

1. Add a table-level PRIMARY KEY constraint to the EMP table on the ID column. The constraint should be named at creation. Name the constraint my_emp_id_pk.

The screenshot shows the Oracle APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. The 'SQL Commands' tab is active, showing a schema of 'WKSP_NITHIN772006'. The language is set to 'SQL' and the number of rows is '10'. The SQL command entered is:

```
1 alter table emp
2 add constraint my_emp_id_pk
3 primary key (id);
```

The 'Run' button is highlighted in green. Below the command editor, the 'Results' tab is selected, displaying the message 'Table altered.' and the execution time '0.09 seconds'. The footer shows the user 'nithin.s.2024.aids@rajalakshmi.edu.in' and the Oracle APEX version '24.2.6'.

2. Create a PRIMARY KEY constraint to the DEPT table using the ID column. The constraint should be named at creation. Name the constraint my_dept_id_pk.

The screenshot shows the Oracle APEX SQL Workshop interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. The 'SQL Commands' tab is active, showing a schema of 'WKSP_NITHIN772006'. The language is set to 'SQL' and the number of rows is '10'. The SQL command entered is:

```
1 alter table dept
2 add constraint my_dept_id_pk
3 primary key(id);
```

The 'Run' button is highlighted in green. Below the command editor, the 'Results' tab is selected, displaying the message 'Table altered.' and the execution time '0.08 seconds'. The footer shows the user 'nithin.s.2024.aids@rajalakshmi.edu.in' and the Oracle APEX version '24.2.6'.

3. Add a column DEPT_ID to the EMP table. Add a foreign key reference on the EMP table that ensures that the employee is not assigned to nonexistent department. Name the constraint my_emp_dept_id_fk.

The screenshot shows the Oracle APEX SQL Workshop interface. At the top, there's a navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile are also present. Below this, the 'SQL Commands' section is active, showing the schema 'WKSP_NITHIN772006'. The language is set to 'SQL' and the number of rows to display is '10'. The SQL command entered is: `ALTER TABLE emp ADD (commision NUMBER(5,2) CONSTRAINT ck_commission CHECK (commision > 0));`. The command has been executed successfully, as indicated by the 'Results' tab showing 'Table altered.' and a execution time of '0.07 seconds'. The footer contains user information, copyright notice, and the Oracle APEX version '24.2.6'.

Oracle APEX SQL Workshop interface showing the execution of an SQL command to alter the EMP table.

Schema: WKSP_NITHIN772006

Language: SQL Rows: 10

SQL Command:

```
1 ALTER TABLE emp
2 ADD (commision NUMBER(5,2) CONSTRAINT ck_commission CHECK (commision > 0));
3
```

Results: Table altered.

0.07 seconds

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4. Modify the EMP table. Add a COMMISSION column of NUMBER data type, precision 2, scale 2. Add a constraint to the commission column that ensures that a commission value is greater than zero.

The screenshot shows the Oracle APEX SQL Workshop interface. At the top, there's a navigation bar with 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', and 'Gallery'. A search bar and user profile are also present. Below this, the 'SQL Commands' section is active, showing the schema 'WKSP_NITHIN772006'. The language is set to 'SQL' and the number of rows to display is '10'. The SQL command entered is: `ALTER TABLE emp ADD (comission_pos NUMBER(2,2) CONSTRAINT comission_positive CHECK (comission_pos > 0));`. The command has been executed successfully, as indicated by the 'Results' tab showing 'Table altered.' and a execution time of '0.07 seconds'. The footer contains user information, copyright notice, and the Oracle APEX version '24.2.6'.

Oracle APEX SQL Workshop interface showing the execution of an SQL command to alter the EMP table.

Schema: WKSP_NITHIN772006

Language: SQL Rows: 10

SQL Command:

```
1 ALTER TABLE emp
2 ADD (comission_pos NUMBER(2,2) CONSTRAINT comission_positive CHECK (comission_pos > 0));
3
```

Results: Table altered.

0.07 seconds

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