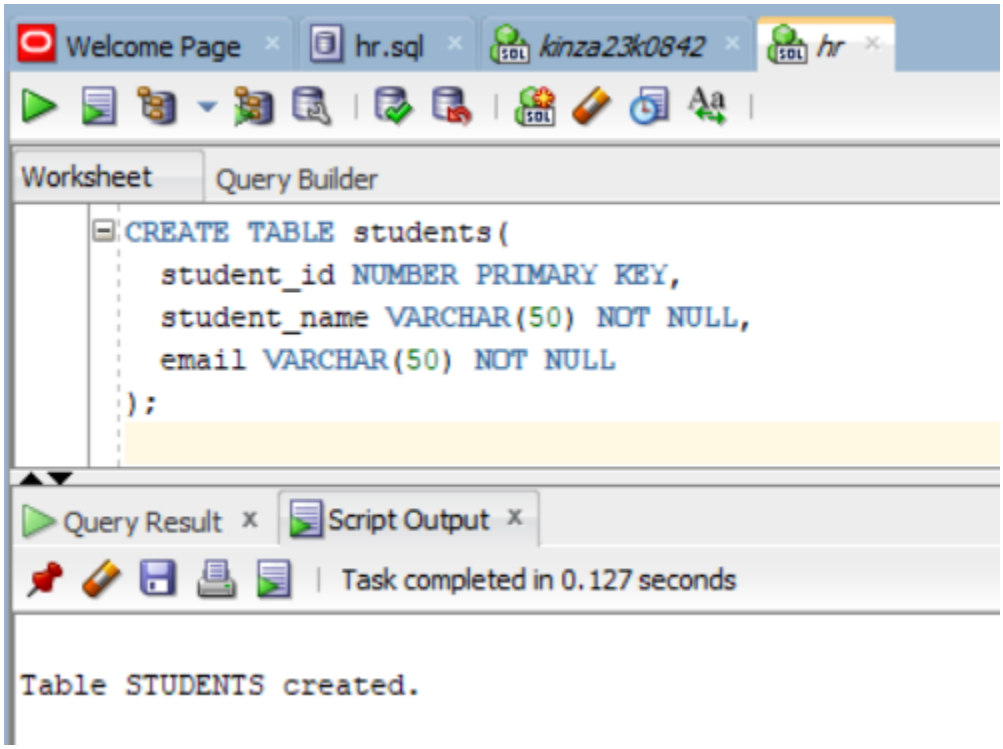
**DBS LAB 03 23k-0842**

```
SQL> connect sys as sysdba
Enter password:
Connected.
SQL> create user kinza identified by password2;

User created.

SQL> grant all privileges to kinza;

Grant succeeded.

SQL>
```

```
SQL> CONNECT kinza/password2
Connected.
```

1. **CREATE TABLE students(**
   **student_id NUMBER PRIMARY KEY,**
   **student_name VARCHAR(50) NOT NULL,**
   **email VARCHAR(50) NOT NULL**
   **);**



2. **CREATE TABLE courses(**
   **course_id NUMBER NOT NULL,**
   **course_name VARCHAR(50) NOT NULL**
   **);**

```
CREATE TABLE courses(
course_id NUMBER NOT NULL,
course_name VARCHAR(50) NOT NULL
);
```

Query Result | Script Output | Task completed in 0.058 seconds

```
Table STUDENTS created.


Table COURSES created.
```

3. **ALTER TABLE courses ADD CONSTRAINT pk_courseid PRIMARY KEY(course_id);**

```
ALTER TABLE courses ADD CONSTRAINT pk_courseid PRIMARY KEY(course_id);
```

Query Result | Script Output | Task completed in 0.06 seconds

```
Table STUDENTS created.


Table COURSES created.


Table COURSES altered.
```

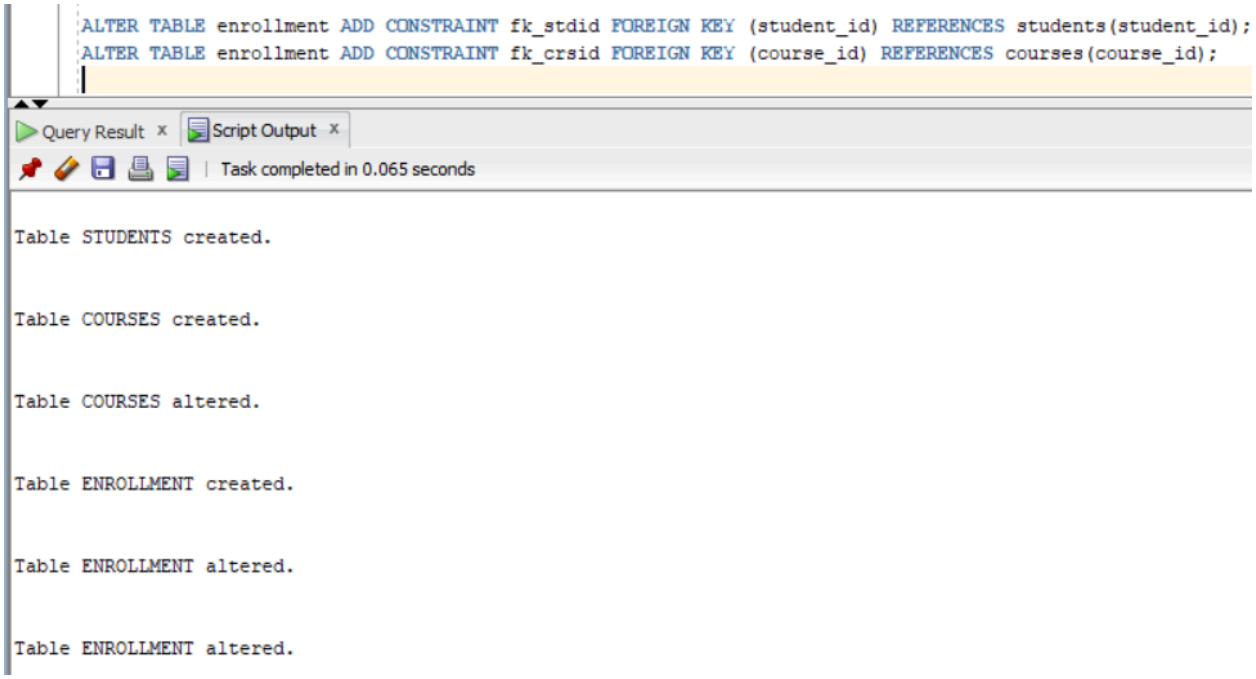
4. **CREATE TABLE enrollment(**
   **enrollment_id NUMBER PRIMARY KEY,**
   **enrollment_date DATE NOT NULL,**
   **student_id NUMBER NOT NULL,**
   **course_id NUMBER NOT NULL**
   **);**

```
CREATE TABLE enrollment(
  enrollment_id NUMBER PRIMARY KEY,
  enrollment_date DATE NOT NULL,
  student_id NUMBER NOT NULL,
  course_id NUMBER NOT NULL
);
```

Query Result | Script Output | Task completed in 0.027 seconds

```
Table STUDENTS created.


Table COURSES created.


Table COURSES altered.


Table ENROLLMENT created.
```

5. **ALTER TABLE enrollment ADD CONSTRAINT fk_stdid FOREIGN KEY (student_id) REFERENCES students(student_id);**
6. **ALTER TABLE enrollment ADD CONSTRAINT fk_crsid FOREIGN KEY (course_id) REFERENCES courses(course_id);**



7. **INSERT INTO students VALUES (1, 'Ali Khan', 'ali@example.com');**
8. **INSERT INTO students VALUES (2, 'Sara Ahmed', 'sara@example.com');**
9. **INSERT INTO students VALUES (3, 'Usman Tariq', 'usman@example.com');**
10. **INSERT INTO students VALUES (4, 'Hina Malik', 'hina@example.com');**

```
INSERT INTO students VALUES (1, 'Ali Khan', 'ali@example.com');
INSERT INTO students VALUES (2, 'Sara Ahmed', 'sara@example.com');
INSERT INTO students VALUES (3, 'Usman Tariq', 'usman@example.com');
INSERT INTO students VALUES (4, 'Hina Malik', 'hina@example.com');
```

Query Result | Script Output

Task completed in 0.052 seconds

```
Table ENROLLMENT altered.


Table ENROLLMENT altered.


1 row inserted.


1 row inserted.


1 row inserted.


1 row inserted.
```

**11. INSERT ALL**

**INTO courses VALUES (101, 'Database Systems')**
**INTO courses VALUES (102, 'Computer Networks')**
**INTO courses VALUES (103, 'Software Engineering')**
**INTO courses VALUES (104, 'Operating Systems')**
**SELECT * FROM dual;**

Worksheet Query Builder

```
INSERT ALL
  INTO courses VALUES (101, 'Database Systems')
  INTO courses VALUES (102, 'Computer Networks')
  INTO courses VALUES (103, 'Software Engineering')
  INTO courses VALUES (104, 'Operating Systems')
SELECT * FROM dual;
```

**12.INSERT ALL**

**INTO enrollment VALUES (1001, DATE '2024-09-01', 1, 101)**
**INTO enrollment VALUES (1002, DATE '2024-09-02', 2, 102)**
**INTO enrollment VALUES (1003, DATE '2024-09-03', 3, 103)**
**INTO enrollment VALUES (1004, DATE '2024-09-04', 4, 104)**
**SELECT * FROM dual;**

```
INSERT ALL
  INTO enrollment VALUES (1001, DATE '2024-09-01', 1, 101)
  INTO enrollment VALUES (1002, DATE '2024-09-02', 2, 102)
  INTO enrollment VALUES (1003, DATE '2024-09-03', 3, 103)
  INTO enrollment VALUES (1004, DATE '2024-09-04', 4, 104)
SELECT * FROM dual;
```

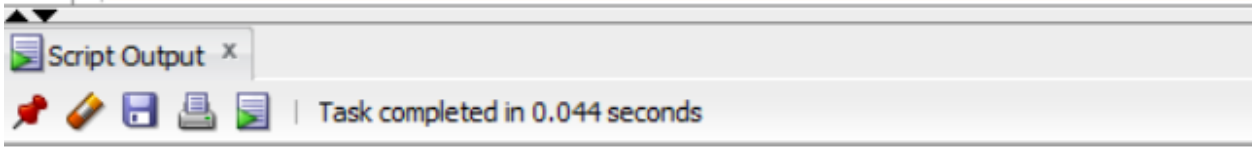
Script Output

Task completed in 0.032 seconds

```
4 rows inserted.
```

13. **UPDATE students SET student_name = 'Ali Raza' WHERE student_id = 1;**

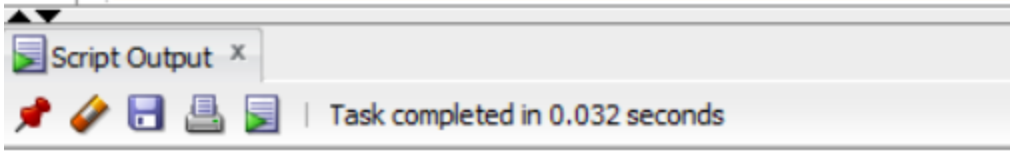
```
UPDATE students SET student_name = 'Ali Raza' WHERE student_id = 1;
```




```
4 rows inserted.


1 row updated.
```

14. **DELETE FROM enrollment WHERE enrollment_id = 1002;**

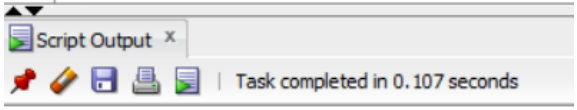
```
DELETE FROM enrollment WHERE enrollment_id = 1002;
```




```
4 rows inserted.


1 row updated.


1 row deleted.
```

15. **TRUNCATE TABLE enrollment;**

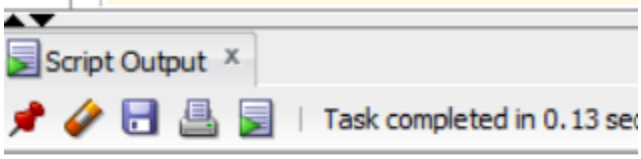
```
TRUNCATE TABLE enrollment;
```




```
4 rows inserted.

1 row updated.

1 row deleted.

Table ENROLLMENT truncated.
```

16. **DROP TABLE enrollment;**

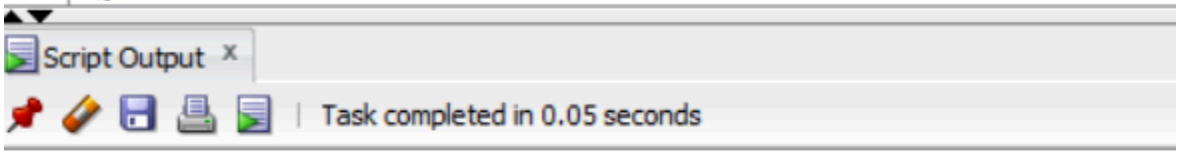
```
DROP TABLE enrollment;
```




```
4 rows inserted.


1 row updated.


1 row deleted.


Table ENROLLMENT truncated.


Table ENROLLMENT dropped.
```

17. **ALTER TABLE students ADD phone VARCHAR2(15);**
18. **ALTER TABLE courses MODIFY course_name VARCHAR2(150);**
19. **ALTER TABLE students DROP COLUMN phone;**
20. **ALTER TABLE students RENAME COLUMN student_name TO full_name;**

```
ALTER TABLE students ADD phone VARCHAR2(15);
ALTER TABLE courses MODIFY course_name VARCHAR2(150);
ALTER TABLE students DROP COLUMN phone;
ALTER TABLE students RENAME COLUMN student_name TO full_name;
```




```
1 row deleted.


Table ENROLLMENT truncated.


Table ENROLLMENT dropped.


Table STUDENTS altered.


Table COURSES altered.


Table STUDENTS altered.


Table STUDENTS altered.
```