sortCatOwners method in Cattery.***

(3 marks)

1. Write an addCat method for CatOwner class that can be used to create a new Cat.   
   NB. You will need to add some code in the Cat class as well.

(4 marks)

1. In the setup method of the Controller class write code to create the following Cats, using the addCat method that has been created previously.

***NOTE You will have to use the findCatOwner() in the Cattery class***

**Owner ID Name Breed Gender Secret Name**

7 Art Abyssianian N The Underwear Thief

23 Fluffy Persian M Grey ghost

23 Blackey Common Domestic N Her Majesty

23 Inky Persian F The Talker

4 Meta Tabby F Mouse's worse nightmare

1. Random Siamese F The One-Eyed Horror

(5 marks)

1. Write a **Boolean** get method named hasManyCats for the CatOwner class that returns true if the number of Cats that person owns is more than two and false otherwise.

***(HINT: Check the value returned by the length method of allMyCats Array.)***

(2 marks)

1. Write a getThoseWithManyCats method for the Cattery class that first lists for each CatOwner who has more than two Cats, the CatOwner’s firstName, lastName and id and then lists underneath the details of the Cat as shown below. This method must call the method created in the previous question.

The required output is:

Casey, van Dyke [23]

Blackey (N) aka Her Majesty

Fluffy (M) aka Grey ghost

Inky (F) aka The Talker

***NOTE: The order shown above is the required order. Punctuation and spacing must also be as shown above.***

***Hint: You MAY need to use \n, \t and ' ' in your methods.***

(8 marks)

**HOW TO SUBMIT YOUR COMPLETED TEST**

* When you have finished the test, zip and send ALL \src files to 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.