BCA 3RD SEMSESTER

DBMS PRACTIAL DCA2130

P1 - Exercise Objective:

- The objective of this exercise is to enable you to understand and to use Relational Database concepts.

Problem Statement

- Consider the table Student_Details and display the records of those students whose Sex is female.
- +--------+---------+-----+----------+------------+
- | Rollno | name | Sex | phone_no | dob |
- +--------+---------+-----+----------+------------+
- | 101 | Kushal | M | 97267 | 1984-04-07 |
- | 102 | Kunal | M | 97265 | 1985-02-15 |
- | 103 | Ramit | M | 97264 | 1996-03-27 |
- | 104 | Suresh | M | 97263 | 1998-03-18 |
- | 105 | Rushali | F | 97262 | 1997-04-25 |
- +--------+---------+-----+----------+------------+

Instructions

- Ensure your code compiles without any errors/warning/deprecations
- Follow best practices while coding
- Avoid too many & unnecessary usage of white spaces (newline, spaces, tabs, ...), except to make the code readable
- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
- Try to retain the original code given in the exercise, to avoid any issues in compiling & running your programs
- Always test the program thoroughly, before saving/submitting exercises/project
- For any issues with your exercise, contact your coach

Warnings

- Take care of whitespace/trailing whitespace
- Trim the output and avoid special characters
- Avoid printing unnecessary values other than expected/asked output

Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Start
- Step – 2: Database is already created with its essential Tables.
- Step – 3: Execute different Commands and extract information from the table. (Hint: use commands like FROM, WHERE, DISTINCT, INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, GROUP BY, ORDERBY etc. You can use suitable operators like AND & OR for certain conditions to meet)

- Step-4: End

Expected Output:

- +--------+---------+-----+----------+------------+
- | Rollno | name | Sex | phone_no | dob |
- +--------+---------+-----+----------+------------+
- | 105 | Rushali | F | 97262 | 1997-04-25 |
- +--------+---------+-----+----------+------------+

Ans. **select * from Student_Details where sex ='F';**

P2 - Exercise Objective:

- The objective of this exercise is to enable you to understand and to use Relational Database concepts.

Problem Statement

- Consider the table Student_Details and display the name and RollNo of those students whose name ends with l.
- +--------+---------+-----+----------+------------+
- | Rollno | name | Sex | phone_no | dob |
- +--------+---------+-----+----------+------------+
- | 101 | Kushal | M | 97267 | 1984-04-07 |
- | 102 | Kunal | M | 97265 | 1985-02-15 |
- | 103 | Ramit | M | 97264 | 1996-03-27 |
- | 104 | Suresh | M | 97263 | 1998-03-18 |
- | 105 | Rushali | F | 97262 | 1997-04-25 |
- +--------+---------+-----+----------+------------+

Instructions

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- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
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Warnings

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Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Start
- Step – 2: Database is already created with its essential Tables.
- Step – 3: Execute different Commands and extract information from the table. (Hint: use commands like FROM, WHERE, DISTINCT, INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, GROUP BY, ORDERBY etc. You can use suitable operators like AND & OR for certain conditions to meet)
- Step-4: End

Expected Output:

- +--------+--------+
- | name | Rollno |
- +--------+--------+
- | Kushal | 101 |
- | Kunal | 102 |
- +--------+--------+

Ans. **select name, Roll_no, from Student_Details where name Like '%l';**

P3 - Exercise Objective:

- The objective of this exercise is to enable you to understand and to use Relational Database concepts.

Problem Statement

- Consider the table Student_Details and update the name of the student from Rushali to Ranjana.
- +--------+---------+-----+----------+------------+
- | Rollno | name | Sex | phone_no | dob |
- +--------+---------+-----+----------+------------+
- | 101 | Kushal | M | 97267 | 1984-04-07 |
- | 102 | Kunal | M | 97265 | 1985-02-15 |
- | 103 | Ramit | M | 97264 | 1996-03-27 |

- | 104 | Suresh | M | 97263 | 1998-03-18 |
- | 105 | Rushali | F | 97262 | 1997-04-25 |
- +--------+---------+-----+----------+------------+

Instructions

- Ensure your code compiles without any errors/warning/deprecations
- Follow best practices while coding
- Avoid too many & unnecessary usage of white spaces (newline, spaces, tabs, ...), except to make the code readable
- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
- Try to retain the original code given in the exercise, to avoid any issues in compiling & running your programs
- Always test the program thoroughly, before saving/submitting exercises/project
- For any issues with your exercise, contact your coach

Warnings

- Take care of whitespace/trailing whitespace
- Trim the output and avoid special characters
- Avoid printing unnecessary values other than expected/asked output

Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Start
- Step – 2: Database is already created with its essential Tables.
- Step – 3: Execute different Commands and extract information from the table. (Hint: use commands like FROM, WHERE, DISTINCT, INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, GROUP BY, ORDERBY etc. You can use suitable operators like AND & OR for certain conditions to meet)
- Step-4: End

Expected Output:

- +--------+---------+-----+----------+------------+
- | Rollno | name | Sex | phone_no | dob |
- +--------+---------+-----+----------+------------+
- | 101 | Kushal | M | 97267 | 1984-04-07 |
- | 102 | Kunal | M | 97265 | 1985-02-15 |
- | 103 | Ramit | M | 97264 | 1996-03-27 |
- | 104 | Suresh | M | 97263 | 1998-03-18 |
- | 105 | Ranjana | F | 97262 | 1997-04-25 |
- +--------+---------+-----+----------+------------+

Ans. update Student_Details set name = 'Ranjana' where name = 'Rushali';

P4 Exercise Objective:

- The objective of this exercise is to enable you to understand and to use Relational Database concepts.

Problem Statement

- Consider the table Student_Details and delete the record of those student whose rollno is 105.
- +--------+---------+-----+----------+------------+
- | Rollno | name | Sex | phone_no | dob |
- +--------+---------+-----+----------+------------+
- | 101 | Kushal | M | 97267 | 1984-04-07 |
- | 102 | Kunal | M | 97265 | 1985-02-15 |
- | 103 | Ramit | M | 97264 | 1996-03-27 |
- | 104 | Suresh | M | 97263 | 1998-03-18 |
- | 105 | Rushali | F | 97262 | 1997-04-25 |
- +--------+---------+-----+----------+------------+

Instructions

- Ensure your code compiles without any errors/warning/deprecations
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- Avoid too many & unnecessary usage of white spaces (newline, spaces, tabs, ...), except to make the code readable
- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
- Try to retain the original code given in the exercise, to avoid any issues in compiling & running your programs
- Always test the program thoroughly, before saving/submitting exercises/project
- For any issues with your exercise, contact your coach

Warnings

- Take care of whitespace/trailing whitespace
- Trim the output and avoid special characters
- Avoid printing unnecessary values other than expected/asked output

Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Start
- Step – 2: Database is already created with its essential Tables.

- Step – 3: Execute different Commands and extract information from the table. (Hint: use commands like FROM, WHERE, DISTINCT, INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN, GROUP BY, ORDERBY etc. You can use suitable operators like AND & OR for certain conditions to meet)
- Step-4: End

Expected Output:

- +Rollno | name | Sex | phone_no | dob |
- +--------+--------+-----+----------+------------+
- | 101 | Kushal | M | 97267 | 1984-04-07 |
- | 102 | Kunal | M | 97265 | 1985-02-15 |
- | 103 | Ramit | M | 97264 | 1996-03-27 |
- | 104 | Suresh | M | 97263 | 1998-03-18 |

Ans. Delete from Student_Details where rollno = '105';

P6 - Exercise Objective

- The objective of this program is to enable you to use the Pl/SQL block.

Problem Statement

- Write a Pl/SQL program to check number is even or odd.Consider the number 23.

Instructions

- Ensure your code compiles without any errors/warning/deprecations
- Follow best practices while coding
- Avoid too many & unnecessary usage of white spaces (newline, spaces, tabs, ...), except to make the code readable
- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
- Try to retain the original code given in the exercise, to avoid any issues in compiling & running your programs
- Always test the program thoroughly, before saving/submitting exercises/project
- For any issues with your exercise, contact your coach

Warnings

- Take care of whitespace/trailing whitespace
- Trim the output and avoid special characters
- Avoid printing unnecessary values other than expected/asked output

Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Write PL/SQL block for the problems stated.
- Step – 2: Execute

Expected output

- number is odd

Ans.

/* program to find if the given number is even or odd
we have the given number as 23*/

```
Declare
n integer:= 23;
r integer;
Begin
        r:= mod(n,2);
        if r=0 then
        dbms_output.put_line('Number is Even');
        else
        dbms_output.put_line('Number is Odd');
        end if;
end;
```

P7 - Exercise Objective

- The objective of this program is to enable you to use the PI/SQL block.

Problem Statement

- Write a PI/SQL program to swap two numbers using temporary variable.Take the value of a=5 and b=10.

Instructions

- Ensure your code compiles without any errors/warning/deprecations
- Follow best practices while coding
- Avoid too many & unnecessary usage of white spaces (newline, spaces, tabs, ...), except to make the code readable
- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
- Try to retain the original code given in the exercise, to avoid any issues in compiling & running your programs
- Always test the program thoroughly, before saving/submitting exercises/project
- For any issues with your exercise, contact your coach

Warnings

- Take care of whitespace/trailing whitespace
- Trim the output and avoid special characters
- Avoid printing unnecessary values other than expected/asked output

Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Write PL/SQL block for the problems stated.
- Step – 2: Execute

Expected output

- before swapping:
- a=5 b=10
- after swapping:
- a=10 b=5

Ans.

/* Program to swap two numbers using a temporary variable given a=5 and b=10 */

```
Declare
a integer:=5;
b integer:=10;
c integer ;
Begin
        dbms_output.put_line('Before swapping');
        dbms_output.put_line('a='||a|| ' b='||b);
        c:=a;
        a:=b;
        b:=c;
        dbms_output.put_line('After swapping');
        dbms_output.put_line('a='||a|| ' b='||b);
end;
```

P5 - Exercise Objective

- The objective of this program is to enable you to use the PI/SQL block.

Problem Statement

- Write a PI/SQL program to calculate factorial of 5.

Instructions

- Ensure your code compiles without any errors/warning/deprecations
- Follow best practices while coding
- Avoid too many & unnecessary usage of white spaces (newline, spaces, tabs, ...), except to make the code readable
- Use appropriate comments at appropriate places in your exercise, to explain the logic, rational, solutions, so that evaluator can know them
- Try to retain the original code given in the exercise, to avoid any issues in compiling & running your programs
- Always test the program thoroughly, before saving/submitting exercises/project
- For any issues with your exercise, contact your coach

Warnings

- Take care of whitespace/trailing whitespace
- Trim the output and avoid special characters
- Avoid printing unnecessary values other than expected/asked output

Hints/Tips

- The steps for this exercise are given below:
- Step – 1: Write PL/SQL block for the problems stated.
- Step – 2: Execute

Expected output

120

Ans.

```
 /* program to find factorial of a given number
we have given number as 5 */
Declare
n integer:=5;
fact integer:=1;
Begin
        for i in 1..n
        loop
        fact:= fact*i;
        end loop;
        dbms_output.put_line('Factorial of '||n||' is: '||fact);
end;
```