Faculty of Technology and Engineering

Chandubhai S. Patel Institute of Technology (CSPIT)

Department of Computer Science & Engineering

Date: / /

Laboratory Manual

Academic Year	:	2024-25	Semester	:	4
Course code	:	CSE206	Course name	:	DATABASE MANAGEMENT SYSTEM

Practical - 1

Aim: Global Trust Bank is expanding its operations and requires a robust database management system to efficiently manage its employees, job profiles, customers' accounts, and loan information. The bank has laid out specific requirements and constraints to ensure data integrity, uniqueness, and completeness.

Requirements

Employee Management:

- Job Profiles: Maintain records of different job profiles.
- Employees: Store detailed information about employees, including their association with job profiles.

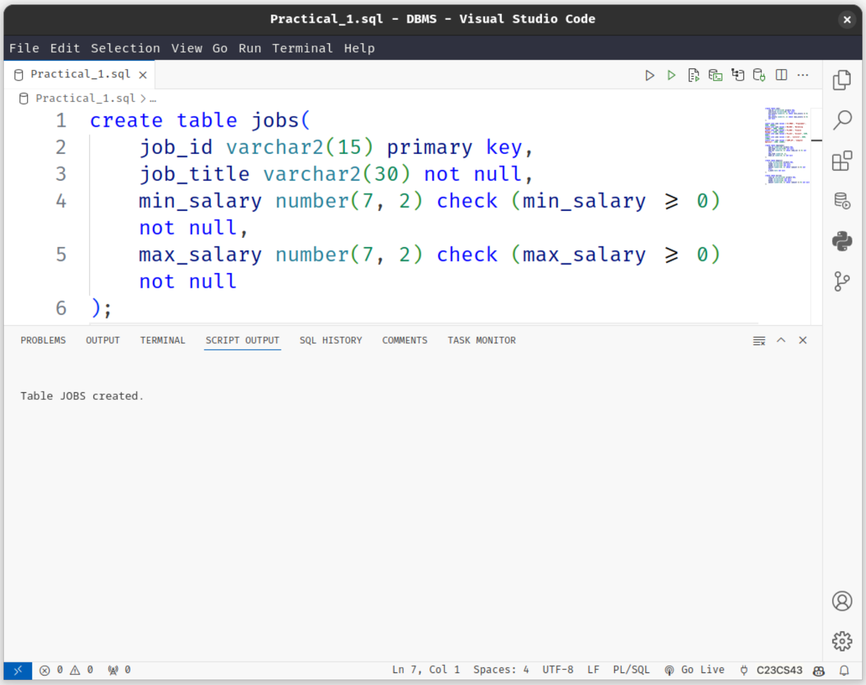
Customer Management:

- Accounts: Maintain separate records for customers' bank accounts.
- Loans: Maintain separate records for customers' loan details
- Design and implement the schema as per the given information.

Constraints –

- Not Null Constraints: Critical fields must not be null to ensure data completeness.
- Unique Constraints: Certain fields must have unique values to avoid duplicates (e.g., Account Number).
- Check Constraints: Enforce domain integrity by limiting the values that can be placed in a column.

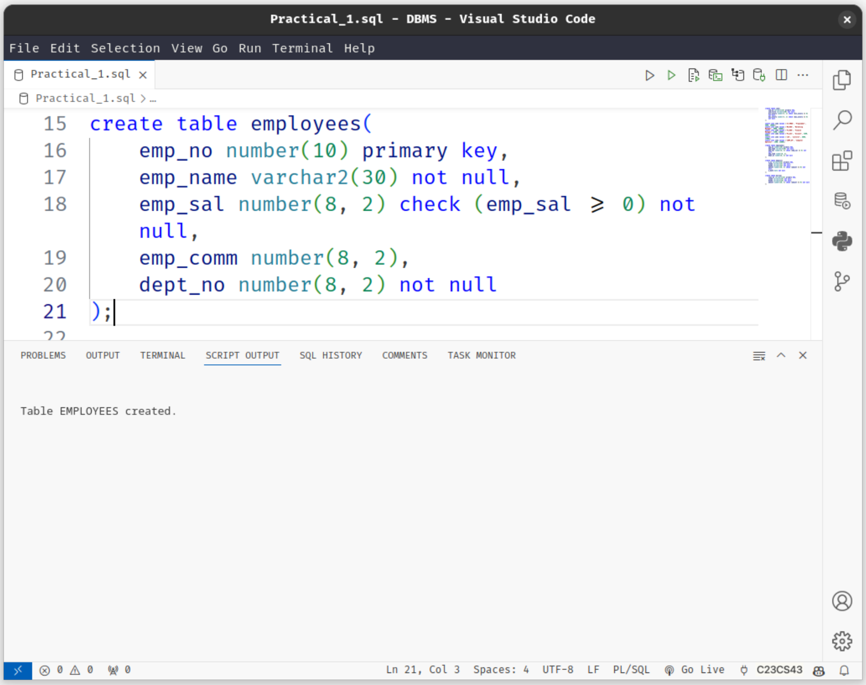
1. Create Table Job (job_id, job_title, min_sal, max_sal)


Practical_1.sql - DBMS - Visual Studio Code
File Edit Selection View Go Run Terminal Help
Practical_1.sql
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 7, Col 1 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

```sql
create table jobs(
    job_id varchar2(15) primary key,
    job_title varchar2(30) not null,
    min_salary number(7, 2) check (min_salary ≥ 0) not null,
    max_salary number(7, 2) check (max_salary ≥ 0) not null
);
```

```
Table JOBS created.
```

2. Create table Employee (emp_no, emp_name, emp_sal, emp_comm, dept_no)


Practical_1.sql - DBMS - Visual Studio Code
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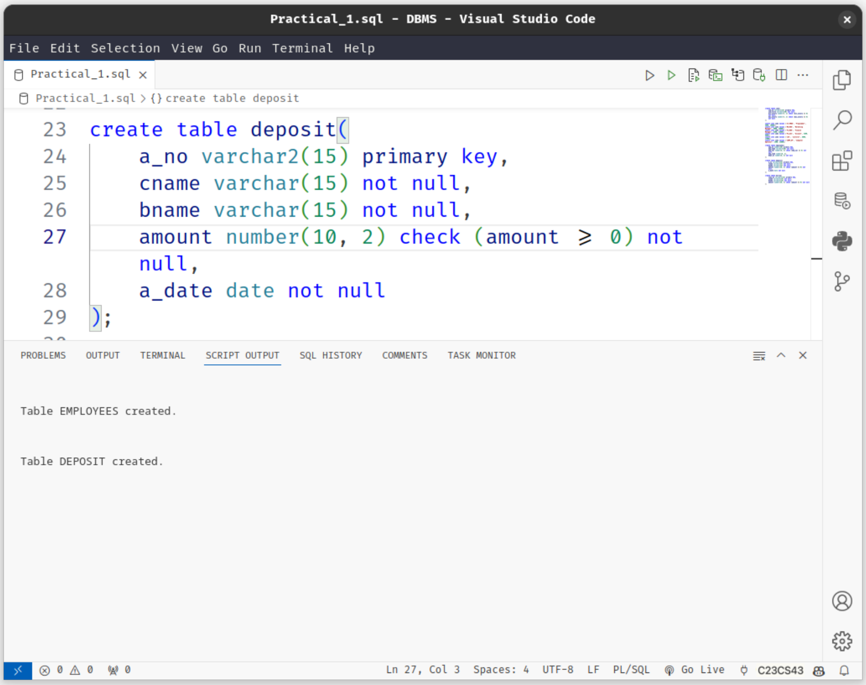
Practical_1.sql
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 21, Col 3 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

```sql
create table employees(
    emp_no number(10) primary key,
    emp_name varchar2(30) not null,
    emp_sal number(8, 2) check (emp_sal ≥ 0) not null,
    emp_comm number(8, 2),
    dept_no number(8, 2) not null
);
```

```
Table EMPLOYEES created.
```

3. Create table deposit (a_no, name,bname, amount,a_date)



Practical_1.sql - DBMS - Visual Studio Code
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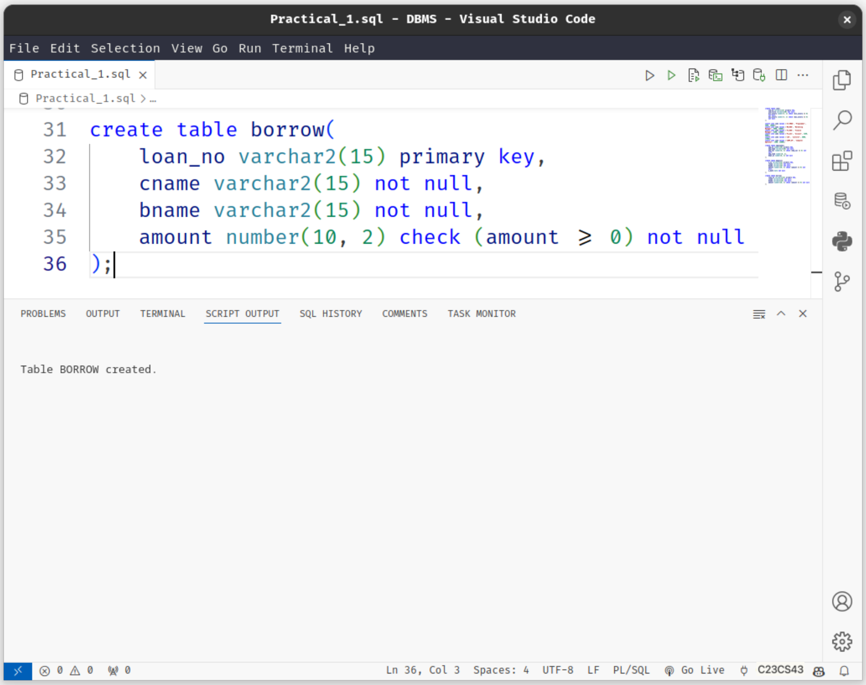
Practical_1.sql
Practical_1.sql > {} create table deposit
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 27, Col 3 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

```
create table deposit(
    a_no varchar2(15) primary key,
    cname varchar(15) not null,
    bname varchar(15) not null,
    amount number(10, 2) check (amount ≥ 0) not
    null,
    a_date date not null
);
```

```
Table EMPLOYEES created.


Table DEPOSIT created.
```

4. Create table borrow (loan no,cname,bname,amount)



Practical_1.sql - DBMS - Visual Studio Code
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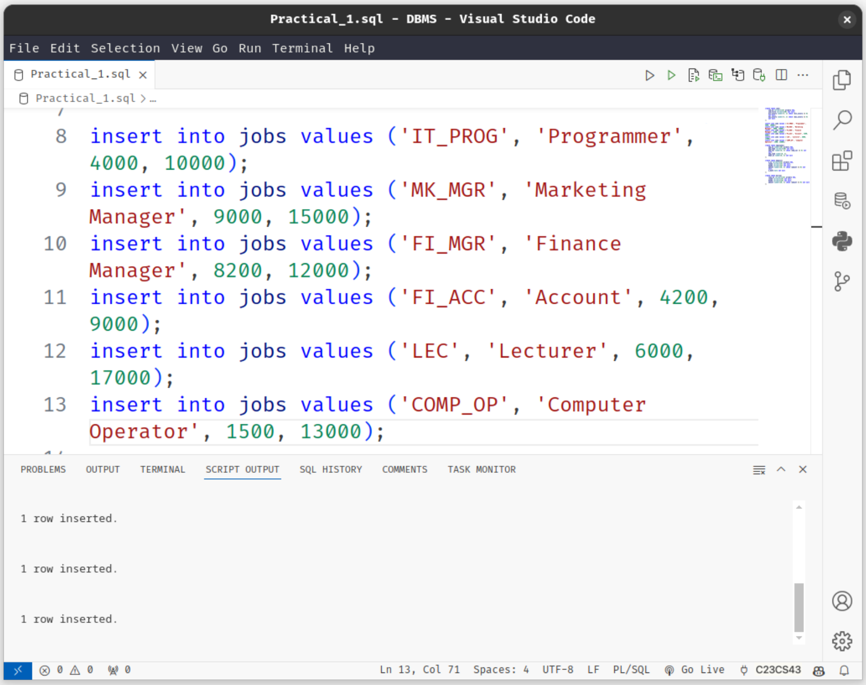
Practical_1.sql > ...
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 36, Col 3 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

```
create table borrow(
    loan_no varchar2(15) primary key,
    cname varchar2(15) not null,
    bname varchar2(15) not null,
    amount number(10, 2) check (amount ≥ 0) not null
);
```

```
Table BORROW created.
```

5. Insert the following values in the table JOB


Practical_1.sql - DBMS - Visual Studio Code
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Practical_1.sql
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 13, Col 71 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

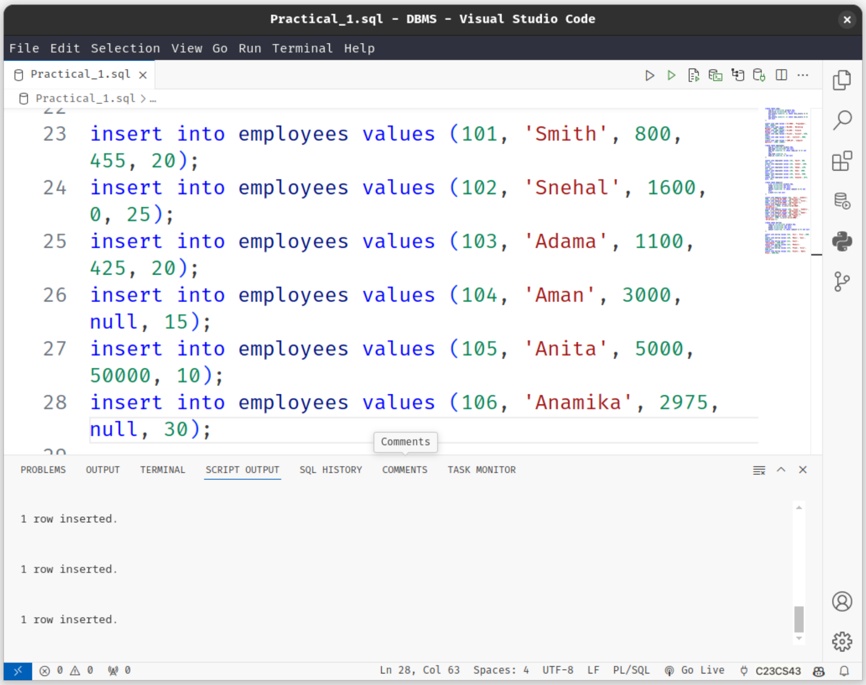
```sql
insert into jobs values ('IT_PROG', 'Programmer', 4000, 10000);
insert into jobs values ('MK_MGR', 'Marketing Manager', 9000, 15000);
insert into jobs values ('FI_MGR', 'Finance Manager', 8200, 12000);
insert into jobs values ('FI_ACC', 'Account', 4200, 9000);
insert into jobs values ('LEC', 'Lecturer', 6000, 17000);
insert into jobs values ('COMP_OP', 'Computer Operator', 1500, 13000);
```

```
1 row inserted.

1 row inserted.

1 row inserted.
```

6. Insert the following values in the table Employee


Practical_1.sql - DBMS - Visual Studio Code
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Practical_1.sql
Comments
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 28, Col 63 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

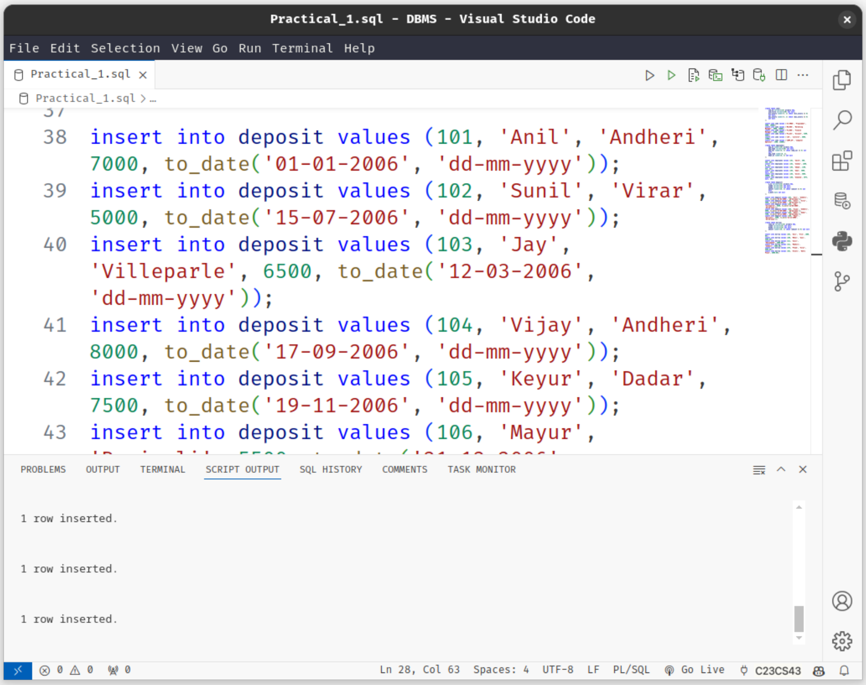
```sql
insert into employees values (101, 'Smith', 800, 455, 20);
insert into employees values (102, 'Snehal', 1600, 0, 25);
insert into employees values (103, 'Adama', 1100, 425, 20);
insert into employees values (104, 'Aman', 3000, null, 15);
insert into employees values (105, 'Anita', 5000, 50000, 10);
insert into employees values (106, 'Anamika', 2975, null, 30);
```

```
1 row inserted.

1 row inserted.

1 row inserted.
```

7. Insert the following values in the table deposit


Practical_1.sql - DBMS - Visual Studio Code
File Edit Selection View Go Run Terminal Help
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Practical_1.sql > …
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 28, Col 63 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

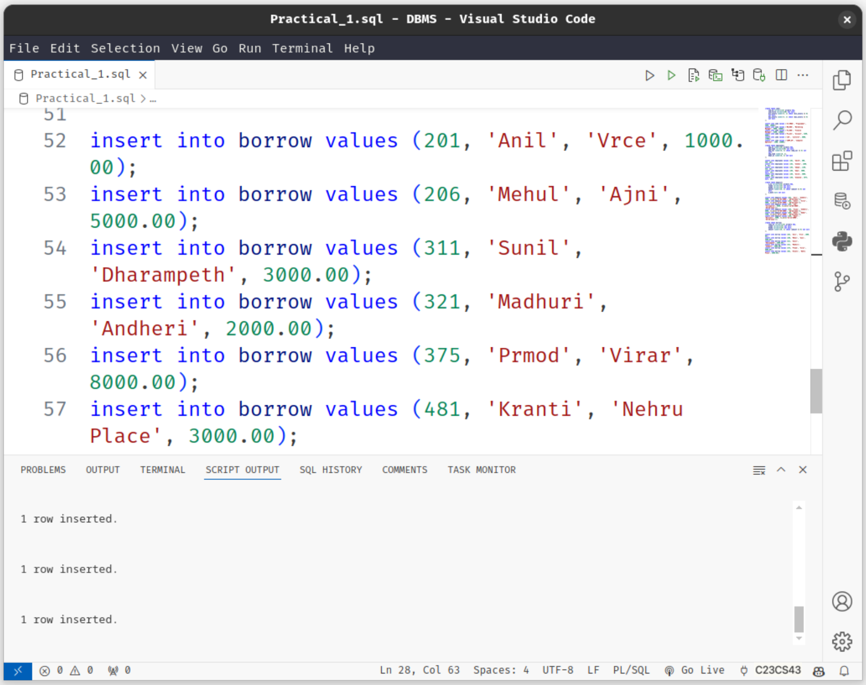
```sql
insert into deposit values (101, 'Anil', 'Andheri',
7000, to_date('01-01-2006', 'dd-mm-yyyy'));
insert into deposit values (102, 'Sunil', 'Virar',
5000, to_date('15-07-2006', 'dd-mm-yyyy'));
insert into deposit values (103, 'Jay',
'Villeparle', 6500, to_date('12-03-2006',
'dd-mm-yyyy'));
insert into deposit values (104, 'Vijay', 'Andheri',
8000, to_date('17-09-2006', 'dd-mm-yyyy'));
insert into deposit values (105, 'Keyur', 'Dadar',
7500, to_date('19-11-2006', 'dd-mm-yyyy'));
insert into deposit values (106, 'Mayur',
```

```
1 row inserted.

1 row inserted.

1 row inserted.
```

8. Insert the following values in the table borrow


Practical_1.sql - DBMS - Visual Studio Code
File Edit Selection View Go Run Terminal Help
Practical_1.sql
Practical_1.sql > …
PROBLEMS OUTPUT TERMINAL SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 28, Col 63 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

```sql
insert into borrow values (201, 'Anil', 'Vrce', 1000.
00);
insert into borrow values (206, 'Mehul', 'Ajni',
5000.00);
insert into borrow values (311, 'Sunil',
'Dharampeth', 3000.00);
insert into borrow values (321, 'Madhuri',
'Andheri', 2000.00);
insert into borrow values (375, 'Prmod', 'Virar',
8000.00);
insert into borrow values (481, 'Kranti', 'Nehru
Place', 3000.00);
```

```
1 row inserted.

1 row inserted.

1 row inserted.
```

9. Describe the table Job, employee, deposit, borrow

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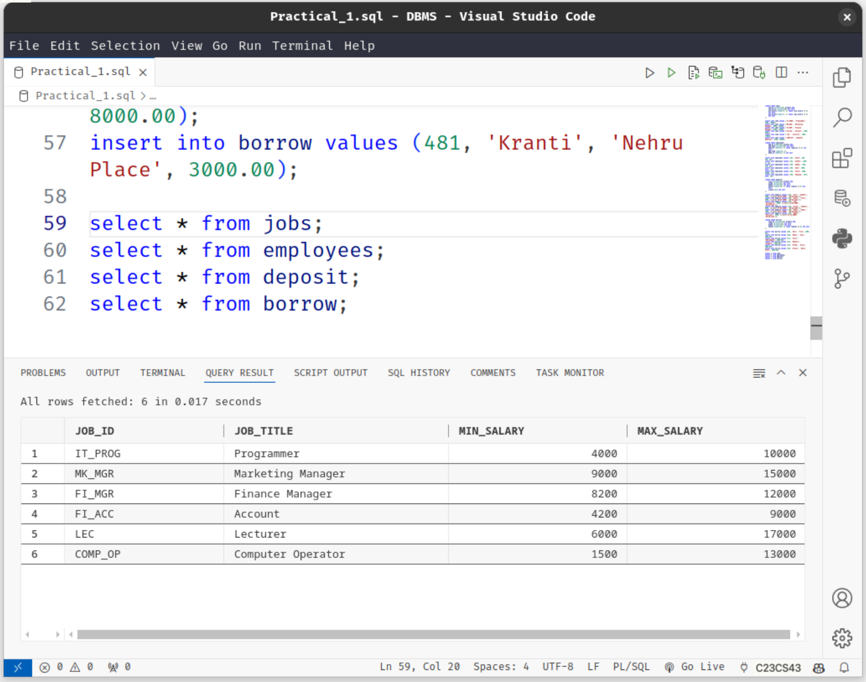

```
8000.00);
insert into borrow values (481, 'Kranti', 'Nehru
Place', 3000.00);

select * from jobs;
select * from employees;
select * from deposit;
select * from borrow;
```

All rows fetched: 6 in 0.017 seconds

	JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
1	IT_PROG	Programmer	4000	10000
2	MK_MGR	Marketing Manager	9000	15000
3	FI_MGR	Finance Manager	8200	12000
4	FI_ACC	Account	4200	9000
5	LEC	Lecturer	6000	17000
6	COMP_OP	Computer Operator	1500	13000

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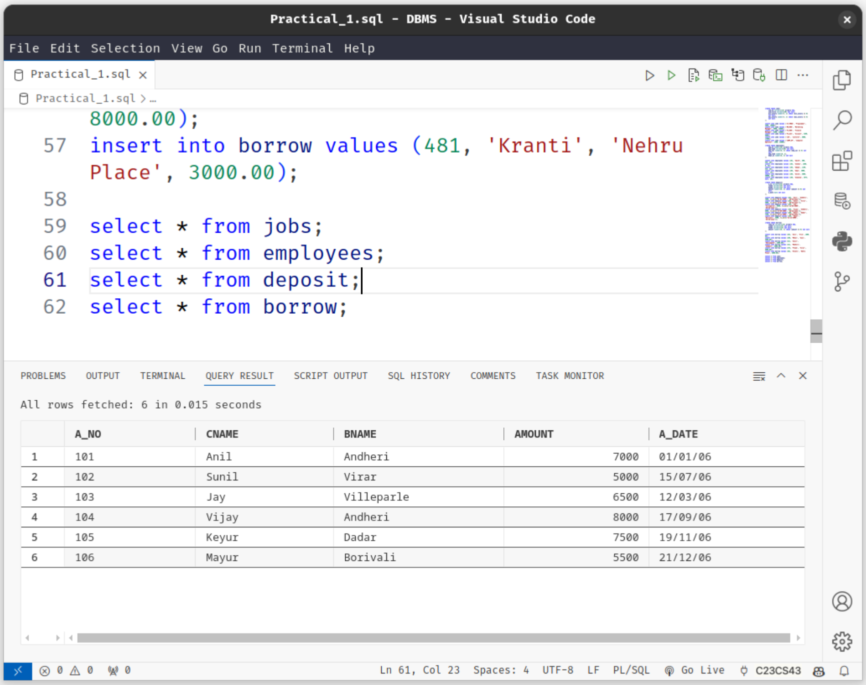
Ln 59, Col 20 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43



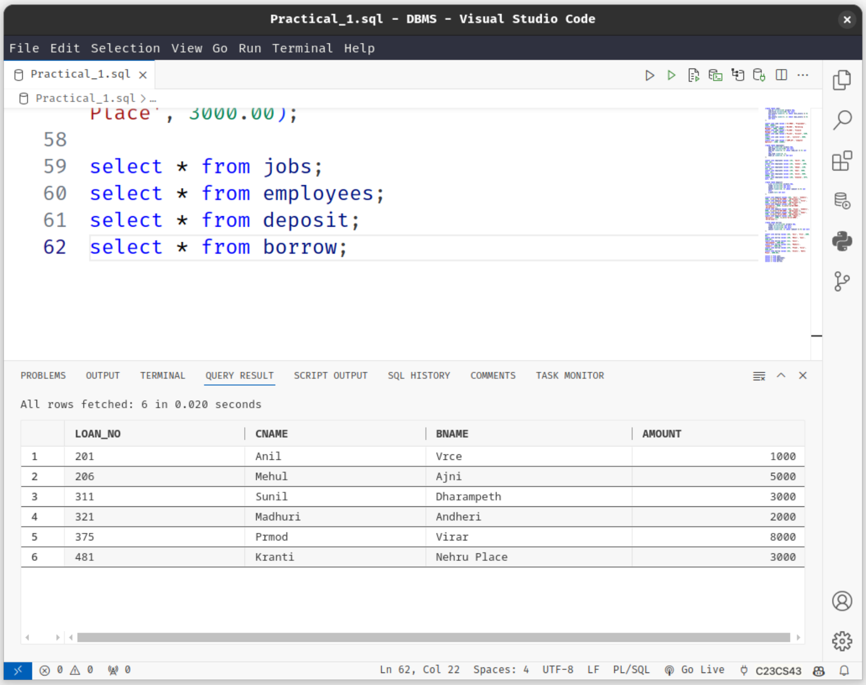
Practical_1.sql - DBMS - Visual Studio Code
File Edit Selection View Go Run Terminal Help
Practical_1.sql
Practical_1.sql > ...
PROBLEMS
OUTPUT
TERMINAL
QUERY RESULT
SCRIPT OUTPUT
SQL HISTORY
COMMENTS
TASK MONITOR

```
8000.00);
insert into borrow values (481, 'Kranti', 'Nehru
Place', 3000.00);

select * from jobs;
select * from employees;
select * from deposit;
select * from borrow;
```

All rows fetched: 6 in 0.015 seconds

	A_NO	CNAME	BNAME	AMOUNT	A_DATE
1	101	Anil	Andheri	7000	01/01/06
2	102	Sunil	Virar	5000	15/07/06
3	103	Jay	Villeparle	6500	12/03/06
4	104	Vijay	Andheri	8000	17/09/06
5	105	Keyur	Dadar	7500	19/11/06
6	106	Mayur	Borivali	5500	21/12/06


Practical_1.sql - DBMS - Visual Studio Code
File Edit Selection View Go Run Terminal Help
Practical_1.sql
PROBLEMS OUTPUT TERMINAL QUERY RESULT SCRIPT OUTPUT SQL HISTORY COMMENTS TASK MONITOR
Ln 62, Col 22 Spaces: 4 UTF-8 LF PL/SQL Go Live C23CS43

```
Place', 3000.00);

select * from jobs;
select * from employees;
select * from deposit;
select * from borrow;
```

All rows fetched: 6 in 0.020 seconds

	LOAN_NO	CNAME	BNAME	AMOUNT
1	201	Anil	Vrce	1000
2	206	Mehul	Ajni	5000
3	311	Sunil	Dharampeth	3000
4	321	Madhuri	Andheri	2000
5	375	Prmod	Virar	8000
6	481	Kranti	Nehru Place	3000