**Advanced Database System Design**

**CS632002- Spring 2013**

**Project Deliverable 2**

**Submitted by:**

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1. For the Interest table from Homework 1, add a statement level trigger that will print a warning message any time somebody tries to update OR delete a row from the table.

**create or replace trigger** tg1 **after update or delete on** PERSONINTERESTS

**Begin**

DBMS\_OUTPUT.PUT\_LINE('Cannot do updations or deletions');

raise\_application\_error (-20100, 'You can not delete initial record');

**End**;

**DELETE FROM** PERSONINTERESTS **WHERE** PERONID = '1001';

**DELETE FROM** PERSONINTERESTS **WHERE** PERONID = '1002';

DBMS\_OUTPUT:

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Cannot do updations or deletions

**Update** PERSONINTERESTS

**set**  PERSONID = '1021'

**where** PERSONID = '1001'

**Update** PERSONINTERESTS

**set**  PERSONID = '1022'

**where** PERSONID = '1002'

DBMS\_OUTPUT:

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Cannot do updations or deletions

1. Add a column Gender to the table PERSON from Homework 1. Fill in values of 'M' or 'W' based on your best guess whether that is the name of a woman or man.Now write an application program possibly using one or several cursors that will generate all possible matches (that means pairs of one man and one woman).

**alter table** PERSON

**add** GENDER **varchar2**(1)

**Syntax to Update Table**

**UPDATE** "RMP44"."PERSON"

**SET** "GENDER"='F'

**WHERE** "PERSONID"=1003

**GO**

**UPDATE** "RMP44"."PERSON"

**SET** "GENDER"='F'

**WHERE** "PERSONID"=1015

**GO**

**UPDATE** "RMP44"."PERSON"

**SET** "GENDER"='M'

**WHERE** "PERSONID"=1017

**There are 13 Men and 7 Women.**

**Table Updated:**



create or replace

procedure PAIR\_GENDER AS

cursor c1 is select FIRSTNAME, LASTNAME, PERSONID, BIRTHDATE, MIDDLEINITIAL from PERSON WHERE GENDER = 'F';

x PERSON.FIRSTNAME%type;

a PERSON.LASTNAME%type;

c PERSON.PERSONID%type;

e PERSON.BIRTHDATE%type;

g PERSON.MIDDLEINITIAL%type;

cursor c2 is select FIRSTNAME, LASTNAME, PERSONID, BIRTHDATE, MIDDLEINITIAL from PERSON WHERE GENDER = 'M';

y PERSON.FIRSTNAME%type;

b PERSON.LASTNAME%type;

d PERSON.PERSONID%type;

f PERSON.BIRTHDATE%type;

h PERSON.MIDDLEINITIAL%type;

i integer;

j integer;

begin

OPEN c1;

i:=0;

LOOP

i:=i+1;

fetch c1 INTO x,a,c,e,g;

if c1%NOTFOUND then exit;

END if;

OPEN c2;

LOOP

j:=i+1;

fetch c2 INTO y,b,d,f,h;

if c2%NOTFOUND then exit;

END if;

DBMS\_OUTPUT.put\_line(c||' '||x||' '||g||' '||a||' '||e||'----'||d||' '||y||' '||h||' '||b||' '||f);

END LOOP;

CLOSE c2;

END LOOP;

CLOSE c1;

END;

DBMS\_OUTPUT:

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1. 1004 Jennifer S Wallace 12-MAY-50----1001 John B Smith 02-MAR-85
2. 1004 Jennifer S Wallace 12-MAY-50----1008 James E Borg 14-JAN-65
3. 1004 Jennifer S Wallace 12-MAY-50----1007 Ahmed V Jabbar 18-FEB-70
4. 1004 Jennifer S Wallace 12-MAY-50----1006 Joyce A English 01-MAR-82
5. 1004 Jennifer S Wallace 12-MAY-50----1005 Ramesh K Narayan 20-JUN-86
6. 1004 Jennifer S Wallace 12-MAY-50----1009 Mike B Smith 22-MAR-88
7. 1004 Jennifer S Wallace 12-MAY-50----1010 Frank M Scher 24-JAN-71
8. 1004 Jennifer S Wallace 12-MAY-50----1013 Raj P Shah 29-JUN-85
9. 1004 Jennifer S Wallace 12-MAY-50----1014 Joy G Clark 16-MAR-49
10. 1004 Jennifer S Wallace 12-MAY-50----1016 James E Borg 19-JAN-69
11. 1004 Jennifer S Wallace 12-MAY-50----1017 David A Hall 09-JUN-85
12. 1004 Jennifer S Wallace 12-MAY-50----1019 Michel F King 04-FEB-67
13. 1004 Jennifer S Wallace 12-MAY-50----1020 Joe N Hill 20-APR-63
14. 1003 Alicia J Zelaya 08-FEB-67----1001 John B Smith 02-MAR-85
15. 1003 Alicia J Zelaya 08-FEB-67----1008 James E Borg 14-JAN-65
16. 1003 Alicia J Zelaya 08-FEB-67----1007 Ahmed V Jabbar 18-FEB-70
17. 1003 Alicia J Zelaya 08-FEB-67----1006 Joyce A English 01-MAR-82
18. 1003 Alicia J Zelaya 08-FEB-67----1005 Ramesh K Narayan 20-JUN-86
19. 1003 Alicia J Zelaya 08-FEB-67----1009 Mike B Smith 22-MAR-88
20. 1003 Alicia J Zelaya 08-FEB-67----1010 Frank M Scher 24-JAN-71
21. 1003 Alicia J Zelaya 08-FEB-67----1013 Raj P Shah 29-JUN-85
22. 1003 Alicia J Zelaya 08-FEB-67----1014 Joy G Clark 16-MAR-49
23. 1003 Alicia J Zelaya 08-FEB-67----1016 James E Borg 19-JAN-69
24. 1003 Alicia J Zelaya 08-FEB-67----1017 David A Hall 09-JUN-85
25. 1003 Alicia J Zelaya 08-FEB-67----1019 Michel F King 04-FEB-67
26. 1003 Alicia J Zelaya 08-FEB-67----1020 Joe N Hill 20-APR-63
27. 1002 Franklin T Wong 04-JAN-81----1001 John B Smith 02-MAR-85
28. 1002 Franklin T Wong 04-JAN-81----1008 James E Borg 14-JAN-65
29. 1002 Franklin T Wong 04-JAN-81----1007 Ahmed V Jabbar 18-FEB-70
30. 1002 Franklin T Wong 04-JAN-81----1006 Joyce A English 01-MAR-82
31. 1002 Franklin T Wong 04-JAN-81----1005 Ramesh K Narayan 20-JUN-86
32. 1002 Franklin T Wong 04-JAN-81----1009 Mike B Smith 22-MAR-88
33. 1002 Franklin T Wong 04-JAN-81----1010 Frank M Scher 24-JAN-71
34. 1002 Franklin T Wong 04-JAN-81----1013 Raj P Shah 29-JUN-85
35. 1002 Franklin T Wong 04-JAN-81----1014 Joy G Clark 16-MAR-49
36. 1002 Franklin T Wong 04-JAN-81----1016 James E Borg 19-JAN-69
37. 1002 Franklin T Wong 04-JAN-81----1017 David A Hall 09-JUN-85
38. 1002 Franklin T Wong 04-JAN-81----1019 Michel F King 04-FEB-67
39. 1002 Franklin T Wong 04-JAN-81----1020 Joe N Hill 20-APR-63
40. 1011 Alice A Brown 18-FEB-77----1001 John B Smith 02-MAR-85
41. 1011 Alice A Brown 18-FEB-77----1008 James E Borg 14-JAN-65
42. 1011 Alice A Brown 18-FEB-77----1007 Ahmed V Jabbar 18-FEB-70
43. 1011 Alice A Brown 18-FEB-77----1006 Joyce A English 01-MAR-82
44. 1011 Alice A Brown 18-FEB-77----1005 Ramesh K Narayan 20-JUN-86
45. 1011 Alice A Brown 18-FEB-77----1009 Mike B Smith 22-MAR-88
46. 1011 Alice A Brown 18-FEB-77----1010 Frank M Scher 24-JAN-71
47. 1011 Alice A Brown 18-FEB-77----1013 Raj P Shah 29-JUN-85
48. 1011 Alice A Brown 18-FEB-77----1014 Joy G Clark 16-MAR-49
49. 1011 Alice A Brown 18-FEB-77----1016 James E Borg 19-JAN-69
50. 1011 Alice A Brown 18-FEB-77----1017 David A Hall 09-JUN-85
51. 1011 Alice A Brown 18-FEB-77----1019 Michel F King 04-FEB-67
52. 1011 Alice A Brown 18-FEB-77----1020 Joe N Hill 20-APR-63
53. 1012 Jen D Wilson 12-MAY-55----1001 John B Smith 02-MAR-85
54. 1012 Jen D Wilson 12-MAY-55----1008 James E Borg 14-JAN-65
55. 1012 Jen D Wilson 12-MAY-55----1007 Ahmed V Jabbar 18-FEB-70
56. 1012 Jen D Wilson 12-MAY-55----1006 Joyce A English 01-MAR-82
57. 1012 Jen D Wilson 12-MAY-55----1005 Ramesh K Narayan 20-JUN-86
58. 1012 Jen D Wilson 12-MAY-55----1009 Mike B Smith 22-MAR-88
59. 1012 Jen D Wilson 12-MAY-55----1010 Frank M Scher 24-JAN-71
60. 1012 Jen D Wilson 12-MAY-55----1013 Raj P Shah 29-JUN-85
61. 1012 Jen D Wilson 12-MAY-55----1014 Joy G Clark 16-MAR-49
62. 1012 Jen D Wilson 12-MAY-55----1016 James E Borg 19-JAN-69
63. 1012 Jen D Wilson 12-MAY-55----1017 David A Hall 09-JUN-85
64. 1012 Jen D Wilson 12-MAY-55----1019 Michel F King 04-FEB-67
65. 1012 Jen D Wilson 12-MAY-55----1020 Joe N Hill 20-APR-63
66. 1015 Abner B Lee 11-FEB-56----1001 John B Smith 02-MAR-85
67. 1015 Abner B Lee 11-FEB-56----1008 James E Borg 14-JAN-65
68. 1015 Abner B Lee 11-FEB-56----1007 Ahmed V Jabbar 18-FEB-70
69. 1015 Abner B Lee 11-FEB-56----1006 Joyce A English 01-MAR-82
70. 1015 Abner B Lee 11-FEB-56----1005 Ramesh K Narayan 20-JUN-86
71. 1015 Abner B Lee 11-FEB-56----1009 Mike B Smith 22-MAR-88
72. 1015 Abner B Lee 11-FEB-56----1010 Frank M Scher 24-JAN-71
73. 1015 Abner B Lee 11-FEB-56----1013 Raj P Shah 29-JUN-85
74. 1015 Abner B Lee 11-FEB-56----1014 Joy G Clark 16-MAR-49
75. 1015 Abner B Lee 11-FEB-56----1016 James E Borg 19-JAN-69
76. 1015 Abner B Lee 11-FEB-56----1017 David A Hall 09-JUN-85
77. 1015 Abner B Lee 11-FEB-56----1019 Michel F King 04-FEB-67
78. 1015 Abner B Lee 11-FEB-56----1020 Joe N Hill 20-APR-63
79. 1018 Keri M Ryan 05-JUL-75----1001 John B Smith 02-MAR-85
80. 1018 Keri M Ryan 05-JUL-75----1008 James E Borg 14-JAN-65
81. 1018 Keri M Ryan 05-JUL-75----1007 Ahmed V Jabbar 18-FEB-70
82. 1018 Keri M Ryan 05-JUL-75----1006 Joyce A English 01-MAR-82
83. 1018 Keri M Ryan 05-JUL-75----1005 Ramesh K Narayan 20-JUN-86
84. 1018 Keri M Ryan 05-JUL-75----1009 Mike B Smith 22-MAR-88
85. 1018 Keri M Ryan 05-JUL-75----1010 Frank M Scher 24-JAN-71
86. 1018 Keri M Ryan 05-JUL-75----1013 Raj P Shah 29-JUN-85
87. 1018 Keri M Ryan 05-JUL-75----1014 Joy G Clark 16-MAR-49
88. 1018 Keri M Ryan 05-JUL-75----1016 James E Borg 19-JAN-69
89. 1018 Keri M Ryan 05-JUL-75----1017 David A Hall 09-JUN-85
90. 1018 Keri M Ryan 05-JUL-75----1019 Michel F King 04-FEB-67
91. 1018 Keri M Ryan 05-JUL-75----1020 Joe N Hill 20-APR-63

1. Write an application program using one or several cursors that will print out ALL pairs of people that have one (or more) interests in common.

**create or replace**

**procedure** COMMON\_INTEREST **AS**

*--Declaration of cursor and variables*

**cursor** c1 **is select distinct** interest **from** personinterests;

x personinterests.interest%**type**;

num\_interest **integer**;

j **integer**:=0;

k **integer**:=0;

**begin**

**select count**(**distinct** interest) **into** num\_interest **from** personinterests;

**OPEN** c1;

*--looping through the interests*

**for** i **in** 1..num\_interest

**LOOP**

**fetch** c1 **INTO** x;

*--declaring cursor for getting person with x interest*

**for** c2 **IN**(**select** p1.personid **as** id1,firstname,middleinitial,lastname **from** personinterests,person p1 **where** interest=x **and** p1.personid = personinterests.personid)

**LOOP**

*--loop throught cursor*

j:=j+1;

*--declare and loop through cursor with person of interest x*

**for** c3 **IN**(**select** p2.personid **as** id2,firstname,middleinitial,lastname **from** personinterests,person p2 **where** interest=x **and** p2.personid = personinterests.personid)

**LOOP**

k:=k+1;

**if** k>j **then**

*--Print the ids, names and common interest*

DBMS\_OUTPUT.put\_line('interst:'||x||' Id1:'||c2.id1||' Name1:'||c2.firstname||' '||c2.middleinitial||' '||c2.lastname||' Id2:'||c3.id2||' Name2:'||c3.firstname||' '||c3.middleinitial||' '||c3.lastname);

**end if**;

**End loop**;

k:=0;

**END LOOP**;

j:=0;

**END LOOP**;

**CLOSE** c1;

**END**;

Output:

Connecting to the database adbms-project.

interst:Coins   Id1:1011  Name1:Alice A Brown   Id2:1017  Name2:David A Hall

interst:Coins   Id1:1011  Name1:Alice A Brown   Id2:1018  Name2:Keri M Ryan

interst:Coins   Id1:1017  Name1:David A Hall   Id2:1018  Name2:Keri M Ryan

interst:Politics   Id1:1004  Name1:Jennifer S Wallace   Id2:1006  Name2:Joyce A English

interst:Politics   Id1:1004  Name1:Jennifer S Wallace   Id2:1012  Name2:Jen D Wilson

interst:Politics   Id1:1004  Name1:Jennifer S Wallace   Id2:1015  Name2:Abner B Lee

interst:Politics   Id1:1006  Name1:Joyce A English   Id2:1012  Name2:Jen D Wilson

interst:Politics   Id1:1006  Name1:Joyce A English   Id2:1015  Name2:Abner B Lee

interst:Politics   Id1:1012  Name1:Jen D Wilson   Id2:1015  Name2:Abner B Lee

interst:Stamps   Id1:1010  Name1:Frank M Scher   Id2:1016  Name2:James E Borg

interst:Stamps   Id1:1010  Name1:Frank M Scher   Id2:1018  Name2:Keri M Ryan

interst:Stamps   Id1:1016  Name1:James E Borg   Id2:1018  Name2:Keri M Ryan

interst:Running   Id1:1005  Name1:Ramesh K Narayan   Id2:1008  Name2:James E Borg

interst:Running   Id1:1005  Name1:Ramesh K Narayan   Id2:1019  Name2:Michel F King

interst:Running   Id1:1008  Name1:James E Borg   Id2:1019  Name2:Michel F King

interst:Weapons   Id1:1009  Name1:Mike B Smith   Id2:1015  Name2:Abner B Lee

interst:Swimming   Id1:1001  Name1:John B Smith   Id2:1005  Name2:Ramesh K Narayan

interst:Swimming   Id1:1001  Name1:John B Smith   Id2:1008  Name2:James E Borg

interst:Swimming   Id1:1001  Name1:John B Smith   Id2:1013  Name2:Raj P Shah

interst:Swimming   Id1:1005  Name1:Ramesh K Narayan   Id2:1008  Name2:James E Borg

interst:Swimming   Id1:1005  Name1:Ramesh K Narayan   Id2:1013  Name2:Raj P Shah

interst:Swimming   Id1:1008  Name1:James E Borg   Id2:1013  Name2:Raj P Shah

interst:Dancing   Id1:1002  Name1:Franklin T Wong   Id2:1007  Name2:Ahmed V Jabbar

interst:Dancing   Id1:1002  Name1:Franklin T Wong   Id2:1014  Name2:Joy G Clark

interst:Dancing   Id1:1007  Name1:Ahmed V Jabbar   Id2:1014  Name2:Joy G Clark

interst:Music   Id1:1002  Name1:Franklin T Wong   Id2:1005  Name2:Ramesh K Narayan

interst:Music   Id1:1002  Name1:Franklin T Wong   Id2:1018  Name2:Keri M Ryan

interst:Music   Id1:1005  Name1:Ramesh K Narayan   Id2:1018  Name2:Keri M Ryan

interst:Skiing   Id1:1004  Name1:Jennifer S Wallace   Id2:1012  Name2:Jen D Wilson

interst:Skiing   Id1:1004  Name1:Jennifer S Wallace   Id2:1015  Name2:Abner B Lee

interst:Skiing   Id1:1012  Name1:Jen D Wilson   Id2:1015  Name2:Abner B Lee

Process exited.