JAVASCRIPT  
1. Four classes have been created in this JAVASCRIPT project.  
Draw a class diagram in the space below showing the classes  
(including their attributes and methods) and relationships.  
  
(1 mark)  
  
  
JAVASCRIPT  
2. In the setup method of the Controller class write code that to create the following DogOwners using the addDogOwner method that exists in the Kennel class.  
  
  
ID First Name Last Name Birth Date  
BMC Brad McCaw 12/13/1982  
RTH Richie Thorn 8/05/1980  
DEL Dan Ellis 16/02/1984  
ACR Andrew Carter 30/11/1987  
  
  
NOTE: the defect in this data is deliberate – fix it!  
  
(2 marks)  
  
  
JAVASCRIPT  
3. Write a getDogOwners method for Kennel class that displays data about the DogOwners.  
  
The required output is:  
  
Andrew, Carter [ACR]  
Brad, McCaw [BMC]  
Dan, Ellis [DEL]  
Richie, Thorn [RTH]  
  
NOTE: Punctuation and spacing and ORDER must also be as shown above.  
  
(3 marks)  
  
  
PYTHON  
4. Write an add\_donation method for the Donor class that can be used to create a new Donation.  
Note: You will need to add some code in the Donation class as well.  
  
(4 marks)  
  
PYTHON  
5. In the setup method of the Controller class write code to create the following Donation, using the add\_donation method that has been created previously.  
NOTE: You will have to use the find\_donor method in the BloodBank class  
  
NationalId BranchName Town DonationDate BloodGroup  
4023500 Christchurch Addington 01/12/2018 AB+  
5000990 Wellington Newtown 30/08/2017 O-  
6896701 Auckland Manuka 11/07/2019 O+  
7906553 North Shore Takapuna 15/12/2016 B-  
9800100 Nelson Tahunanui 09/11/2017 AB+  
9800100 Otago Dunedin 05/10/2018 AB+  
  
  
(5 marks)  
  
PYTHON  
6. Write a boolean get method named has\_positive\_blood\_group in the Donor class that returns true if their blood group ends with a '+' and false otherwise.  
  
(2 marks)  
  
JAVASCRIPT  
7. Write a getThoseWithOneDog method for the Kennel class that first lists for each DogOwner who has exactly one dog, the DogOwner's details and then lists underneath the details of the Dog as shown below.  
This method must call the method created in the previous question.  
The required output is:  
  
Andrew, Carter [ACR]  
 Random (F) the Mastiff likes to eat Cat  
Brad, McCaw [BMC]  
 Speedy (N) the Pomeranian likes to eat Ekanuba   
  
NOTE: The order shown above is the required order. Punctuation and spacing must also be as shown above.  
  
(8 marks)

HOW TO SUBMIT YOUR COMPLETED TEST  
When you have finished the test, zip and send. /src folder 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.