Table Creation (DDL Operations)

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CO4: Creating DML, DDL using Oracle and connection with ODBC/JDBC for existing JAVA application	
PO-e-2: Use modern engineering and IT tools for prediction and modeling of complex computer science and engineering problem	Marks

Coustomer_Info :

```
create table coustomer_info (
  coustomer_id   number(20) primary key,
  coustomer_name  varchar2(20) not null,
  email          varchar2(20),
  address    varchar2(20)
)
desc coustomer_info
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **COUSTOMER_INFO**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COUSTOMER_INFO	COUSTOMER_ID	NUMBER	-	20	0	1	-	-	-
	COUSTOMER_NAME	VARCHAR2	20	-	-	-	-	-	-
	EMAIL	VARCHAR2	20	-	-	-	✓	-	-
	ADDRESS	VARCHAR2	20	-	-	-	✓	-	-

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```
create table coustomer_info (
  coustomer_id   number(20) primary key,
  coustomer_name  varchar2(20) not null,
  email          varchar2(20),
  address    varchar2(20)
)
desc coustomer_info
select * from coustomer_info
```

Results Explain Describe Saved SQL History

COUSTOMER_ID	COUSTOMER_NAME	EMAIL	ADDRESS
1	Mohammad Ali Masud	ali@gmail.com	Kuril
2	Choyon Adhikari	choyon@gmail.com	mirpur
3	Abir	abir@gmail.com	Boshundhora

3 rows returned in 0.01 seconds Download

Table :01

Coustomers :

```
CREATE TABLE coustomers (
  R_id        NUMBER(20) PRIMARY KEY,
  c_id        NUMBER(20),
  seats       VARCHAR2(20),
  flight_id   VARCHAR2(20),
  R_date      DATE,
  coustomer_id NUMBER(20) CONSTRAINT fk  REFERENCES coustomer_info(coustomer_id)
  )
desc coustomers
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **COUSTOMERS**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COUSTOMERS	R_ID	NUMBER	-	20	0	1	-	-	-
	C_ID	NUMBER	-	20	0	-	✓	-	-
	SEATS	VARCHAR2	20	-	-	-	✓	-	-
	FLIGHT_ID	VARCHAR2	20	-	-	-	✓	-	-
	R_DATE	DATE	7	-	-	-	✓	-	-
	COUSTOMER_ID	NUMBER	-	20	0	-	✓	-	-

```
select * from coustomers
```

Results Explain Describe Saved SQL History

R_ID	C_ID	SEATS	FLIGHT_ID	R_DATE	COUSTOMER_ID
1	2	10	FL1234	01/10/2024	1
2	3	15	FL4467	01/15/2024	2
3	3	15	FL4467	01/20/2024	3

3 rows returned in 0.00 seconds Download

Table :02

Payment :

```
create table payment
(
 Pid varchar2(50) primary key,
 Rid varchar2(50) not null,
 Pdate date,
 Pammount varchar2(50),
 Pmathod varchar2(50))

desc payment
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **PAYMENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PAYMENT	PID	VARCHAR2	50	-	-	1	-	-	-
	RID	VARCHAR2	50	-	-	-	-	-	-
	PDATE	DATE	7	-	-	-	✓	-	-
	PAMMOUNT	VARCHAR2	50	-	-	-	✓	-	-
	PMATHOD	VARCHAR2	50	-	-	-	✓	-	-

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```
select * from payment
```

Results Explain Describe Saved SQL History

PID	RID	PDATE	PAMMOUNT	PMATHOD
1	1	01/10/2024	10000	Card
2	2	01/15/2024	20000	Card
3	3	01/25/2024	10000	Mobile Banking

3 rows returned in 0.01 seconds Download

Table :03

Coustomer2 :

```
create table coustomer2
(
  R_id varchar2(50) primary key,
  flight_id      varchar2(50) not null,
  c_id  number(20),
  seats varchar2(50),
  R_date  date,
  Pid varchar2(50) CONSTRAINT fk2  REFERENCES payment(pid)
)
desc coustomer2
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **COUSTOMER2**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
COUSTOMER2	R_ID	VARCHAR2	50	-	-	1	-	-	-
	FLIGHT_ID	VARCHAR2	50	-	-	-	-	-	-
	C_ID	NUMBER	-	20	0	-	✓	-	-
	SEATS	VARCHAR2	50	-	-	-	✓	-	-
	R_DATE	DATE	7	-	-	-	✓	-	-
	PID	VARCHAR2	50	-	-	-	✓	-	-

```
desc coustomer2
select * from coustomer2
```

Results Explain Describe Saved SQL History

R_ID	FLIGHT_ID	C_ID	SEATS	R_DATE	PID
1	FI11	2	15	02/10/2024	1
2	FI11	3	16	02/15/2024	2
3	FI11	3	17	02/20/2024	3

3 rows returned in 0.02 seconds Download

Table :04

Agent :

```
create table Agent
(
 Agent_id varchar2(50) primary key,
 Agent_name varchar2(50),
 commmission number(25) not null)
```

```
desc Agent
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **AGENT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
AGENT	AGENT_ID	VARCHAR2	50	-	-	1	-	-	-
	AGENT_NAME	VARCHAR2	50	-	-	-	✓	-	-
	COMMMISSION	NUMBER	-	5	2	-	-	-	-

1 - 3

```
desc Agent
select * from agent
```

Results Explain Describe Saved SQL History

AGENT_ID	AGENT_NAME	COMMMISSION
101	sanjid	.12
102	sanjid	.13
103	sanjid	.15

3 rows returned in 0.00 seconds Download

Table :05

Reservation :

```
create table reservation
(
 Rid varchar2(50) primary key,
 cid varchar2(50) not null,
 seats varchar2(50) not null,
 Rdate date,
 Flightid varchar2(50),
 Agent_id varchar2(50) constraint fk_agent_id references Agent(agent_id))
desc Reservation
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **RESERVATION**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
RESERVATION	RID	VARCHAR2	50	-	-	1	-	-	-
	CID	VARCHAR2	50	-	-	-	-	-	-
	SEATS	VARCHAR2	50	-	-	-	-	-	-
	RDATE	DATE	7	-	-	-	✓	-	-
	FLIGHTID	VARCHAR2	50	-	-	-	✓	-	-
	AGENT_ID	VARCHAR2	50	-	-	-	✓	-	-

```
select * from reservation
```

Results Explain Describe Saved SQL History

RID	CID	SEATS	RDATE	FLIGHTID	AGENT_ID
1	6	65	06/11/0024	5453348	101
2	7	666	06/16/0024	5453348	102
3	8	667	06/18/0024	5453348	103

3 rows returned in 0.01 seconds Download

Table : 06

Flight_Info :

```
create table flight_info (
  f_id   varchar2(20) primary key,
  a_name  varchar2(20) not null,
  total_set   varchar2(20),
  d_airport   varchar2(20),
  a_airport  varchar2(20)
)
desc flight_info
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **FLIGHT_INFO**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
FLIGHT_INFO	F_ID	VARCHAR2	20	-	-	1	-	-	-
	A_NAME	VARCHAR2	20	-	-	-	-	-	-
	TOTAL_SET	VARCHAR2	20	-	-	-	✓	-	-
	D_AIRPORT	VARCHAR2	20	-	-	-	✓	-	-
	A_AIRPORT	VARCHAR2	20	-	-	-	✓	-	-

1 - 5

```
select * from flight_info
```

Results Explain Describe Saved SQL History

F_ID	A_NAME	TOTAL_SET	D_AIRPORT	A_AIRPORT
1	dhaka	200	Dhaka	Joshor
2	Dhaka	250	Chottogram	Dhaka
3	Dkaka	300	khulna	Dhaka

Table : 07

Reser_Info :

```
create table reser_info (
  r_id  varchar2(20) primary key,
  e_id number(20) not null,
  flight_id varchar2(20),
  seats  number(20),
  r_date date,
  f_id   varchar2(20) constraint fk_f_id references flight_info(f_id)
) desc reser_info
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **RESER_INFO**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
RESER_INFO	R_ID	VARCHAR2	20	-	-	1	-	-	-
	E_ID	NUMBER	-	20	0	-	-	-	-
	FLIGHT_ID	VARCHAR2	20	-	-	-	✓	-	-
	SEATS	NUMBER	-	20	0	-	✓	-	-
	R_DATE	DATE	7	-	-	-	✓	-	-
	F_ID	VARCHAR2	20	-	-	-	✓	-	-

```
select * from reser_info
```

Results Explain Describe Saved SQL History

R_ID	E_ID	FLIGHT_ID	SEATS	R_DATE	F_ID
1	101	1001	1	06/10/2024	1
2	102	1002	2	02/15/2024	2
3	103	1003	3	06/20/2024	3

Table :08

Location :

```
create table location (

  B_id varchar2(50) primary key,
  City varchar2(50),
  Country varchar2(50)
)

desc location
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **LOCATION**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
LOCATION	B_ID	VARCHAR2	50	-	-	1	-	-	-
	CITY	VARCHAR2	50	-	-	-	✓	-	-
	COUNTRY	VARCHAR2	50	-	-	-	✓	-	-

```
desc location
select * from location
```

Results Explain Describe Saved SQL History

B_ID	CITY	COUNTRY
405	Kuril	Bangladesh
406	Badda	Bangladesh
407	Rampura	Bangladesh

Table :09

Airport :

```
create table airport (
  a_id   varchar2(20) primary key,
  a_name  varchar2(20) not null,
  f_id   varchar2(20) constraint fk2_f_id references flight_info(f_id),
  B_id varchar2(50) constraint fk2_b_id references location(B_id)
)
desc airport
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **AIRPORT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
AIRPORT	A_ID	VARCHAR2	20	-	-	1	-	-	-
	A_NAME	VARCHAR2	20	-	-	-	-	-	-
	F_ID	VARCHAR2	20	-	-	-	✓	-	-
	B_ID	VARCHAR2	50	-	-	-	✓	-	-

```
desc airport
select * from airport
```

Results Explain Describe Saved

A_ID	A_NAME	F_ID	B_ID
1	Manik	1	405
2	Shagor	2	406
3	Manik	3	407

Table :10

Flight :

```
create table flight
(
sent_id number(10) primary key,
flight_id number(10) not null,
sent_name varchar2(20) not null,
class varchar2(20) not null,
F_id varchar2(20) constraint fk_f_id references flight_info(f_id)
)
desc flight
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **FLIGHT**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
FLIGHT	SENT_ID	NUMBER	-	10	0	1	-	-	-
	FLIGHT_ID	NUMBER	-	10	0	-	-	-	-
	SENT_NAME	VARCHAR2	20	-	-	-	✓	-	-
	CLASS	VARCHAR2	20	-	-	-	✓	-	-
	F_ID	VARCHAR2	20	-	-	-	✓	-	-

```
desc flight
select * from flight
```

Results Explain Describe Saved SQL History

SENT_ID	FLIGHT_ID	SENT_NAME	CLASS	F_ID
568484	3477	Abir	first	1
568485	4517	saif	second	2
568486	2377	chyon	third	3

Table :11

Stuff :

```
create table stuff
(
stuff_id number(20) primary key,
stuff_name varchar2(10) not null,
role varchar2(20)
)
desc stuff
```

Results Explain **Describe** Saved SQL History

Object Type **TABLE** Object **STUFF**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
STUFF	STUFF_ID	NUMBER	-	20	0	1	-	-	-
	STUFF_NAME	VARCHAR2	10	-	-	-	-	-	-
	ROLE	VARCHAR2	20	-	-	-	✓	-	-

1 3

```
desc stuff
select * from stuff
```

Results Explain Describe Saved SQL

STUFF_ID	STUFF_NAME	ROLE
2345	Lex	pilot
5678	Lina	airhostage
1234	Jhon	mecanic

Table :12

Description of a Successful DB connection

DataBase Connection by (Zaman, Md Saif….23-50952-1)

If we don't already have it installed, we must first install a few items on our device in order for the database connection to function.

The first thing I did was download and install Oracle11g .Then set the path in my laptop .I made a table called **"Coustomer_Info"** with four columns, as well as a database named "**Airlines Reservation System.**" The values that follow are then added to the table, which has three rows total.

Writing the java code :

Chosen an notepad which is notepad++ of my choice. I used **notepad++** code for Java development. In my Java code, loaded the Oracle Java Connector driver by importing the JAR file into my project and using the Class.forName() method to register it. Used the DriverManager.getConnection() method to establish a connection to my Oracle database by providing the appropriate username, and password. My username was saif and the password is saif. After establishing the connection, created a Statement or Created Statement object to execute SQL queries. Used the created statement to execute SQL queries like SELECT, INSERT, UPDATE, or DELETE. Captured the necessary results. Used the ResultSet object to retrieve and process the data. Performed necessary operations on the data retrieved from the database.

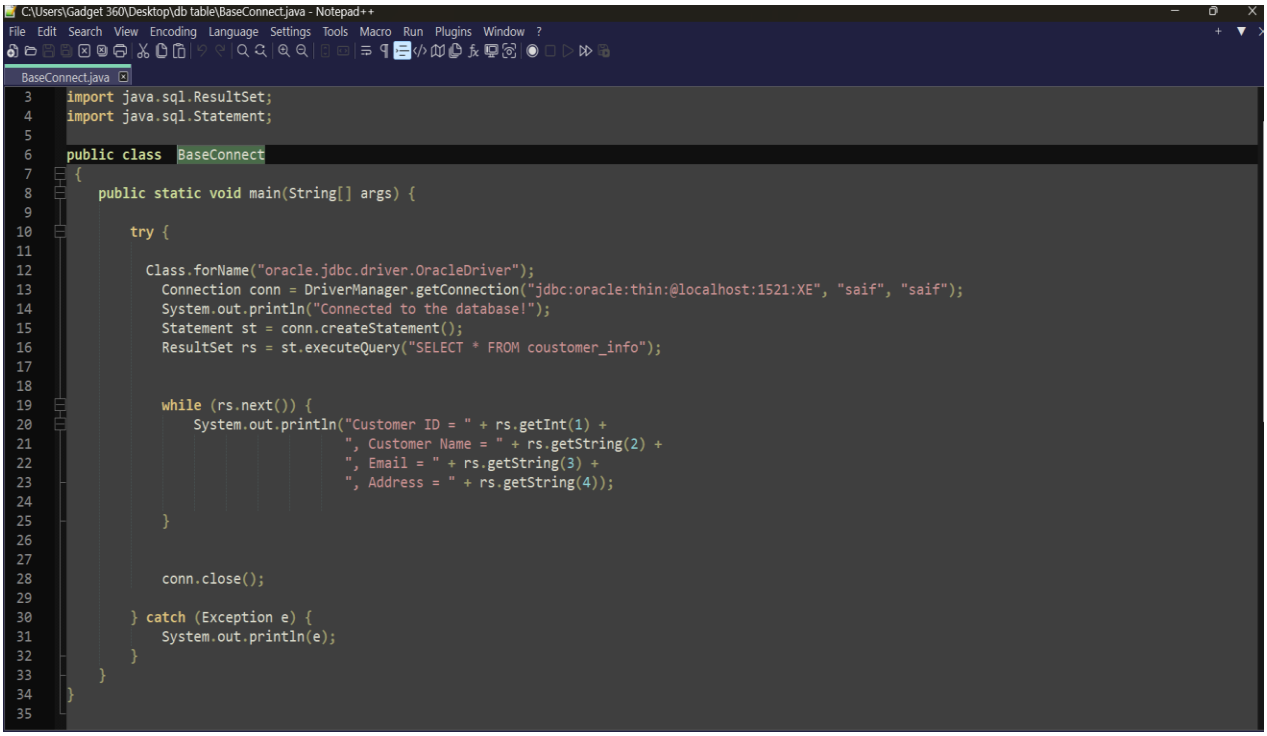

Fig 1: code in notepad++ for java and sql connection

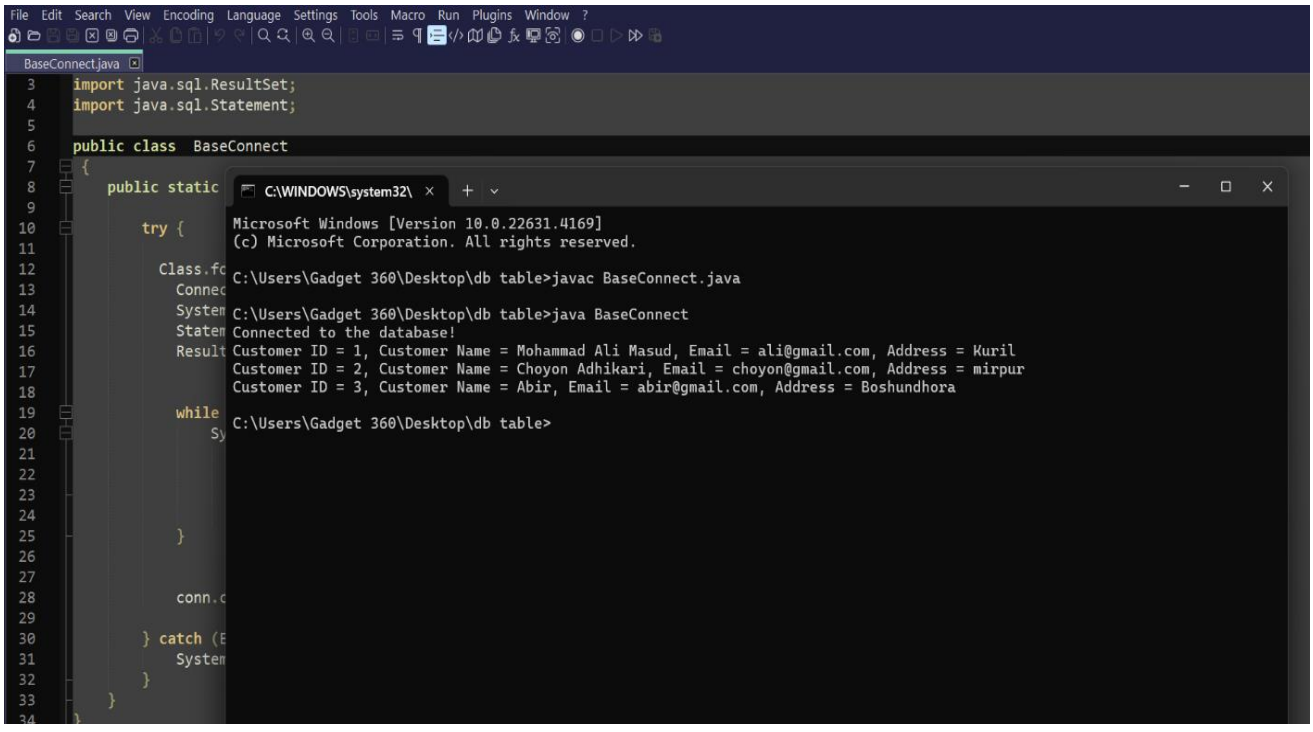

Fig 2: output from notepad++ after connect with my sql connector java