Part 3- SQL and PL/SQL (40 points)

Study the following tables:

Owner Table

EDIT	OWNERID	OWNERNAME	OWNEREMAILADDRESS	OWNERTYPE
	1	Mary Jones	Mary.Jones@somewhere.com	Individual
	2	DT Enterprises	DTE@dte.com	Corporation
	3	Sam Douglas	Sam.Douglas@somewhere.com	Individual
	4	UNY Enterprises	UNYE@unye.com	Corporation
	5	Doug Samuels	Doug.Samuels@somewhere.com	Individual

Owned_Property

EDIT	PROPERTYID	PROPERTYNAME	PROPERTYTYPE	STREET	CITY	STATE	ZIP	OWNERID
	29	Eastlake Building	Office	123 Eastlake	Seattle	WA	98119	2
	30	Elm St Apts	Apartments	4 East Elm	Lynwood	WA	98223	1
	31	Jefferson Hill	Office	42 West 7th St	Bellevue	WA	98007	2
	32	Lake View Apts	Apartments	1265 32nd Avenue	Redmond	WA	98052	3
	33	Kodak Heights Apts	Apartments	65 32nd Avenue	Redmond	WA	98052	4
	34	Jones House	Private Residence	1456 48th St	Bellevue	WA	98007	1
	35	Douglas House	Private Residence	1567 51st St	Bellevue	WA	98007	3
	36	Samuels House	Private Residence	567 151st St	Redmond	WA	98052	5

Employee5

EDIT	EMPLOYEEID	LASTNAME	FIRSTNAME	CELLPHONE	EXPERIENCELEVEL
	1	Smith	Sam	206-254-1234	Master
	2	Evanston	John	206-254-2345	Senior
	3	Murray	Dale	206-254-3456	Junior
	4	Murphy	Jerry	585-545-8765	Master
	5	Fontaine	Joan	206-254-4567	Senior

GG Service

EDIT	SERVICEID	SERVICEDESCRIPTION	COSTPERHOUR
	28	Mow Lawn	25
	29	Plant Annuals	25
	30	Weed Garden	30
	31	Trim Hedge	45
	32	Prune Small Tree	60
	33	Trim Medium Tree	100
	34	Trim Large Tree	125

Property_Service

EDIT	PROPERTYSERVICEID	PROPERTYID	SERVICEID	SERVICEDATE	EMPLOYEEID	HOURSWORKED
	1006	36	28	05/15/2019	4	2.75
	1001	29	29	05/05/2019	1	4.5
	1002	31	29	05/08/2019	3	4.5
	1003	30	28	05/08/2019	2	2.75
	1004	35	28	05/10/2019	5	2.5
	1005	29	32	05/12/2019	4	7.5
	1007	32	31	05/19/2019	1	1
	1009	34	30	06/03/2019	5	2.5
	1008	36	28	05/21/2019	2	2.5

A) SQL

Write the SQL statements based on the following data requirements. **Write your answers in a word document and convert it to pdf before submission**. (26 points):

1. Using a create query, create the property service table. Ensure that primary key and foreign keys added. (Note: You must examine and see its connections to other tables) (3 points)
2. Create at least one insert query to the Property_Service table. (2 points)
3. Create at least one update query to the Property_Service table (2 points)
4. Retrieve the owner id, name, property id, property name and property city. Sort the results by owner name ascending. (2 points)
5. Retrieve the employees who worked on May 8, 2019 (You should also include the date in the query results). Include their first name, last name, the number of hours they worked, and the property name they worked at that time. (2 points)

   Sample output:

FIRSTNAME	LASTNAME	PROPERTYNAME	CITY	HOURSWORKED	SERVICEDATE
Dale	Murray	Jefferson Hill	Bellevue	4.5	05/08/2019
John	Evanston	Elm St Apts	Lynwood	2.75	05/08/2019

6. Using a set operator, show only the employees who did not work on May 8, 2019. Show the employee id, last name. (3 points)

   Sample output:

EMPLOYEEID	LASTNAME
1	Smith
4	Murphy
5	Fontaine

7. Show the total hours accumulated per service. Show the service id, service description and the hours worked. (3 points)

8. Display the total wage of all employees by computing the accumulated hours of their work and multiplying it with 25 dollars. Further filter the results by showing only those employees that have earned more than 125 dollars. Display the data according to the output below (3 points)

LASTNAME	Total Wage
Murphy	256.25
Smith	137.5
Murray	612.5
Evanston	131.25

9. Using a subquery retrieve the employees who have a total wage that is more than employee named Murray. The computation of the total wage is similar to number 8 (3 points)

   Sample output:

LASTNAME	Total Wage
Murphy	256.25

10. Display the sum of the total hours per service id that are greater than average hours per service id. Your output should be similar to the one below: (3 points)

SERVICEID	SERVICEDESCRIPTION	Total Hours
28	Mow Lawn	10.5
29	Plant Annuals	9

B) PL/SQL

Code the PL/SQL based on the following data requirements. Write your answers in a word document and convert it to pdf before submission. (26 points):

1. Create an anonymous block that will create a new table from existing tables. The new table will contain property id, property name and hours worked on that property. The new table should be furthered filtered to only contain those with hours worked that is more than 4.
   From this new table, the anonymous block should display the minimum number of hours. (3 points)

   Data in the new table:

EDIT	PROPERTYID	PROPERTYNAME	HOURSWORKED
	29	Eastlake Building	4.5
	31	Jefferson Hill	4.5
	29	Eastlake Building	7.5

   Output when block is executed:

```
Minimum hours worked     : 4.5

Statement processed.

0.04 seconds
```

2. You will create a function and procedure for this number (8 points).
   a) Create a function that will accept the number of hours and multiply it by 25. It will return the result of the computation.
   b) Create a procedure that will call that function and display the total wage of employees based on the total number of hours of an employee. Output will be similar to the one below:

```
Employee id       : 1
Total Wage       : 137.5
Employee id       : 2
Total Wage       : 131.25
Employee id       : 4
Total Wage       : 256.25
Employee id       : 5
Total Wage       : 125
Employee id       : 3
Total Wage       : 112.5

Statement processed.
```

3. Create a trigger that will show the following every time the propery_service number of hours is updated. The following will be the output (3 points):

```
Old Hours worked 15
New Hours worked 20

1 row(s) updated.
```