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 Zones using the add\_zone method that exists in the CarPark class.  
  
  
ID Location  
3 Cashel Mall  
1 Central City   
2 Madras Street  
  
  
NOTE: the defect in this data is deliberate – fix it!  
  
(2 marks)  
  
  
PYTHON  
3. Write a get\_zones method for CarPark class that displays data about the Zones.  
  
The required output is:  
  
[3]  
[1]  
[2]  
  
NOTE: Punctuation and spacing and ORDER must also be as shown above.  
  
(3 marks)  
  
  
PYTHON  
4. Write an add\_client method for the Zone class that can be used to create a new Client.  
Note: You will need to add some code in the Client class as well.  
  
(4 marks)  
  
PYTHON  
5. In the setup method of the Controller class write code to create the following Client, using the add\_client method that has been created previously.  
NOTE: You will have to use the find\_zone method in the CarPark class  
  
ID Personal Name Family Name Birthday Is Permanent  
6001 Maya Thorne 31 Jan 2016 no   
6002 Carl Umaga 29 Aug 2016 yes   
7001 Jessica Bush 31 March 2017 yes  
7002 Marge Clinton 14 May 2017 yes  
8001 Jillian Fleming 14 Feb 2018 no   
6003 Anna Kumar 31 March 2018 no   
  
  
(5 marks)  
  
PYTHON  
6. Write a boolean get method named has\_two\_clients in the Zone class that returns true if the number of clients that zone owns is two and false otherwise.  
  
(2 marks)  
  
PYTHON  
7. Write a get\_those\_with\_two\_clients method for the CarPark class that first lists for each Zone who has exactly two clients, the Zone's details and then lists underneath the details of the Client as shown below.  
This method must call the method created in the previous question.  
The required output is:  
  
Madras Street [2]  
 Jessica Bush   
 Marge Clinton   
  
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.