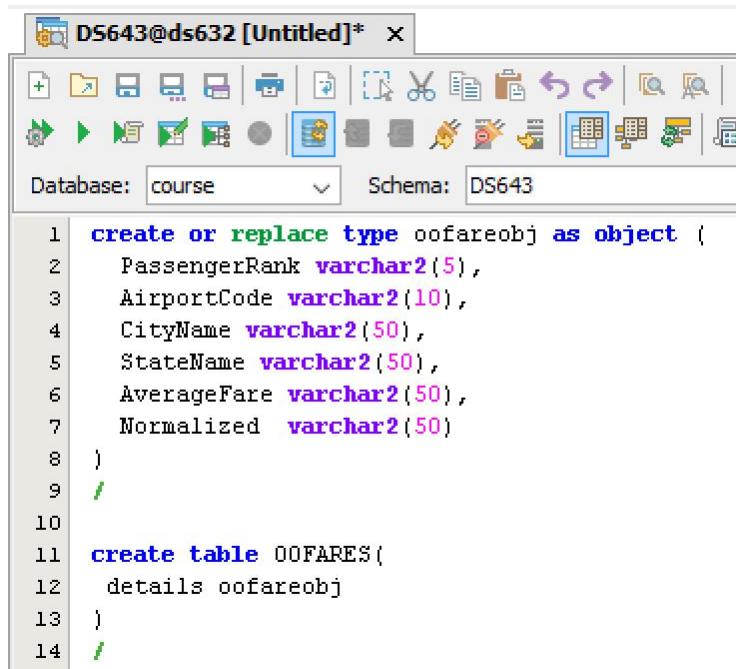


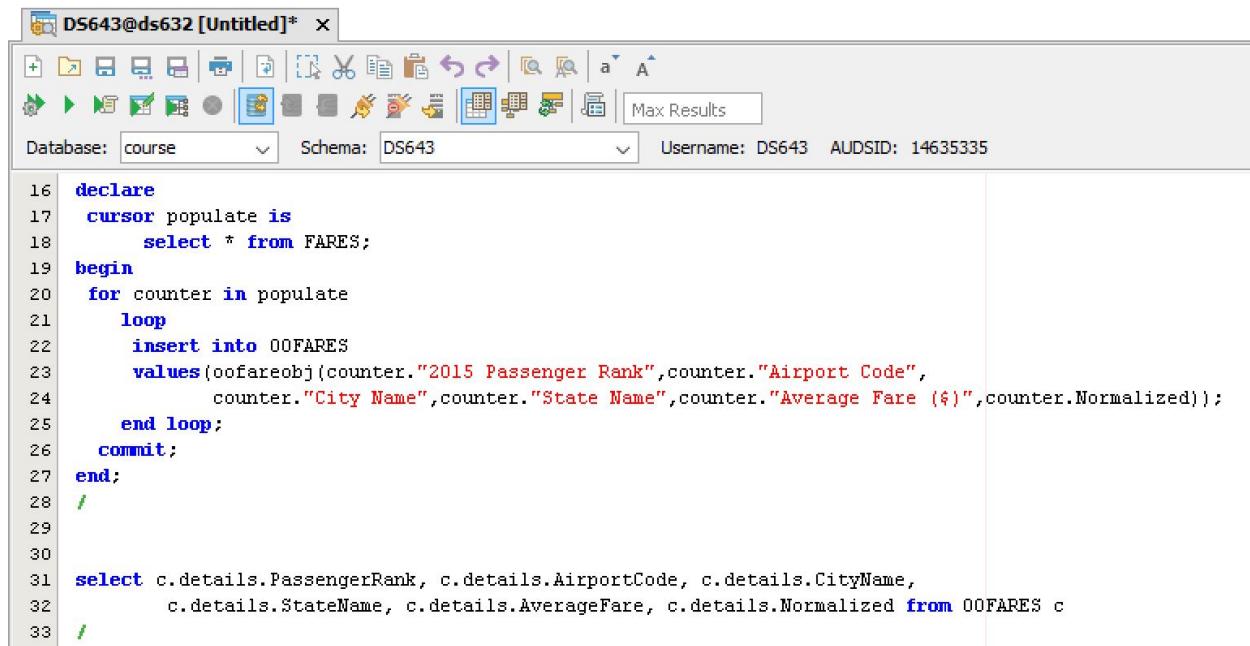
Homework 3
For
CS632-001
By
Dushyant Sankhla
Ds643@njit.edu

- 1) Create a new table OOFARES.



The screenshot shows the Oracle SQL Developer interface with a connection to DS643@ds632. The schema selected is DS643. The code area contains the following PL/SQL script:

```
1 create or replace type oofareobj as object (
2     PassengerRank varchar2(5),
3     AirportCode varchar2(10),
4     CityName varchar2(50),
5     StateName varchar2(50),
6     AverageFare varchar2(50),
7     Normalized varchar2(50)
8 )
9 /
10
11 create table OOFARES(
12     details oofareobj
13 )
14 /
```



The screenshot shows the Oracle SQL Developer interface with a connection to DS643@ds632. The schema selected is DS643. The code area contains the following PL/SQL block:

```
16 declare
17     cursor populate is
18         select * from FARES;
19 begin
20     for counter in populate
21     loop
22         insert into OOFARES
23             values(oofareobj(counter."2015 Passenger Rank",counter."Airport Code",
24                             counter."City Name",counter."State Name",counter."Average Fare ($)",counter.Normalized));
25     end loop;
26     commit;
27 end;
28 /
29
30
31 select c.details.PassengerRank, c.details.AirportCode, c.details.CityName,
32       c.details.StateName, c.details.AverageFare, c.details.Normalized from OOFARES c
33 /
```

select c.details.PassengerR... [Fetch Data: 47ms] Sum: Q

	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED
1	1	LAX	Los Angeles	CA	361.85	-.43
2	2	ORD	Chicago-O'Hare	IL	338.31	-.55
3	3	DEN	Denver	CO	326.1	-.61
4	4	SFO	San Francisco	CA	397.63	-.25
5	5	ATL	Atlanta	GA	373.26	-.37
6	6	BOS	Boston	MA	367.32	-.4
7	7	SEA	Seattle	WA	337.83	-.55
8	8	DFW	Dallas-DFW	TX	351.52	-.48
9	9	LGA	New York-La Guardia	NY	336.43	-.56
10	10	JFK	New York-JFK	NY	402.53	-.23
11	11	EWR	Newark	NJ	449.14	0
12	12	PHX	Phoenix	AZ	340.3	-.54
13	13	PHL	Philadelphia	PA	373.47	-.37
14	14	LAS	Las Vegas	NV	233.54	-1.07
15	15	MSP	Minneapolis	MN	415.71	-.16
16	16	MCO	Orlando	FL	261.16	-.93
17	17	DCA	Washington-Reagan National	DC	343.57	-.52
18	18	BWI	Baltimore	MD	326.54	-.6
19	19	DTW	Detroit	MI	393.17	-.27
20	20	SAN	San Diego	CA	350.22	-.49

	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED
21	21	FLL	Fort Lauderdale	FL	252.58	-.97
22	22	IAH	Houston-Intercontinental	TX	443.96	-.02
23	23	PDX	Portland	OR	334.67	-.56
24	24	TPA	Tampa	FL	307.14	-.7
25	25	MDW	Chicago-Midway	IL	293.27	-.77
26	26	OAK	Oakland	CA	299.57	-.74
27	27	CLT	Charlotte	NC	449.64	.01
28	28	SLC	Salt Lake City	UT	392.69	-.28
29	29	AUS	Austin	TX	374.5	-.37
30	30	STL	St. Louis	MO	368.24	-.4
31	31	DAL	Dallas-Love Field	TX	267.35	-.9
32	32	MCI	Kansas City	MO	375.26	-.36
33	33	SMF	Sacramento	CA	353.35	-.47
34	34	MIA	Miami	FL	313.75	-.67
35	35	RDU	Raleigh/Durham	NC	374.29	-.37
36	36	SJC	San Jose	CA	316.26	-.66
37	37	SNA	Santa Ana	CA	358.71	-.45
38	39	IAD	Washington-Dulles	DC	458.22	.05
39	41	HOU	Houston-Hobby	TX	334.84	-.56
40	43	CLE	Cleveland	OH	348.69	-.49
41	45	MSY	New Orleans	LA	324.9	-.61

41	45	MSY	New Orleans	LA	324.9	-.61
42	46	MKE	Milwaukee	WI	353.28	-.47
43	48	BDL	Hartford	CT	387.54	-.3
44	50	SJU	San Juan	PR	302.36	-.72
45	52	RSW	Fort Myers	FL	287.13	-.8
46	54	PBI	West Palm Beach/Palm Beach	FL	315.56	-.66
47	55	JAX	Jacksonville	FL	386.85	-.31
48	57	BUR	Burbank	CA	287.22	-.8
49	59	ABQ	Albuquerque	NM	373.92	-.37
50	61	MEM	Memphis	TN	398.98	-.25

select c.details.PassengerR... [Fetch Data: 47ms] Sum: Q

	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED
385	324	LAK	Laramie	WY	438.93	-.05
386	326	OGD	Ogden	UT	90.04	-1.78
387	328	CDV	Cordova	AK	392.95	-.28
388	330	MMH	Mammoth Lakes	CA	204.2	-1.21
389	333	AKN	King Salmon	AK	798	1.73
390	335	ENA	Kenai	AK	665.65	1.08
391	337	IMT	Iron Mountain/Kingsfd	MI	609.46	.8
392	340	HYS	Hays	KS	566.93	.59
393	342	DLG	Dillingham	AK	936.17	2.42
394	344	HYA	Hyannis	MA	542.6	.47
395	347	OTH	North Bend/Coos Bay	OR	416.39	-.16
396	349	YAK	Yakutat	AK	385.94	-.31
397	352	MWA	Marion/Herrin	IL	525.3	.38
398	354	UIN	Quincy	IL	482.76	.17
399	356	DUJ	DuBois	PA	477.66	.14
400	358	LEB	Lebanon-Hanover	NH	435.77	-.06
401	397	HON	Huron	SD	319.5	-.64
402	399	OLF	Wolf Point	MT	911	2.29
403	400	GDV	Glendive	MT	478	.15
404	403	CPX	Culebra	PR	310.5	-.68
405	405	SSB	Christiansted	VI	424	-.12

2) Solve Problems 4)a) and 4)b) from Homework 1 using the table OOFARES.

4a) Show complete information according to the table FARES for all the airports in the state of Alaska and the state of Florida, ordered by average fare.

The screenshot shows the Oracle SQL Developer interface with a query window and a results grid.

Query:

```

1 select c.details.PassengerRank, c.details.AirportCode, c.details.CityName,
2       b.details.StateName, c.details.AverageFare, c.details.Normalized from OOFARES c
3 where c.details.StateName in ('FL','AK') order by c.details.StateName
4 /

```

Results Grid:

	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED
1	342	DLG	Dillingham	AK	936.17	.24
2	334	WRG	Wrangell	AK	410.34	-.19
3	333	AKN	King Salmon	AK	798	.73
4	328	CDV	Cordova	AK	392.95	-.28
5	280	OTZ	Kotzebue	AK	488.03	.2
6	266	ADQ	Kodiak	AK	540.32	.46
7	257	SIT	Sitka	AK	420.81	-.14
8	248	BET	Bethel	AK	409.72	-.19
9	281	BRW	Barrow	AK	475.47	.13
10	246	SCC	Deadhorse	AK	427.36	-.1
11	225	KTN	Ketchikan	AK	499.99	.26
12	138	FAI	Fairbanks	AK	427.6	-.1
13	349	YAK	Yakutat	AK	385.94	-.31
14	64	ANC	Anchorage	AK	459.36	.05
15	391	SNP	St. Paul	AK	960.14	2.54

	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED
16	386	ADK	Adak Island	AK	1196.3	3.71
17	379	SDP	Sandpoint	AK	1000.76	2.74
18	355	VDZ	Valdez	AK	763.57	1.56
19	350	HOM	Homer	AK	649.36	1
20	283	OME	Nome	AK	509.07	.3
21	306	DUT	Unalaska	AK	969.36	2.58
22	166	JNU	Juneau	AK	375.54	-.36
23	323	PSG	Petersburg	AK	421.74	-.13
24	335	ENA	Kenai	AK	665.65	1.08
25	157	DAB	Daytona Beach	FL	363.37	-.42
26	124	SRQ	Sarasota/Bradenton	FL	405.68	-.21
27	100	PGD	Punta Gorda	FL	120.02	-1.63
28	98	PNS	Pensacola	FL	454.77	.03
29	82	PIE	St. Petersburg	FL	109.49	-1.68
30	312	UST	St. Augustine	FL	196.97	-1.25
31	198	EYW	Key West	FL	489.57	.2
32	175	MLB	Melbourne	FL	395	-.27
33	165	GNV	Gainesville	FL	457.77	.05
34	156	ECP	Panama City	FL	463.41	.07
35	153	VPS	Valparaiso	FL	512.26	.32
36	146	TLH	Tallahassee	FL	574.79	.63
37	65	SFB	Sanford	FL	110.75	-1.67
38	55	JAX	Jacksonville	FL	386.85	-.31
39	54	PBI	West Palm Beach/Palm Beach	FL	315.56	-.66
40	52	RSW	Fort Myers	FL	287.13	-.8

41	34	MIA	Miami	FL	313.75	-.67
42	24	TPA	Tampa	FL	307.14	-.7
43	16	MCO	Orlando	FL	261.16	-.93
44	21	FLL	Fort Lauderdale	FL	252.58	-.97

4b) Show the average fare by state, in alphabetical order by state name. (In other words, your table should contain one row for each state, and the fare should be the average value for all cities in this state.) Thus your result should have two columns, STATE and AVERAGEFARE.

The screenshot shows the Oracle SQL Developer interface. The top window displays a SQL query:

```
1 select c.details.StateName,
2     round(sum(c.details.AverageFare)/count(c.details.StateName),2) as AverageFare
3 from OOFARES c
4 group by c.details.StateName
5 order by c.details.StateName
6 /

```

The bottom window shows the results of the query:

	DETAILS.STATENAME	AVERAGEFARE
1	AK	607.65
2	AL	559.14
3	AR	527.36
4	AZ	351.43
5	CA	394.17
6	CO	476
7	CT	393
8	DC	400.9
9	FL	338.9
10	GA	496.87
11	HI	308.54
12	IA	457.31
13	ID	490.51
14	IL	342.88
15	IN	402.47
16	KS	514.07
17	KY	357.29
18	LA	529.29

	DETAILS.STATENAME	AVERAGEFARE
19	MA	493.83
20	MD	270.07
21	ME	421.06
22	MI	541.26
23	MN	478.75
24	MO	445.49
25	MS	521.32
26	MT	496.46
27	NC	393.77
28	ND	448.66
29	NE	450.66
30	NH	308.24
31	NJ	243.29
32	NM	471.24
33	NV	438.55
34	NY	371.18
35	OH	289.55
36	OK	442.22
37	OR	376.74
38	PA	403.67
39	PR	326.23
40	RI	349.68
41	SC	417.64
42	SD	518.35
43	TN	438.96

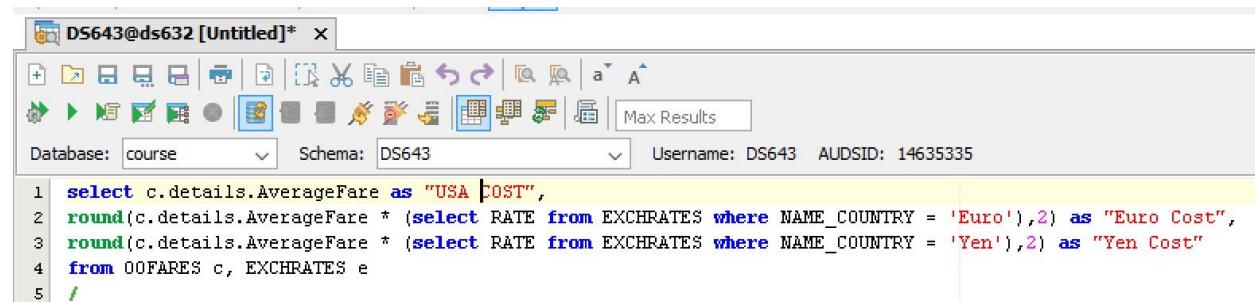
select c.details.StateName,...

53 record(s) [Fetch Data: 0ms]

	DETAILS.STATENAME	AVERAGEFARE
44	TT	1652.48
45	TX	432.61
46	UT	279.72
47	VA	458.98
48	VI	411.61
49	VT	470.82
50	WA	340.15
51	WI	531.11
52	WV	396.59
53	WY	555.75

3) Solve Problem 5)a) from Homework 1 using the table OOFARES.

5a) Show the table FARES, but all prices should be in EURO, in YEN, and in Dollar. You must use the exchange rate from the table EXCHRATE.



The screenshot shows the Oracle SQL Developer interface. The top bar displays the connection information: DS643@ds632 [Untitled]*, Database: course, Schema: DS643, Username: DS643, AUDSID: 14635335. Below the toolbar, the code editor contains the following SQL query:

```

1 select c.details.AverageFare as "USA COST",
2 round(c.details.AverageFare * (select RATE from EXCHRATES where NAME_COUNTRY = 'Euro'),2) as "Euro Cost",
3 round(c.details.AverageFare * (select RATE from EXCHRATES where NAME_COUNTRY = 'Yen'),2) as "Yen Cost"
4 from OOFARES c, EXCHRATES e
5 /

```

select c.details.AverageFar...

3240 record(s) [Fetch Data: 31]

	USA COST	Euro Cost	Yen Cost
1	361.85	324.43	36680.01
2	338.31	303.33	34293.81
3	326.1	292.38	33056.1
4	397.63	356.52	40306.96
5	373.26	334.66	37836.62
6	367.32	329.34	37234.49
7	337.83	302.9	34245.15
8	351.52	315.17	35632.88
9	336.43	301.64	34103.24
10	402.53	360.91	40803.66
11	449.14	402.7	45528.42
12	340.3	305.11	34495.53
13	373.47	334.85	37857.91
14	233.54	209.39	23673.48
15	415.71	372.73	42139.69
16	261.16	234.16	26473.27
17	343.57	308.04	34827
18	326.54	292.78	33100.71
19	393.17	352.52	39854.86
20	350.22	314.01	35501.1
21	252.58	226.46	25603.53
22	443.96	398.05	45003.34
23	334.67	300.07	33924.83
24	307.14	275.38	31134.17
25	293.27	262.95	29728.19

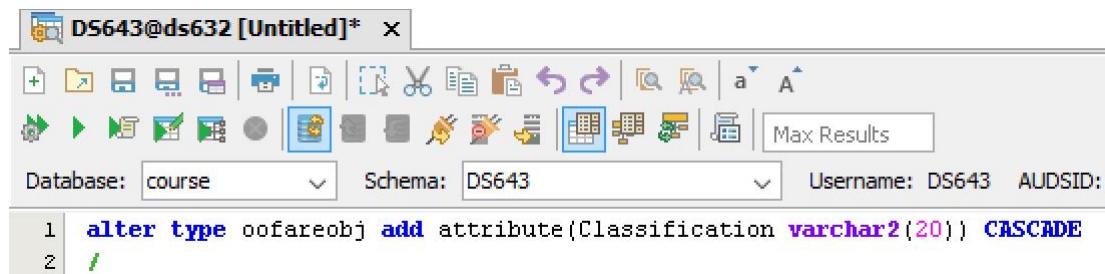
26	299.57	268.59	30366.81
27	449.64	403.15	45579.11
28	392.69	352.09	39806.2
29	374.5	335.78	37962.32
30	368.24	330.16	37327.75
31	267.35	239.71	27100.73
32	375.26	336.46	38039.36
33	353.35	316.81	35818.38
34	313.75	281.31	31804.21
35	374.29	335.59	37941.03
36	316.26	283.56	32058.64
37	358.71	321.62	36361.72
38	458.22	410.84	46448.84
39	334.84	300.22	33942.06
40	348.69	312.64	35346.01
41	324.9	291.31	32934.46
42	353.28	316.75	35811.29
43	387.54	347.47	39284.15
44	302.36	271.1	30649.63
45	287.13	257.44	29105.79
46	315.56	282.93	31987.69
47	386.85	346.85	39214.21
48	287.22	257.52	29114.92
49	373.92	335.26	37903.52
50	398.98	357.73	40443.8

select c.details.AverageFar...

3240 record(s) [Fetch Data: 31]

	USA COST	Euro Cost	Yen Cost
3216	563.03	504.81	57073.23
3217	669.92	600.65	67908.45
3218	382.25	342.73	38747.92
3219	536.33	480.87	54366.7
3220	438.93	393.54	44493.46
3221	90.04	80.73	9127.17
3222	392.95	352.32	39832.56
3223	204.2	183.09	20699.35
3224	798	715.49	80891.66
3225	665.65	596.82	67475.61
3226	609.46	546.44	61779.74
3227	566.93	508.31	57468.56
3228	936.17	839.37	94897.68
3229	542.6	486.5	55002.28
3230	416.39	373.34	42208.62
3231	385.94	346.03	39121.97
3232	525.3	470.98	53248.61
3233	482.76	432.84	48936.42
3234	477.66	428.27	48419.44
3235	435.77	390.71	44173.13
3236	319.5	286.46	32387.08
3237	911	816.8	92346.25
3238	478	428.57	48453.9
3239	310.5	278.39	31474.76
3240	424	380.16	42980.03

4) a) Alter the table OOFARES so that it gets one additional column CLASSIFICATION.



The screenshot shows the Oracle SQL Developer interface with the following details:

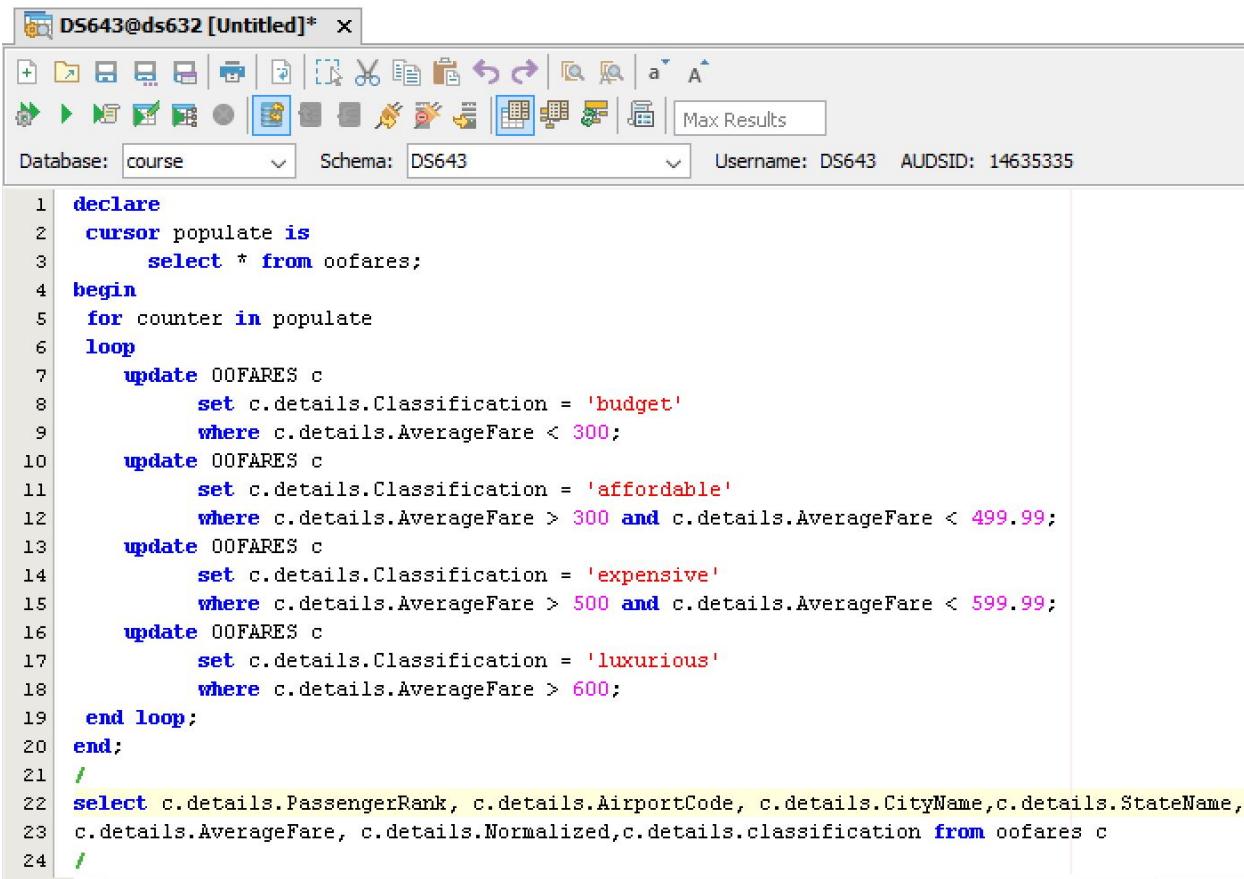
- Title Bar:** DS643@ds632 [Untitled]*
- Toolbar:** Standard Oracle SQL Developer toolbar with various icons for database navigation and operations.
- Database and Schema:** Database: course, Schema: DS643, Username: DS643, AUDSID: [redacted]
- Code Editor:**

```

1 alter type oofareobj add attribute(Classification varchar2(20)) CASCADE
2 /

```

b) Write a PL/SQL program that UPDATES the contents of the table OOFARES as follows. It fills in a value for the column CLASSIFICATION in every row.



The screenshot shows the Oracle SQL Developer interface with the following details:

- Title Bar:** DS643@ds632 [Untitled]*
- Toolbar:** Standard Oracle SQL Developer toolbar.
- Database and Schema:** Database: course, Schema: DS643, Username: DS643, AUDSID: 14635335
- Code Editor:**

```

1 declare
2   cursor populate is
3     select * from oofares;
4 begin
5   for counter in populate
6   loop
7     update OOFARES c
8       set c.details.Classification = 'budget'
9       where c.details.AverageFare < 300;
10    update OOFARES c
11      set c.details.Classification = 'affordable'
12      where c.details.AverageFare > 300 and c.details.AverageFare < 499.99;
13    update OOFARES c
14      set c.details.Classification = 'expensive'
15      where c.details.AverageFare > 500 and c.details.AverageFare < 599.99;
16    update OOFARES c
17      set c.details.Classification = 'luxurious'
18      where c.details.AverageFare > 600;
19  end loop;
20 end;
21 /
22 select c.details.PassengerRank, c.details.AirportCode, c.details.CityName,c.details.StateName,
23 c.details.AverageFare, c.details.Normalized,c.details.classification from oofares c
24 /

```



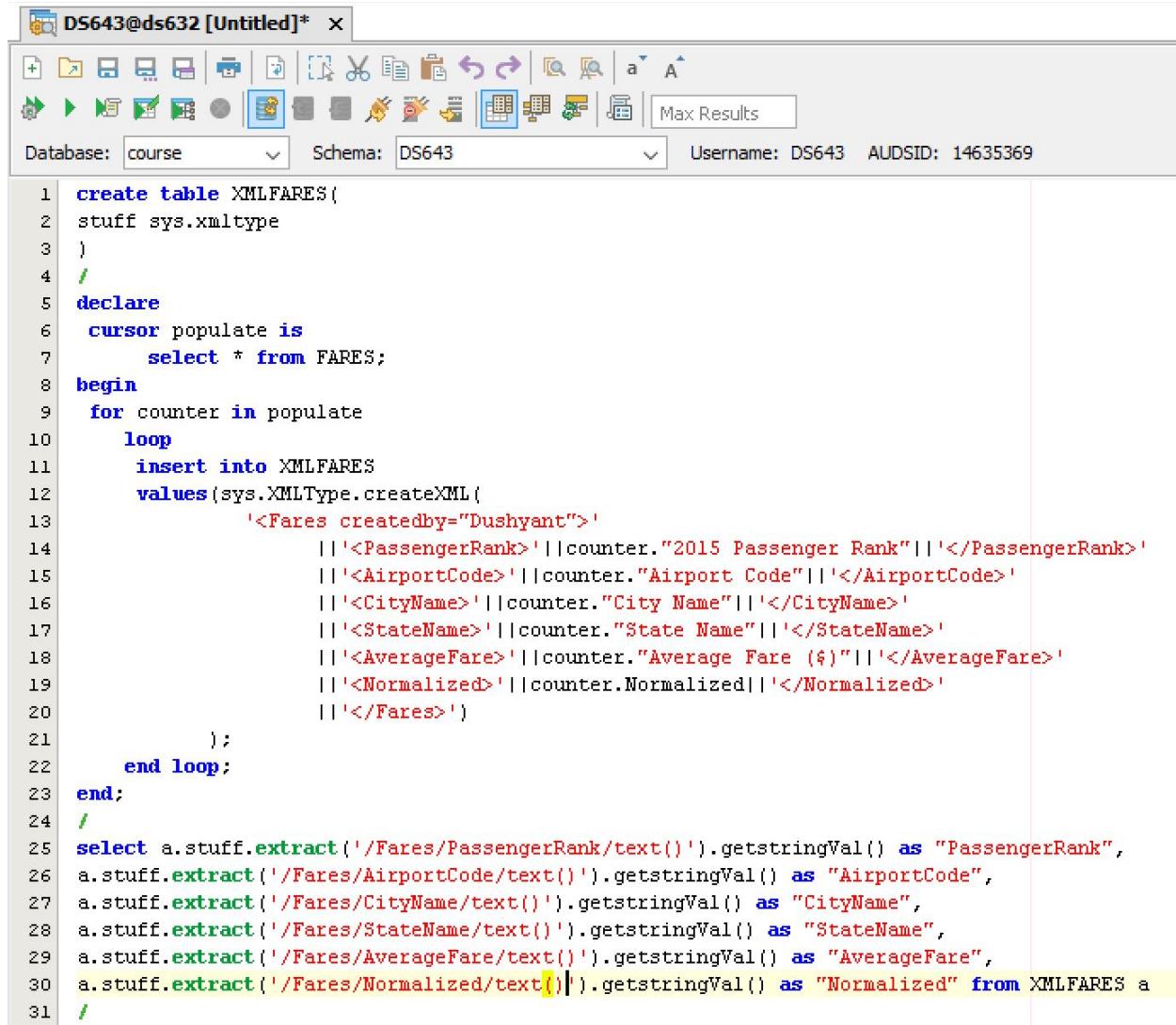
The screenshot shows the Oracle SQL Developer interface with the following details:

- Title Bar:** select c.details.PassengerR... →
- Toolbar:** Standard Oracle SQL Developer toolbar.
- Database and Schema:** Database: course, Schema: DS643
- Table View:** A grid view showing the results of the query. The columns are labeled: DETAILS.PASSENGERRANK, DETAILS.AIRPORTCODE, DETAILS.CITYNAME, DETAILS.STATENAME, DETAILS.AVERAGEFARE, DETAILS.NORMALIZED, and DETAILS.CLASSIFICATION. The table contains 405 records.

	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED	DETAILS.CLASSIFICATION
1	1	LAX	Los Angeles	CA	361.85	-43	affordable
2	2	ORD	Chicago-O'Hare	IL	338.31	-55	affordable
3	3	DEN	Denver	CO	326.1	-61	affordable
4	4	SFO	San Francisco	CA	397.63	-25	affordable
5	5	ATL	Atlanta	GA	373.26	-37	affordable
6	6	BOS	Boston	MA	367.32	-4	affordable
7	7	SEA	Seattle	WA	337.83	-55	affordable
8	8	DFW	Dallas-DFW	TX	351.52	-48	affordable
9	9	LGA	New York-La Guardia	NY	336.43	-56	affordable
10	10	JFK	New York-JFK	NY	402.53	-23	affordable
11	11	EWR	Newark	NJ	449.14	0	affordable
12	12	PHX	Phoenix	AZ	340.3	-54	affordable
13	13	PHL	Philadelphia	PA	373.47	-37	affordable
14	14	LAS	Las Vegas	NV	233.54	-1.07	budget
15	15	MSP	Minneapolis	MN	415.71	-16	affordable
16	16	MCO	Orlando	FL	261.16	-93	budget
17	17	DCA	Washington-Reagan National	DC	343.57	-52	affordable
18	18	BWI	Baltimore	MD	326.54	-6	affordable
19	19	DTW	Detroit	MI	393.17	-27	affordable
20	20	SAN	San Diego	CA	350.22	-49	affordable
21	21	FLL	Fort Lauderdale	FL	252.58	-97	budget
22	22	IAH	Houston-Intercontinental	TX	443.96	-02	affordable
23	23	PDX	Portland	OR	334.67	-56	affordable
24	24	TPA	Tampa	FL	307.14	-7	affordable
25	25	MDW	Chicago-Midway	IL	293.27	-77	budget

select c.details.PasengerR... ▾							
	DETAILS.PASSENGERRANK	DETAILS.AIRPORTCODE	DETAILS.CITYNAME	DETAILS.STATENAME	DETAILS.AVERAGEFARE	DETAILS.NORMALIZED	DETAILS.CLASSIFICATION
26	26	OAK	Oakland	CA	299.57	-.74	budget
27	27	CLT	Charlotte	NC	449.64	.01	affordable
28	28	SLC	Salt Lake City	UT	392.69	-.28	affordable
29	30	STL	St. Louis	MO	368.24	-.4	affordable
30	31	DAL	Dallas-Love Field	TX	267.35	-.9	budget
31	32	MCI	Kansas City	MO	375.26	-.36	affordable
32	34	MIA	Miami	FL	313.75	-.67	affordable
33	35	RDU	Raleigh/Durham	NC	374.29	-.37	affordable
34	36	SJC	San Jose	CA	316.26	-.66	affordable
35	39	IAD	Washington-Dulles	DC	458.22	.05	affordable
36	41	HOU	Houston-Hobby	TX	334.84	-.56	affordable
37	43	CLE	Cleveland	OH	348.69	-.49	affordable
38	46	MKE	Milwaukee	WI	353.28	-.47	affordable
39	48	BDL	Hartford	CT	387.54	-.3	affordable
40	50	SJU	San Juan	PR	302.36	-.72	affordable
41	52	RSW	Fort Myers	FL	287.13	-.8	budget
42	55	JAX	Jacksonville	FL	386.85	-.31	affordable
43	57	BUR	Burbank	CA	287.22	-.8	budget
44	59	ABQ	Albuquerque	NM	373.92	-.37	affordable
45	61	MEM	Memphis	TN	398.98	-.25	affordable
46	63	OKC	Oklahoma City	OK	414.67	-.17	affordable
47	65	SFB	Sanford	FL	110.75	-1.67	budget
48	68	GEG	Spokane	WA	357.64	-.45	affordable
49	70	TUS	Tucson	AZ	388.22	-.3	affordable
50	72	RNO	Reno	NV	357	-.45	affordable
381	252	FLO	Florence	SC	395.02	-.27	affordable
382	109	XNA	Fayetteville	AR	559.52	.55	expensive
383	163	MOB	Mobile	AL	554.86	.53	expensive
384	190	MGM	Montgomery	AL	500.15	.26	expensive
385	195	IDA	Idaho Falls	ID	537.77	.44	expensive
386	206	AEX	Alexandria	LA	557.99	.54	expensive
387	240	MHK	Manhattan/Ft. Riley	KS	509.93	.3	expensive
388	267	DBQ	Dubuque	IA	500.91	.26	expensive
389	286	GCC	Gillette	WY	577.59	.64	expensive
390	304	BJI	Bemidji	MN	593.85	.72	expensive
391	332	HIB	Hibbing	MN	569.65	.6	expensive
392	363	PQL	Presque Isle/Houlton	ME	546.36	.49	expensive
393	375	ALS	Alamosa	CO	590.67	.71	expensive
394	393	WRL	Worland	WY	589.29	.7	expensive
395	147	SHV	Shreveport	LA	529.61	.4	expensive
396	177	EVV	Evansville	IN	551.27	.51	expensive
397	228	CLL	College Station/Bryan	TX	544.55	.48	expensive
398	266	ADQ	Kodiak	AK	540.32	.46	expensive
399	212	ISN	Williston	ND	644.15	.97	luxurious
400	255	ACV	Arcata/Eureka	CA	618.92	.85	luxurious
401	314	CIU	Sault Ste. Marie	MI	651.3	1.01	luxurious
402	350	HOM	Homer	AK	649.36	1	luxurious
403	371	CYS	Cheyenne	WY	603.21	.77	luxurious
404	386	ADK	Adak Island	AK	1196.3	3.71	luxurious
405	264	GUM	Guam	TT	1609.3	5.76	luxurious

5) Create a new table XMLFARES.



The screenshot shows the Oracle SQL Developer interface with the following details:

- Title Bar:** DS643@ds632 [Untitled]*
- Toolbar:** Includes standard database navigation icons like New, Open, Save, and Print.
- Database:** course
- Schema:** DS643
- Username:** DS643 AUDSID: 14635369
- Code Area:** Displays PL/SQL code for creating the XMLFARES table and populating it with data from the FARES table.

```
1 create table XMLFARES(
2     stuff sys.xmltype
3 )
4 /
5 declare
6     cursor populate is
7         select * from FARES;
8 begin
9     for counter in populate
10    loop
11        insert into XMLFARES
12        values(sys.XMLType.createXML(
13            '<Fares createdby="Dushyant">' ||
14                '<PassengerRank>'|||counter."2015 Passenger Rank"|||''|
15                '<AirportCode>'|||counter."Airport Code"|||''|
16                '<CityName>'|||counter."City Name"|||''|
17                '<StateName>'|||counter."State Name"|||''|
18                '<AverageFare>'|||counter."Average Fare ($)"|||''|
19                '<Normalized>'|||counter.Normalized|||''|
20            '|</Fares>')
21        );
22    end loop;
23 end;
24 /
25 select a.stuff.extract('/Fares/PassengerRank/text()').getstringVal() as "PassengerRank",
26 a.stuff.extract('/Fares/AirportCode/text()').getstringVal() as "AirportCode",
27 a.stuff.extract('/Fares/CityName/text()').getstringVal() as "CityName",
28 a.stuff.extract('/Fares/StateName/text()').getstringVal() as "StateName",
29 a.stuff.extract('/Fares/AverageFare/text()').getstringVal() as "AverageFare",
30 a.stuff.extract('/Fares/Normalized/text()').getstringVal() as "Normalized" from XMLFARES a
31 /
```

select a.stuff.extract('/Fa...')

810 record(s) [Fetch Data: 2s] Sum:

	PassengerRank	AirportCode	CityName	StateName	AverageFare	Normalized
1	1	LAX	Los Angeles	CA	361.85	-.43
2	2	ORD	Chicago-O'Hare	IL	338.31	-.55
3	3	DEN	Denver	CO	326.1	-.61
4	4	SFO	San Francisco	CA	397.63	-.25
5	5	ATL	Atlanta	GA	373.26	-.37
6	6	BOS	Boston	MA	367.32	-.4
7	7	SEA	Seattle	WA	337.83	-.55
8	8	DFW	Dallas-DFW	TX	351.52	-.48
9	9	LGA	New York-La Guardia	NY	336.43	-.56
10	10	JFK	New York-JFK	NY	402.53	-.23
11	11	EWR	Newark	NJ	449.14	0
12	12	PHX	Phoenix	AZ	340.3	-.54
13	13	PHL	Philadelphia	PA	373.47	-.37
14	14	LAS	Las Vegas	NV	233.54	-1.07
15	15	MSP	Minneapolis	MN	415.71	-.16
16	16	MCO	Orlando	FL	261.16	-.93
17	17	DCA	Washington-Reagan National	DC	343.57	-.52
18	18	BWI	Baltimore	MD	326.54	-.6
19	19	DTW	Detroit	MI	393.17	-.27
20	20	SAN	San Diego	CA	350.22	-.49
21	21	FLL	Fort Lauderdale	FL	252.58	-.97
22	22	IAH	Houston-Intercontinental	TX	443.96	-.02
23	23	PDX	Portland	OR	334.67	-.56
24	24	TPA	Tampa	FL	307.14	-.7
25	25	MDW	Chicago-Midway	IL	293.27	-.77
26	26	OAK	Oakland	CA	299.57	-.74
27	27	CLT	Charlotte	NC	449.64	.01
28	28	SLC	Salt Lake City	UT	392.69	-.28
29	29	AUS	Austin	TX	374.5	-.37
30	30	STL	St. Louis	MO	368.24	-.4
31	31	DAL	Dallas-Love Field	TX	267.35	-.9
32	32	MCI	Kansas City	MO	375.26	-.36
33	33	SMF	Sacramento	CA	353.35	-.47
34	34	MIA	Miami	FL	313.75	-.67
35	35	RDU	Raleigh/Durham	NC	374.29	-.37
36	36	SJC	San Jose	CA	316.26	-.66
37	37	SNA	Santa Ana	CA	358.71	-.45
38	39	IAD	Washington-Dulles	DC	458.22	.05
39	41	HOU	Houston-Hobby	TX	334.84	-.56
40	43	CLE	Cleveland	OH	348.69	-.49
41	45	MSY	New Orleans	LA	324.9	-.61
42	46	MKE	Milwaukee	WI	353.28	-.47
43	48	BDL	Hartford	CT	387.54	-.3
44	50	SJU	San Juan	PR	302.36	-.72
45	52	RSW	Fort Myers	FL	287.13	-.8
46	54	PBI	West Palm Beach/Palm Beach	FL	315.56	-.66
47	55	JAX	Jacksonville	FL	386.85	-.31
48	57	BUR	Burbank	CA	287.22	-.8
49	59	ABQ	Albuquerque	NM	373.92	-.37
50	61	MEM	Memphis	TN	398.98	-.25

381	315	BRD	Brainerd	MN	563.03	.57
382	317	RHI	Rhinelander	WI	669.92	1.1
383	320	MKG	Muskegon	MI	382.25	-.33
384	322	HOB	Hobbs	NM	536.33	.44
385	324	LAR	Laramie	WY	438.93	-.05
386	326	OGD	Ogden	UT	90.04	-1.78
387	328	CDV	Cordova	AK	392.95	-.28
388	330	MMH	Mammoth Lakes	CA	204.2	-1.21
389	333	AKN	King Salmon	AK	798	1.73
390	335	ENA	Kenai	AK	665.65	1.08
391	337	IMT	Iron Mountain/Kingsfd	MI	609.46	.8
392	340	HYS	Hays	KS	566.93	.59
393	342	DLG	Dillingham	AK	936.17	2.42
394	344	HYA	Hyannis	MA	542.6	.47
395	347	OTH	North Bend/Coos Bay	OR	416.39	-.16
396	349	YAK	Yakutat	AK	385.94	-.31
397	352	MWA	Marion/Herrin	IL	525.3	.38
398	354	UIN	Quincy	IL	482.76	.17
399	356	DUJ	DuBois	PA	477.66	.14
400	358	LEB	Lebanon-Hanover	NH	435.77	-.06
401	397	HON	Huron	SD	319.5	-.64
402	399	OLF	Wolf Point	MT	911	2.29
403	400	GDV	Glendive	MT	478	.15
404	403	CPX	Culebra	PR	310.5	-.68
405	405	SSB	Christiansted	VI	424	-.12

- 6) Solve Problems 4)a) and 4)b) from Homework 1 using the table XMLFARES.

4a) Show complete information according to the table FARES for all the airports in the state of Alaska and the state of Florida, ordered by average fare.

The screenshot shows a database interface with a toolbar at the top, followed by a header bar with 'Database: course', 'Schema: DS643', and 'Username: DS643 AUDSID: 14635889'. Below this is a code editor containing the following SQL query:

```

1 select a.stuff.extract('/Fares/PassengerRank/text()').getStringVal() as "PassengerRank",
2 a.stuff.extract('/Fares/AirportCode/text()').getStringVal() as "AirportCode",
3 a.stuff.extract('/Fares/CityName/text()').getStringVal() as "CityName",
4 a.stuff.extract('/Fares/StateName/text()').getStringVal() as "StateName",
5 a.stuff.extract('/Fares/AverageFare/text()').getStringVal() as "AverageFare",
6 a.stuff.extract('/Fares/Normalized/text()').getStringVal() as "Normalized"
7 from XMLFARES a
8 where a.stuff.extract('/Fares/StateName/text()').getStringVal() in ('FL','AK')
9 order by a.stuff.extract('/Fares/StateName/text()').getStringVal()
10 /

```

Below the code editor, there are status indicators '12 | 1 : 0' and buttons for 'INS' and 'PC'. The main area displays the results of the query:

select a.stuff.extract('/Fa... ↴

	PassengerRank	AirportCode	CityName	StateName	AverageFare	Normalized
1	342	DLG	Dillingham	AK	936.17	.24
2	334	WRG	Wrangell	AK	410.34	-.19
3	333	AKN	King Salmon	AK	798	1.73
4	328	CDV	Cordova	AK	392.95	-.28
5	280	OTZ	Kotzebue	AK	488.03	.2
6	266	ADQ	Kodiak	AK	540.32	.46
7	257	SIT	Sitka	AK	420.81	-.14
8	248	BET	Bethel	AK	409.72	-.19
9	281	BRW	Barrow	AK	475.47	.13
10	246	SCC	Deadhorse	AK	427.36	-.1
11	225	KTN	Ketchikan	AK	499.99	.26
12	138	FAI	Fairbanks	AK	427.6	-.1
13	349	YAK	Yakutat	AK	385.94	-.31
14	64	ANC	Anchorage	AK	459.36	.05
15	391	SNP	St. Paul	AK	960.14	2.54

	PassengerRank	AirportCode	CityName	StateName	AverageFare	Normalized
16	386	ADK	Adak Island	AK	1196.3	3.71
17	379	SDP	Sandpoint	AK	1000.76	2.74
18	355	VDZ	Valdez	AK	763.57	1.56
19	350	HOM	Homer	AK	649.36	1
20	283	OME	Nome	AK	509.07	.3
21	306	DUT	Unalaska	AK	969.36	2.58
22	166	JNU	Juneau	AK	375.54	-.36
23	323	PSG	Petersburg	AK	421.74	-.13
24	335	ENA	Kenai	AK	665.65	1.08
25	157	DAB	Daytona Beach	FL	363.37	-.42
26	124	SRQ	Sarasota/Bradenton	FL	405.68	-.21
27	100	PGD	Punta Gorda	FL	120.02	-1.63
28	98	PNS	Pensacola	FL	454.77	.03
29	82	PIE	St. Petersburg	FL	109.49	-1.68
30	312	UST	St. Augustine	FL	196.97	-1.25
31	198	EYW	Key West	FL	489.57	.2
32	175	MLB	Melbourne	FL	395	-.27
33	165	GNV	Gainesville	FL	457.77	.05
34	156	ECP	Panama City	FL	463.41	.07
35	153	VPS	Valparaiso	FL	512.26	.32
36	146	TLH	Tallahassee	FL	574.79	.63
37	65	SFB	Sanford	FL	110.75	-1.67
38	55	JAX	Jacksonville	FL	386.85	-.31
39	54	PBI	West Palm Beach/Palm Beach	FL	315.56	-.66
40	52	RSW	Fort Myers	FL	287.13	-.8

41	34	MIA	Miami	FL	313.75	-.67
42	24	TPA	Tampa	FL	307.14	-.7
43	16	MCO	Orlando	FL	261.16	-.93
44	21	FLL	Fort Lauderdale	FL	252.58	-.97

4b) Show the average fare by state, in alphabetical order by state name. (In other words, your table should contain one row for each state, and the fare should be the average value for all cities in this state.) Thus your result should have two columns, STATE and AVERAGEFARE.

The screenshot shows a SQL Server Management Studio window titled "DS643@ds632 [Untitled]*". The query window contains the following T-SQL code:

```
1 select a.stuff.extract('/Fares/StateName/text()').getstringVal() as "StateName",
2 round(sum(a.stuff.extract('/Fares/AverageFare/text()').getstringVal()))
3 /count(a.stuff.extract('/Fares/StateName/text()').getstringVal()),2) as AverageFare
4 from XMLFARES a
5 group by a.stuff.extract('/Fares/StateName/text()').getstringVal()
6 order by a.stuff.extract('/Fares/StateName/text()').getstringVal()
7 /
```

The status bar at the bottom indicates "1 | 25 : 0 | INS | PC | [11/20/2016 7:15:34 PM] Script executed - No Errors [Time: 782ms]".

The results window displays the following table:

	StateName	AVERAGEFARE
1	AK	607.65
2	AL	559.14
3	AR	527.36
4	AZ	351.43
5	CA	394.17
6	CO	476
7	CT	393
8	DC	400.9
9	FL	338.9
10	GA	496.87
11	HI	308.54
12	IA	457.31
13	ID	490.51
14	IL	342.88
15	IN	402.47
16	KS	514.07
17	KY	357.29

18	LA	529.29
19	MA	493.83
20	MD	270.07
21	ME	421.06
22	MI	541.26
23	MN	478.75
24	MO	445.49
25	MS	521.32
26	MT	496.46
27	NC	393.77
28	ND	448.66
29	NE	450.66
30	NH	308.24
31	NJ	243.29
32	NM	471.24
33	NV	438.55
34	NY	371.18
35	OH	289.55
36	OK	442.22
37	OR	376.74
38	PA	403.67
39	PR	326.23
40	RI	349.68
41	SC	417.64
42	SD	518.35

43	TN	438.96
44	TT	1652.48
45	TX	432.61
46	UT	279.72
47	VA	458.98
48	VI	411.61
49	VT	470.82
50	WA	340.15
51	WI	531.11
52	WV	396.59
53	WY	555.75

- 7) Create a homepage on GitHub using your NJIT email address as identification.
Show a screen dump of your GitHub homepage.

The screenshot shows a GitHub profile page for a user named ds643. The profile picture is a 4x4 grid of pink squares. A blue banner at the top right says "ProTip! Updating your profile with your name, location, and a profile picture helps other GitHub users get to know you." with a green "Edit profile" button. Below the banner, there are tabs for Overview, Repositories (0), Stars (0), Followers (0), and Following (0). The Overview section includes a "Popular repositories" box which displays the message "You don't have any repositories yet." There is also a "Contribution graph" section showing activity from November 2016, with a single dark green square on the 10th. A link to "Read the Hello World guide" is present. At the bottom, there are buttons for "Contribution activity", "Jump to", and a blue "2016" button.

ProTip! Updating your profile with your name, location, and a profile picture helps other GitHub users get to know you. [Edit profile](#)

Overview Repositories 0 Stars 0 Followers 0 Following 0

Popular repositories

You don't have any repositories yet.

1 contribution in the last year [Contribution settings](#)

Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov

Mon Wed Fri

Learn how we count contributions. [Less](#) [More](#)

This is your **contribution graph**. Your first is for joining GitHub and you'll earn more as you make **additional contributions**. More contributions means a darker green square for that day. Over time, your chart might start looking [something like this](#).

We have a quick guide that will show you how to create your first repository and earn more green squares!

[Read the Hello World guide](#)

Contribution activity [Jump to](#) [2016](#)