PYTHON  
1. Four classes have been created in this PYTHON project.  
Draw a class diagram in the space below showing the classes  
(including their attributes and methods) and relationships.  
  
(1 mark)  
  
  
PYTHON  
2. In the setup method of the Controller class write code that to create the following Members using the add\_member method that exists in the Club class.  
  
  
ID First Name Last Name Birth Date  
M02 Mary Shelly 17/01/1981  
M04 Melvin Dean 08/08/2000  
M05 Jim Beam 27/12/1980  
M01 Carla Main 11/07/1980  
M03 James Bean 15/08/2001  
  
  
NOTE: the defect in this data is deliberate – fix it!  
  
(2 marks)  
  
  
PYTHON  
3. Write a display\_members method for Club class that displays data about the Members.  
  
The required output is:  
  
Main, Carla [M01]  
Shelly, Mary [M02]  
Bean, James [M03]  
Dean, Melvin [M04]  
Beam, Jim [M05]  
  
NOTE: Punctuation and spacing and ORDER must also be as shown above.  
  
(3 marks)  
  
  
PYTHON  
4. Write an add\_activity method for the Member class that can be used to create a new Activity.  
Note: You will need to add some code in the Activity class as well.  
  
(4 marks)  
  
PYTHON  
5. In the setup method of the Controller class write code to create the following Activity, using the add\_activity method that has been created previously.  
NOTE: You will have to use the find\_member method in the Club class  
  
MemberID Event Place Start Date Cost  
M01 Autumn Festival Arrowtown 01/01/2018 $0.00  
M05 Joyride Carnival Auckland 05/02/2019 $300.00  
M05 Easter High Tea Wellington 10/12/2018 $150.00  
M05 Festival of Colour Hamilton 07/11/2018 $0.00  
M02 Wine and Food Festival Napier 10/02/2020 $350.00  
M04 Music in Park Hamilton 08/12/2018 $0.00  
  
  
(5 marks)  
  
PYTHON  
6. Write a boolean get method named has\_many\_activities in the Member class that returns true if the number of dogs that person owns is one and false otherwise.  
  
(2 marks)  
  
PYTHON  
7. Write a display\_busy\_members method for the Club class that first lists for each Member who has more than one activity, the Member's details and then lists underneath the details of the Activity as shown below.  
This method must call the method created in the previous question.  
The required output is:  
  
Beam, Jim [M05]  
 Festival of Colour starts on 11/7/2018 at Hamilton  
 Easter High Tea starts on 12/10/2018 at Wellington  
 Joyride Carnival starts on 2/5/2019 at Auckland  
  
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.