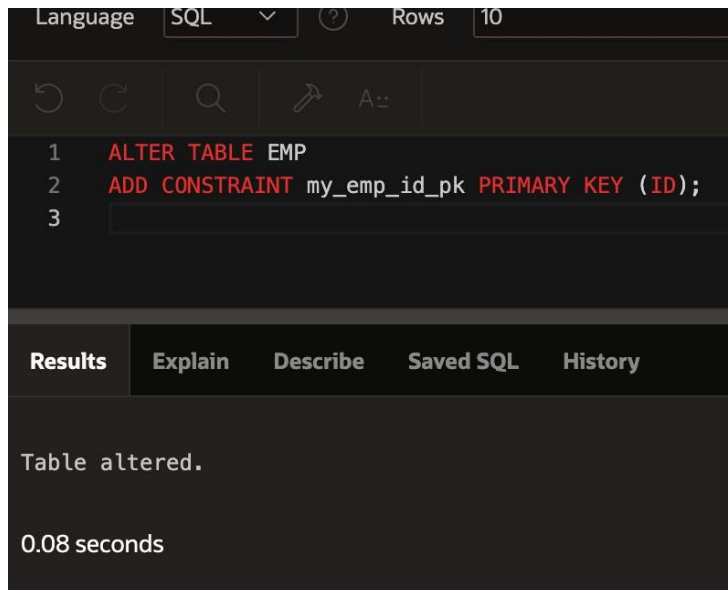


## Exercise 3

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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.

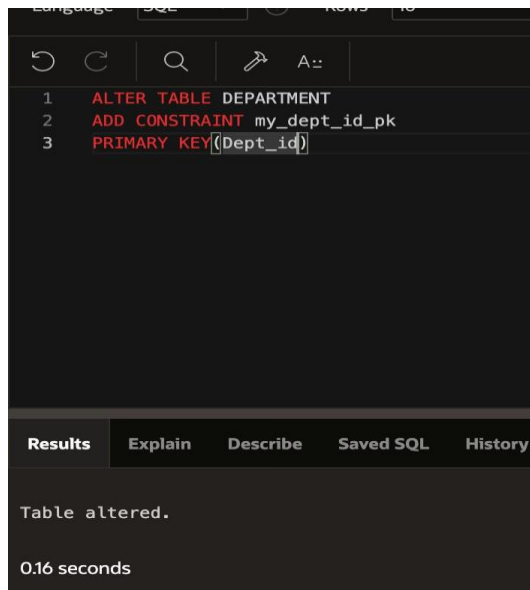


The screenshot shows a SQL IDE interface. At the top, there is a 'Language' dropdown set to 'SQL' and a 'Rows' counter set to '10'. Below this is a toolbar with icons for undo, redo, search, and a keyboard shortcut 'A-z'. The main text area contains the following SQL code:

```
1 ALTER TABLE EMP
2 ADD CONSTRAINT my_emp_id_pk PRIMARY KEY (ID);
3
```

Below the code editor is a tabbed interface with five tabs: 'Results', 'Explain', 'Describe', 'Saved SQL', and 'History'. The 'Results' tab is currently selected and displays the message 'Table altered.' followed by the execution time '0.08 seconds'.

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



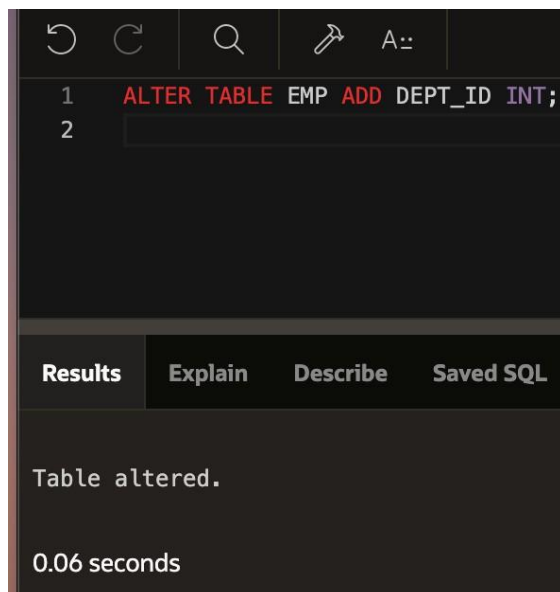
```
1 ALTER TABLE DEPARTMENT
2 ADD CONSTRAINT my_dept_id_pk
3 PRIMARY KEY (dept_id)
```

Results Explain Describe Saved SQL History

Table altered.

0.16 seconds

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.



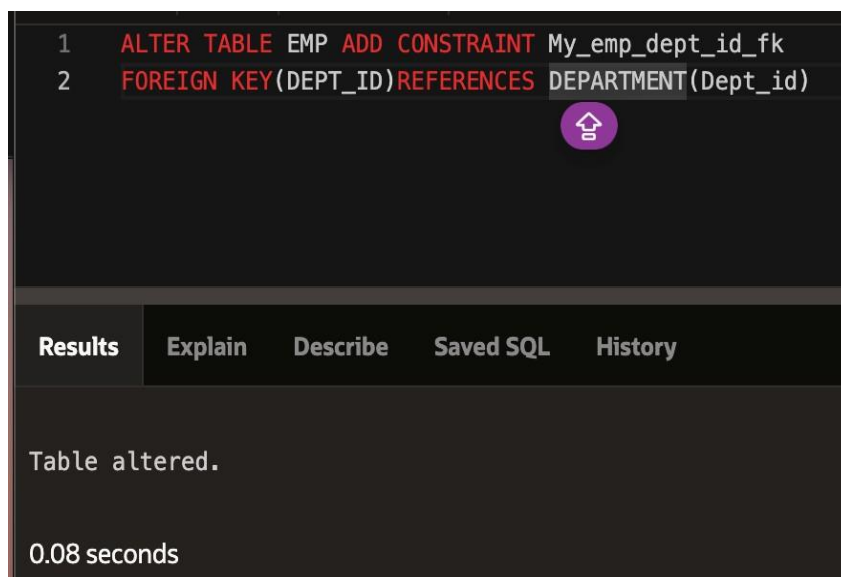
A screenshot of a SQL IDE interface. The top toolbar contains icons for undo, redo, search, and a dropdown menu. The SQL editor shows two lines of code: `1 ALTER TABLE EMP ADD DEPT_ID INT;` and `2` (an empty line). Below the editor is a tabbed interface with 'Results' selected. The results pane displays 'Table altered.' and '0.06 seconds'.

```
1 ALTER TABLE EMP ADD DEPT_ID INT;
2
```

Results Explain Describe Saved SQL

Table altered.

0.06 seconds



A screenshot of a SQL IDE interface. The SQL editor shows two lines of code: `1 ALTER TABLE EMP ADD CONSTRAINT My_emp_dept_id_fk` and `2 FOREIGN KEY(DEPT_ID)REFERENCES DEPARTMENT(Dept_id)`. Below the editor is a tabbed interface with 'Results' selected. The results pane displays 'Table altered.' and '0.08 seconds'. A purple icon with a house symbol is visible in the editor area.

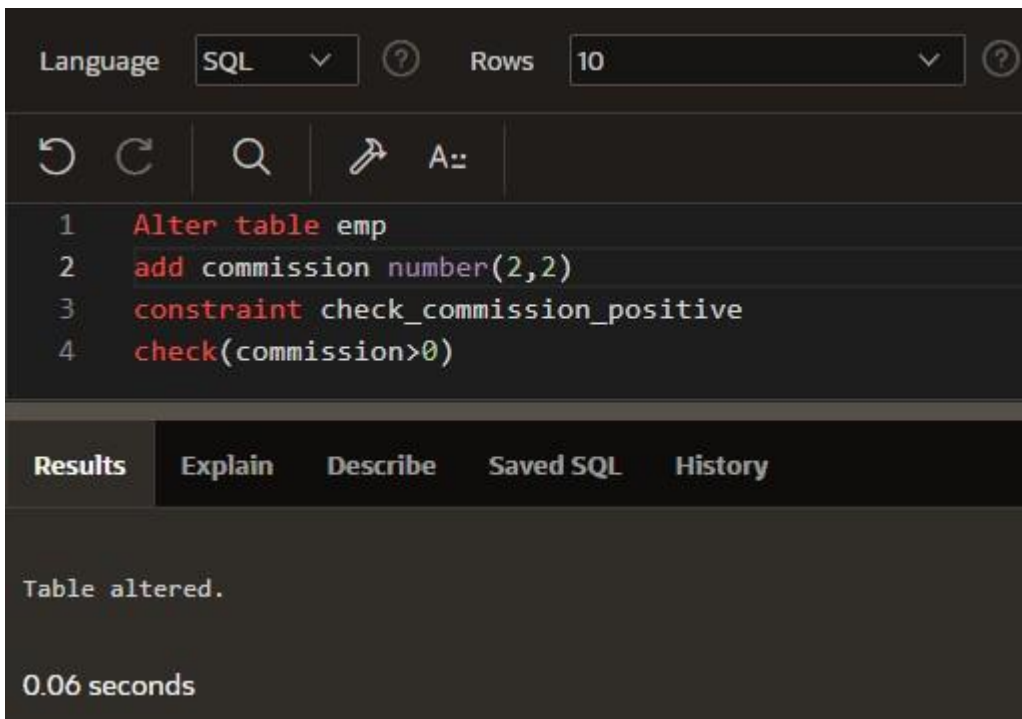
```
1 ALTER TABLE EMP ADD CONSTRAINT My_emp_dept_id_fk
2 FOREIGN KEY(DEPT_ID)REFERENCES DEPARTMENT(Dept_id)
```

Results Explain Describe Saved SQL History

Table altered.

0.08 seconds

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 a SQL IDE interface with a dark theme. At the top, there is a 'Language' dropdown set to 'SQL' and a 'Rows' dropdown set to '10'. Below these are icons for undo, redo, search, and a toolbar with a pin and a double colon. The main area displays four lines of SQL code: 1. `Alter table emp`, 2. `add commission number(2,2)`, 3. `constraint check_commission_positive`, and 4. `check(commission>0)`. Below the code is a tabbed interface with 'Results' selected, showing the message 'Table altered.' and the execution time '0.06 seconds'. Other tabs include 'Explain', 'Describe', 'Saved SQL', and 'History'.

```
1 Alter table emp
2 add commission number(2,2)
3 constraint check_commission_positive
4 check(commission>0)
```

Results Explain Describe Saved SQL History

Table altered.

0.06 seconds