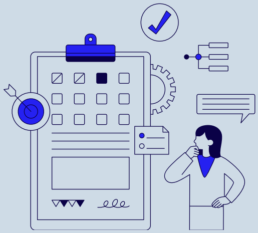
جامعة جدة
University of Jeddah

COMING SOON !

General Entertainment Authority

INTRODUCTION TO DATABASE
CCCS 215



INSTRUCTOR:
DR. MASHAEL M.KHAYYAT

SECTION CO

MAY 2024

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1.1 Team Members

- Hadeel Alharthi 2210794
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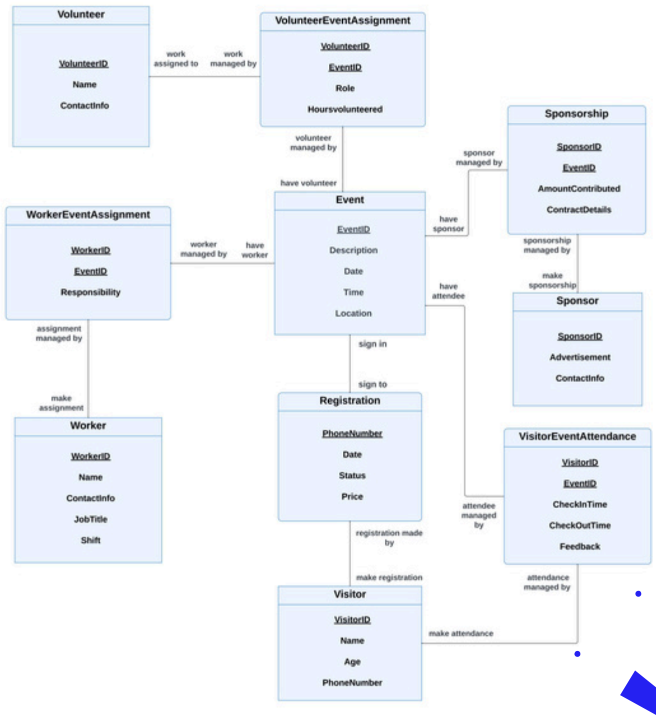
1.2 GEA Database Description

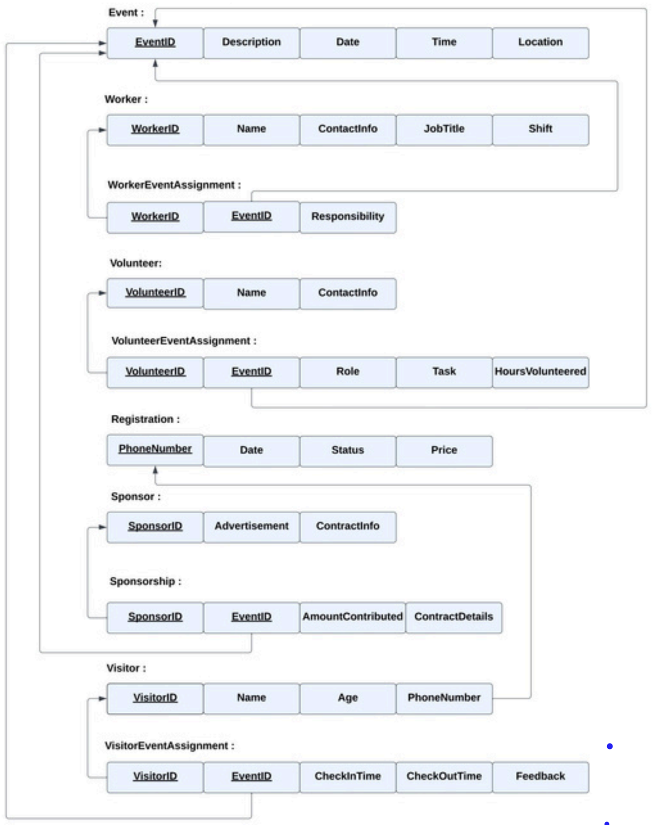
The GEA is struggling with disorganized entertainment data dispersed across platforms, risking loss of insights and compromising security. Prioritizing an extensive database system is essential for organizing, protecting, and accessing valuable data assets to improve the entertainment scene.

we have 10 entities: visitor, volunteer, event, worker, registration, sponsor, visitorEventAttendance, sponsorship, volunteerEventAssignment, and WorkerEventAssignment. Volunteers engage in multiple events, and events entail the involvement of numerous volunteers. To streamline this relationship, we introduced the volunteerEventAssignment, establishing a one-to-one connection. Similarly, workers are involved in multiple events, and events require the contribution of various workers. This complex interaction is simplified through the addition of the workerEventAssignment, resolving it into a one-to-one relationship. Visitors engage in a one-to-one registration and event attendance process, ensuring seamless participation. Moreover, events maintain a reciprocal one-to-one relationship with visitor registrations. Sponsors, engaging in multiple event sponsorships, and events attracting multiple sponsors, have their dynamic bond solidified through the sponsorship entity, establishing a coherent one-to-one association. These meticulous adjustments enhance data integrity and accessibility, essential for the GEA's mission to elevate the entertainment landscape.

1.3 E-R DIAGRAM



1.4 Relational Schema



1.5 Normalization

1NF: - The attribute Shift has been removed from the table WorkerEventAssignment because of duplication.

2NF: - has no partial dependency. That is, all non-key attributes are fully dependent The schema is already in 2NF

3NF: - have no transitive dependency. The schema is already in 3NF.

1.6 Functional Dependencies

FD EventID -> Description, Date, Time, Location

FD WorkerID -> Name, ContactInfo, JobTitle, Shift, responsibility

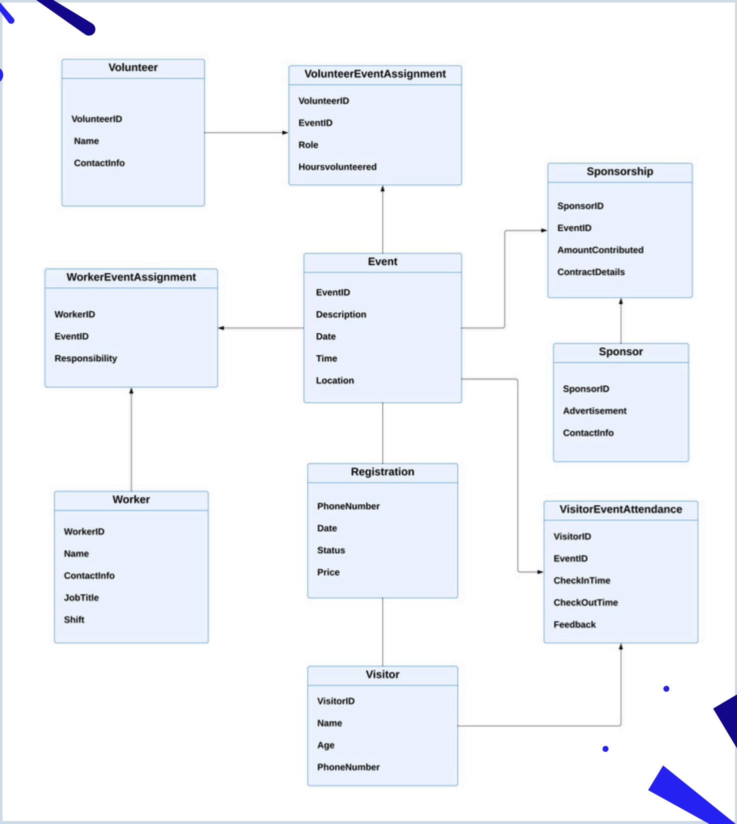
FD VolunteerID -> Name, ContactInfo, Role, Task, HoursVolunteered

FD PhoneNumber -> Date, Status, Price

FD SponsorID -> Advertisement, ContactInfo, AmountContributed, ContractDetails

FD VisitorID -> Name, Age, CheckInTime, CheckOutTime, Feedback

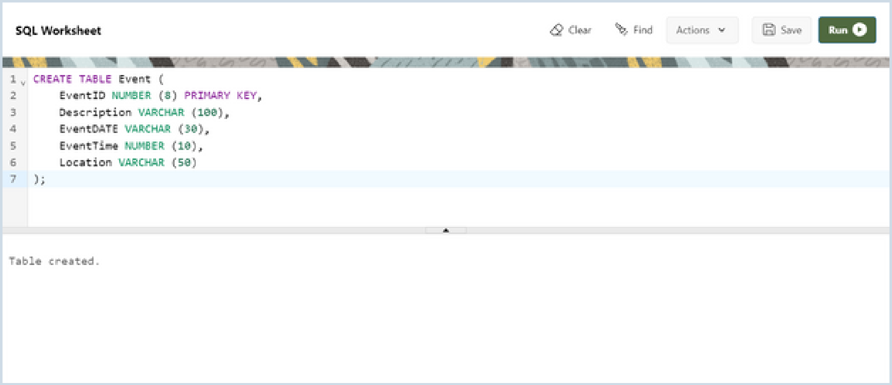
1.7 Logical Model



1.8 Coding

1- Event entity

- table creation



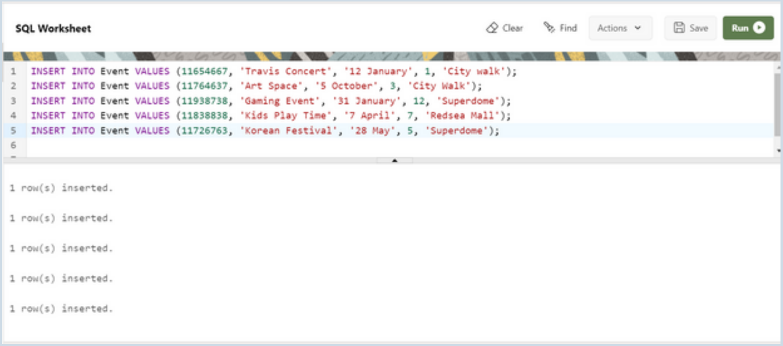
```
CREATE TABLE Event (
    EventID NUMBER (8) PRIMARY KEY,
    Description VARCHAR (100),
    EventDATE VARCHAR (30),
    EventTime NUMBER (10),
    Location VARCHAR (50)
);
```

```
Table created.
```

1.8 Coding

1- Event entity

- insert into table



```sql
INSERT INTO Event VALUES (11654667, 'Travis Concert', '12 January', 1, 'City walk');
INSERT INTO Event VALUES (11764637, 'Art Space', '5 October', 3, 'City Walk');
INSERT INTO Event VALUES (11938738, 'Gaming Event', '31 January', 12, 'Superdome');
INSERT INTO Event VALUES (11838838, 'Kids Play Time', '7 April', 7, 'Redsea Mall');
INSERT INTO Event VALUES (11726763, 'Korean Festival', '28 May', 5, 'Superdome');
```

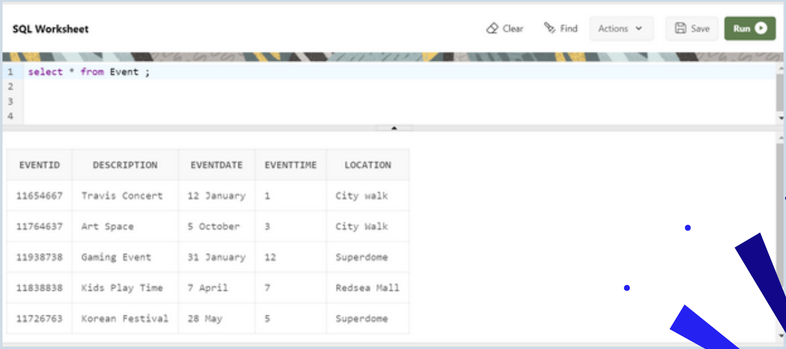
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



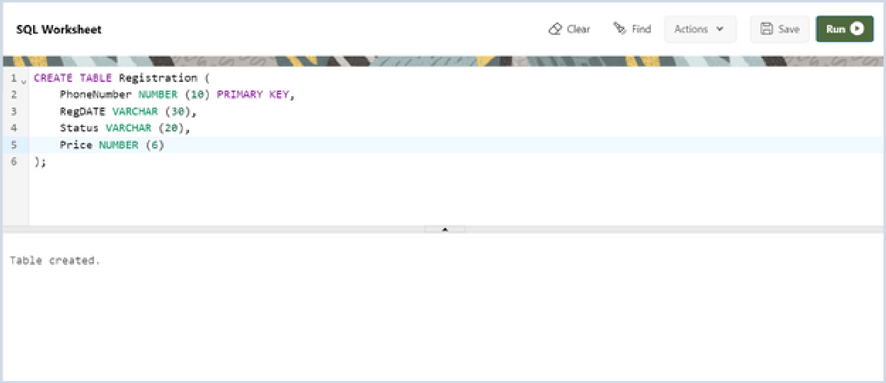
```sql
select * from Event ;
```

EVENTID	DESCRIPTION	EVENTDATE	EVENTTIME	LOCATION
11654667	Travis Concert	12 January	1	City walk
11764637	Art Space	5 October	3	City Walk
11938738	Gaming Event	31 January	12	Superdome
11838838	Kids Play Time	7 April	7	Redsea Mall
11726763	Korean Festival	28 May	5	Superdome

1.8 Coding

2- Registration entity

- create table



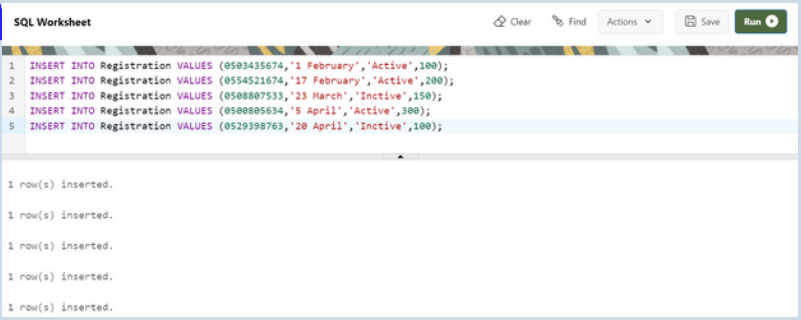
```
CREATE TABLE Registration (
     PhoneNumber NUMBER (10) PRIMARY KEY,
     RegDATE VARCHAR (30),
     Status VARCHAR (20),
     Price NUMBER (6)
);
```

```
Table created.
```

1.8 Coding

2- Registration entity

- insert into table



```
INSERT INTO Registration VALUES (0503435674,'1 February','Active',100);
INSERT INTO Registration VALUES (0554521674,'17 February','Active',200);
INSERT INTO Registration VALUES (0508807533,'23 March','Inctive',150);
INSERT INTO Registration VALUES (0500805634,'5 April','Active',300);
INSERT INTO Registration VALUES (0529398763,'20 April','Inctive',100);
```

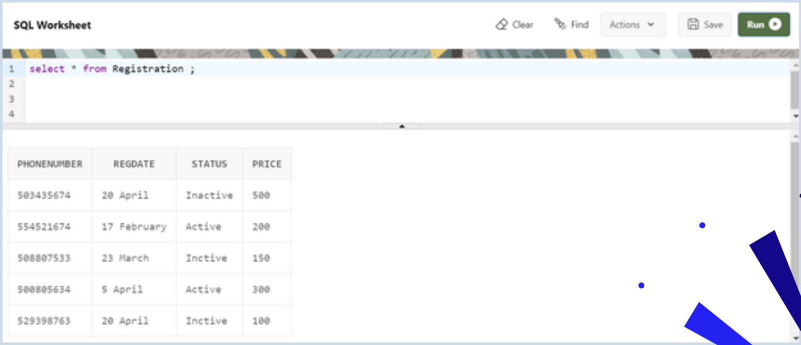
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



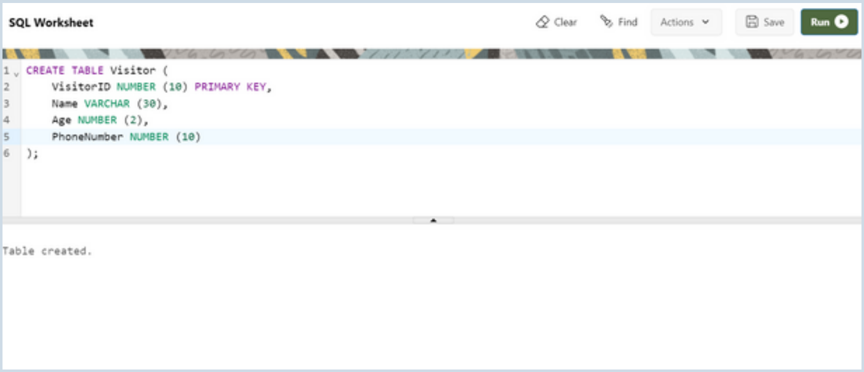
```
select * from Registration ;
```

PHONENUMBER	REGDATE	STATUS	PRICE
503435674	20 April	Inactive	500
554521674	17 February	Active	200
508807533	23 March	Inctive	150
500805634	5 April	Active	300
529398763	20 April	Inctive	100

1.8 Coding

3- Visitor entity

- create table



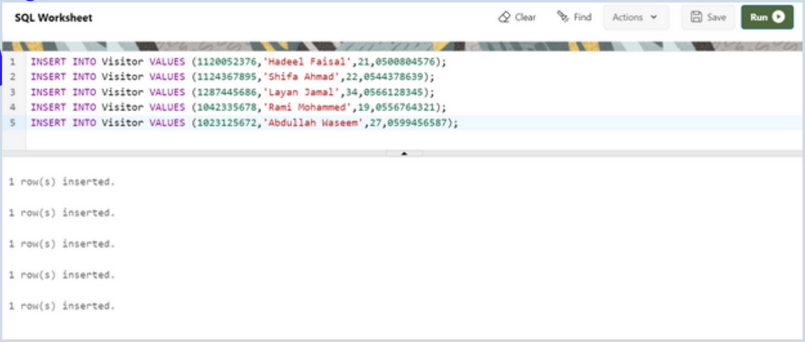
```
CREATE TABLE Visitor (
    VisitorID NUMBER (10) PRIMARY KEY,
    Name VARCHAR (30),
    Age NUMBER (2),
    PhoneNumber NUMBER (10)
);
```

```
Table created.
```

1.8 Coding

3- Visitor entity

- insert into table



```
INSERT INTO Visitor VALUES (1120052376,'Hadeel Faisal',21,0500804576);
INSERT INTO Visitor VALUES (1124367895,'Shifa Ahmad',22,0544378639);
INSERT INTO Visitor VALUES (1287445686,'Layan Jamal',34,0566128345);
INSERT INTO Visitor VALUES (1042335678,'Rami Mohammed',19,0556764321);
INSERT INTO Visitor VALUES (1023125672,'Abdullah Waseem',27,0599456587);
```

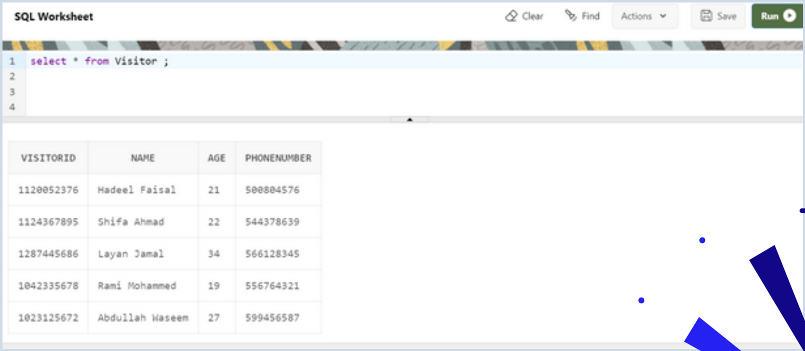
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



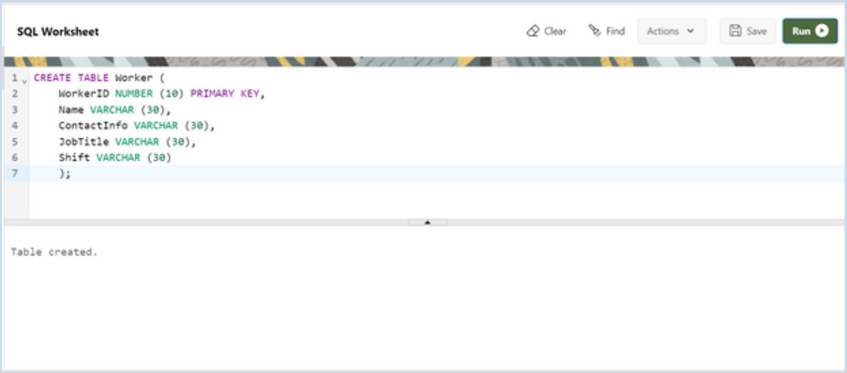
```
select * from Visitor ;
```

VISITORID	NAME	AGE	PHONENUMBER
1120052376	Hadeel Faisal	21	500804576
1124367895	Shifa Ahmad	22	544378639
1287445686	Layan Jamal	34	566128345
1042335678	Rami Mohammed	19	556764321
1023125672	Abdullah Waseem	27	599456587

1.8 Coding

4- Worker entity

- create table



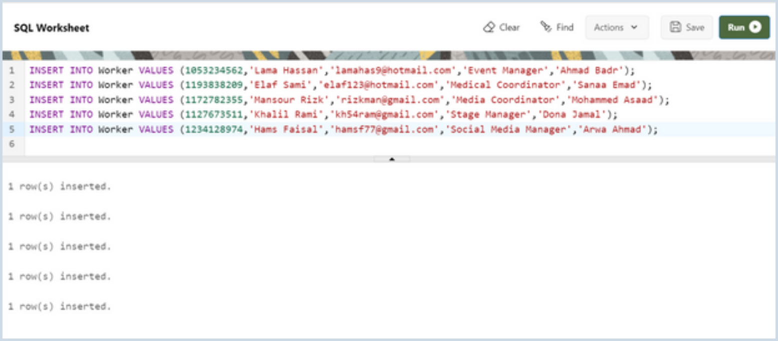
```
CREATE TABLE Worker (
    WorkerID NUMBER (10) PRIMARY KEY,
    Name VARCHAR (30),
    ContactInfo VARCHAR (30),
    JobTitle VARCHAR (30),
    Shift VARCHAR (30)
    );
```

```
Table created.
```

1.8 Coding

4- Worker entity

- insert into table



```sql
INSERT INTO Worker VALUES (1053234562,'Lama Hassan','lamahas9@hotmail.com','Event Manager','Ahmad Badr');
INSERT INTO Worker VALUES (1193838209,'Elaf Sami','elaf123@hotmail.com','Medical Coordinator','Sanaa Emad');
INSERT INTO Worker VALUES (1172782355,'Mansour Rizk','rizkman@gmail.com','Media Coordinator','Mohammed Asaad');
INSERT INTO Worker VALUES (1127673511,'Khalil Rami','kh54ram@gmail.com','Stage Manager','Dona Jamal');
INSERT INTO Worker VALUES (1234128974,'Hams Faisal','hamsf77@gmail.com','Social Media Manager','Arwa Ahmad');
```

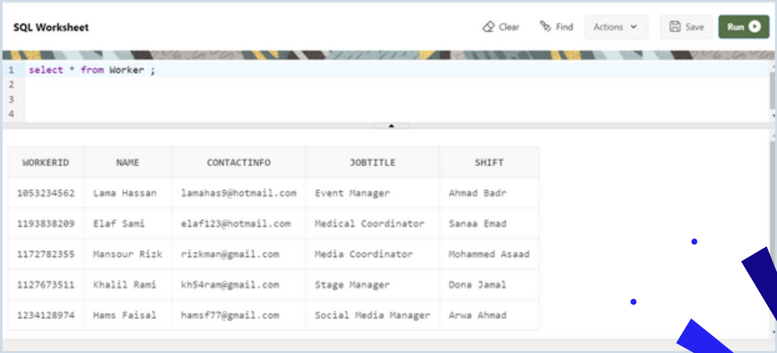
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



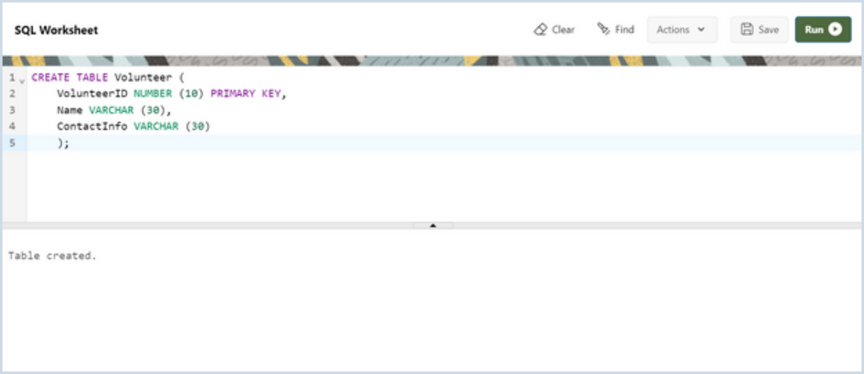
```sql
select * from Worker ;
```

WORKERID	NAME	CONTACTINFO	JOBTITLE	SHIFT
1053234562	Lama Hassan	lamahas9@hotmail.com	Event Manager	Ahmad Badr
1193838209	Elaf Sami	elaf123@hotmail.com	Medical Coordinator	Sanaa Emad
1172782355	Mansour Rizk	rizkman@gmail.com	Media Coordinator	Mohammed Asaad
1127673511	Khalil Rami	kh54ram@gmail.com	Stage Manager	Dona Jamal
1234128974	Hams Faisal	hamsf77@gmail.com	Social Media Manager	Arwa Ahmad

1.8 Coding

5- Volunteer entity

- create table



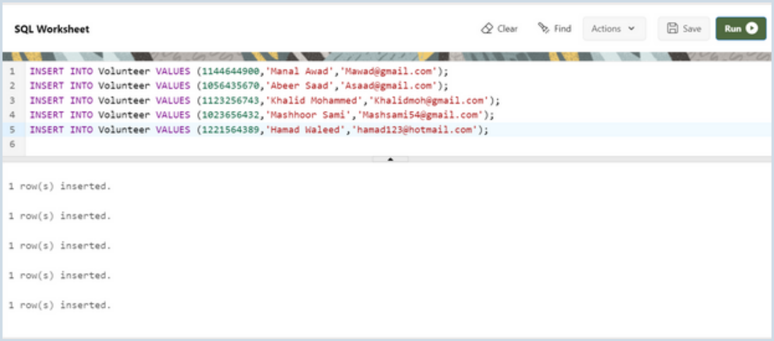
```
CREATE TABLE Volunteer (
    VolunteerID NUMBER (10) PRIMARY KEY,
    Name VARCHAR (30),
    ContactInfo VARCHAR (30)
    );
```

```
Table created.
```

1.8 Coding

5- Volunteer entity

- insert into table



```
INSERT INTO Volunteer VALUES (1144644900,'Manal Awad','Mawad@gmail.com');
INSERT INTO Volunteer VALUES (1056435670,'Abeer Saad','Asaad@gmail.com');
INSERT INTO Volunteer VALUES (1123256743,'Khalid Mohammed','Khalidmoh@gmail.com');
INSERT INTO Volunteer VALUES (1023656432,'Mashhoor Sami','Mashsami54@gmail.com');
INSERT INTO Volunteer VALUES (1221564389,'Hamad Waleed','hamad123@hotmail.com');
```

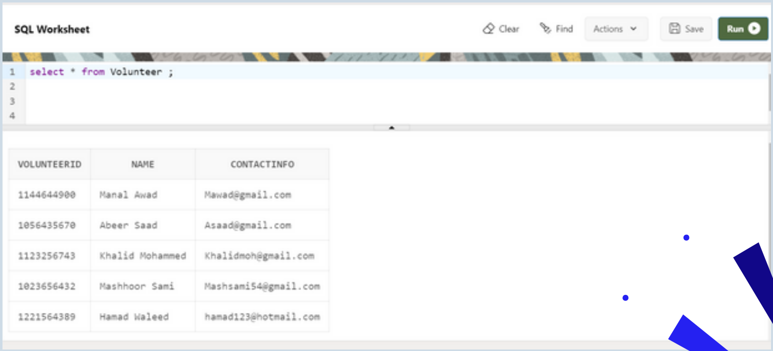
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



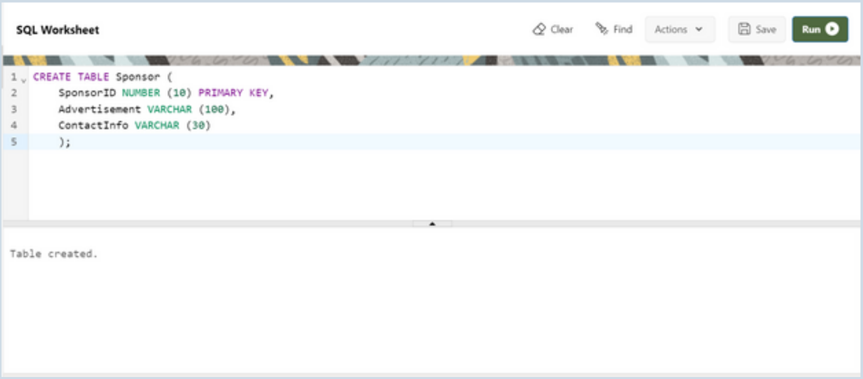
```
select * from Volunteer ;
```

VOLUNTEERID	NAME	CONTACTINFO
1144644900	Manal Awad	Mawad@gmail.com
1056435670	Abeer Saad	Asaad@gmail.com
1123256743	Khalid Mohammed	Khalidmoh@gmail.com
1023656432	Mashhoor Sami	Mashsami54@gmail.com
1221564389	Hamad Waleed	hamad123@hotmail.com

1.8 Coding

6- Sponsor entity

- create table



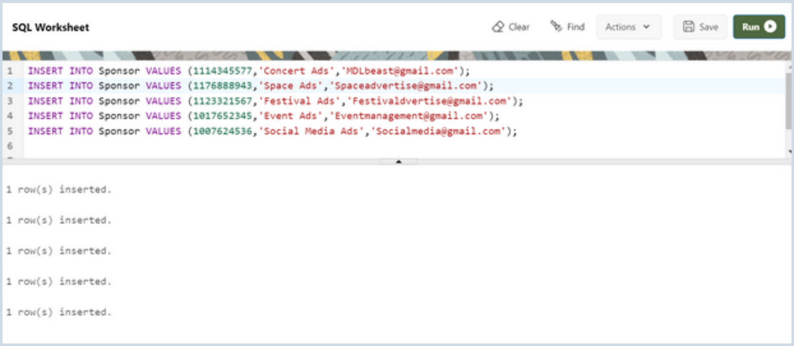
```
CREATE TABLE Sponsor (
    SponsorID NUMBER (10) PRIMARY KEY,
    Advertisement VARCHAR (100),
    ContactInfo VARCHAR (30)
    );
```

```
Table created.
```

1.8 Coding

6- Sponsor entity

- insert into table



```
INSERT INTO Sponsor VALUES (1114345577,'Concert Ads','MDLbeast@gmail.com');
INSERT INTO Sponsor VALUES (1176888943,'Space Ads','Spaceadvertise@gmail.com');
INSERT INTO Sponsor VALUES (1123321567,'Festival Ads','Festivaldvertise@gmail.com');
INSERT INTO Sponsor VALUES (1017652345,'Event Ads','Eventmanagement@gmail.com');
INSERT INTO Sponsor VALUES (1007624536,'Social Media Ads','Socialmedia@gmail.com');
```

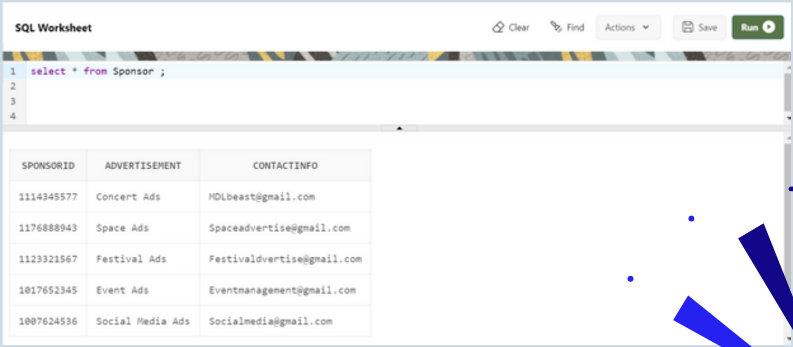
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



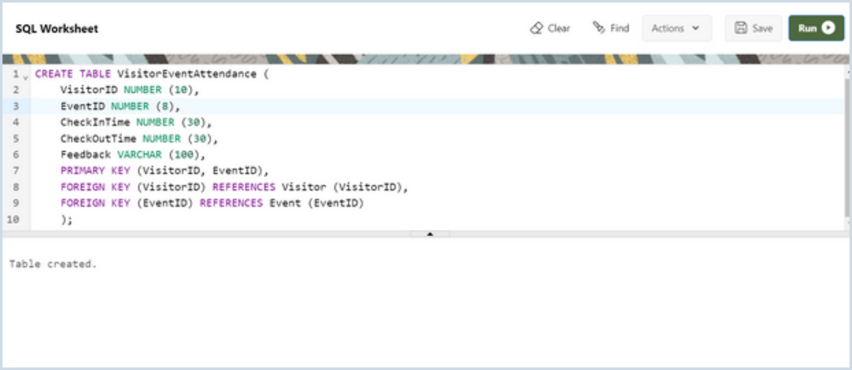
```
select * from Sponsor ;
```

SPONSORID	ADVERTISEMENT	CONTACTINFO
1114345577	Concert Ads	MDLbeast@gmail.com
1176888943	Space Ads	Spaceadvertise@gmail.com
1123321567	Festival Ads	Festivaldvertise@gmail.com
1017652345	Event Ads	Eventmanagement@gmail.com
1007624536	Social Media Ads	Socialmedia@gmail.com

1.8 Coding

7- VisitorEventAttendance entity

- create table



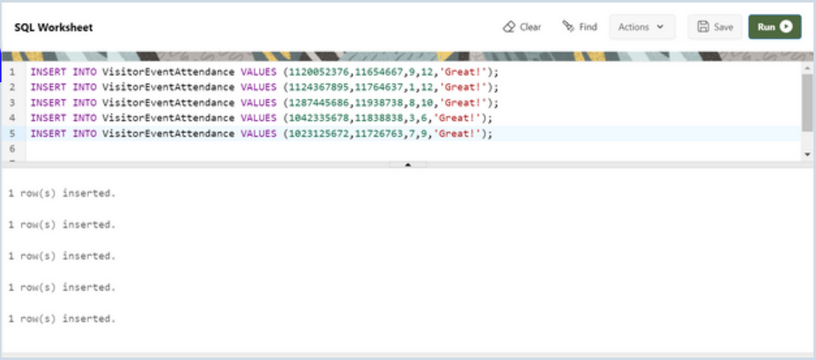
```
CREATE TABLE VisitorEventAttendance (
    VisitorID NUMBER (10),
    EventID NUMBER (8),
    CheckInTime NUMBER (30),
    CheckOutTime NUMBER (30),
    Feedback VARCHAR (100),
    PRIMARY KEY (VisitorID, EventID),
    FOREIGN KEY (VisitorID) REFERENCES Visitor (VisitorID),
    FOREIGN KEY (EventID) REFERENCES Event (EventID)
    );
```

```
Table created.
```

1.8 Coding

7- VisitorEventAttendance entity

- insert into table



```
INSERT INTO VisitorEventAttendance VALUES (1120052376,11654667,9,12,'Great!');
INSERT INTO VisitorEventAttendance VALUES (1124367895,11764637,1,12,'Great!');
INSERT INTO VisitorEventAttendance VALUES (1287445686,11938738,8,10,'Great!');
INSERT INTO VisitorEventAttendance VALUES (1042335678,11838838,3,6,'Great!');
INSERT INTO VisitorEventAttendance VALUES (1023125672,11726763,7,9,'Great!');
```

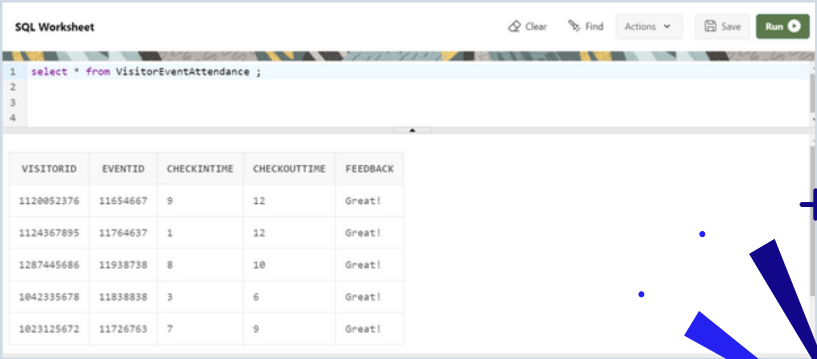
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



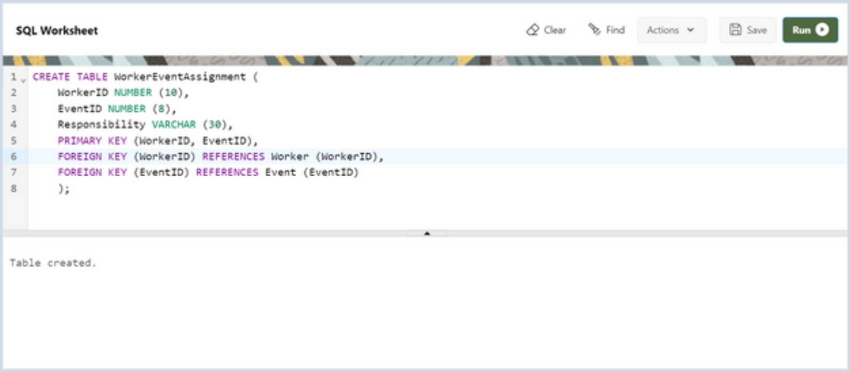
```
select * from VisitorEventAttendance ;
```

VISITORID	EVENTID	CHECKINTIME	CHECKOUTTIME	FEEDBACK
1120052376	11654667	9	12	Great!
1124367895	11764637	1	12	Great!
1287445686	11938738	8	10	Great!
1042335678	11838838	3	6	Great!
1023125672	11726763	7	9	Great!

1.8 Coding

8- WowkerEventAssignment entity

- create table



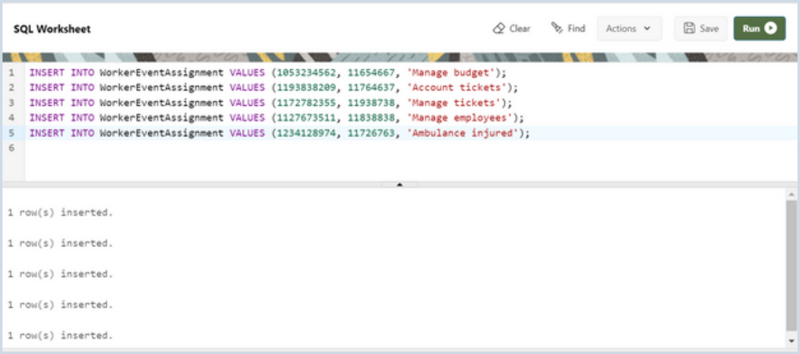
```
CREATE TABLE WorkerEventAssignment (
    WorkerID NUMBER (10),
    EventID NUMBER (8),
    Responsibility VARCHAR (30),
    PRIMARY KEY (WorkerID, EventID),
    FOREIGN KEY (WorkerID) REFERENCES Worker (WorkerID),
    FOREIGN KEY (EventID) REFERENCES Event (EventID)
    );
```

```
Table created.
```

1.8 Coding

8- WowkerEventAssignment entity

- insert into table



```
INSERT INTO WorkerEventAssignment VALUES (1053234562, 11654667, 'Manage budget');
INSERT INTO WorkerEventAssignment VALUES (1193838209, 11764637, 'Account tickets');
INSERT INTO WorkerEventAssignment VALUES (1172782355, 11938738, 'Manage tickets');
INSERT INTO WorkerEventAssignment VALUES (1127673511, 11838838, 'Manage employees');
INSERT INTO WorkerEventAssignment VALUES (1234128974, 11726763, 'Ambulance injured');
```

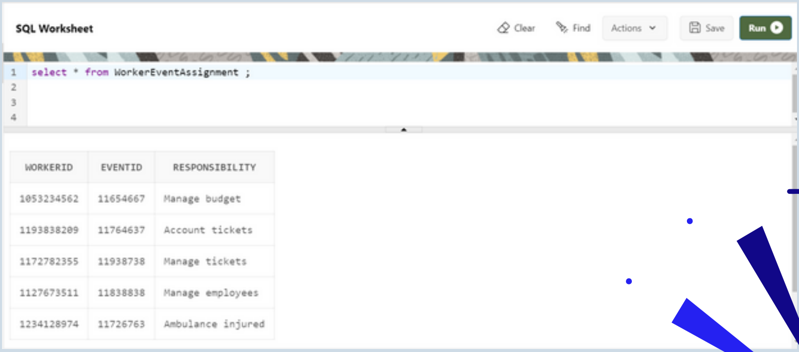
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



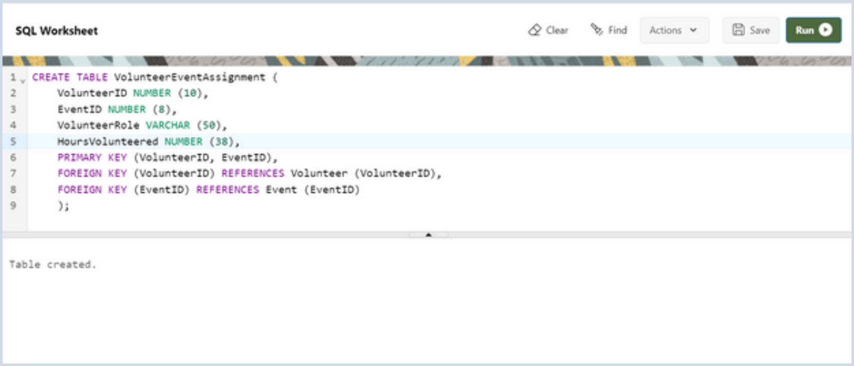
```
select * from WorkerEventAssignment ;
```

WORKERID	EVENTID	RESPONSIBILITY
1053234562	11654667	Manage budget
1193838209	11764637	Account tickets
1172782355	11938738	Manage tickets
1127673511	11838838	Manage employees
1234128974	11726763	Ambulance injured

1.8 Coding

9- VolunteerEventAssignment

- create table



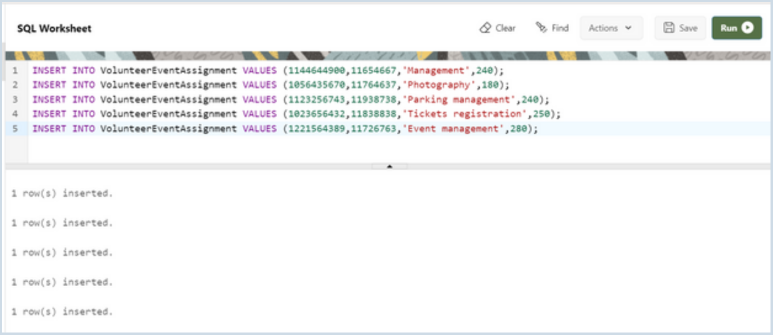
```
CREATE TABLE VolunteerEventAssignment (
    VolunteerID NUMBER (10),
    EventID NUMBER (8),
    VolunteerRole VARCHAR (50),
    HoursVolunteered NUMBER (38),
    PRIMARY KEY (VolunteerID, EventID),
    FOREIGN KEY (VolunteerID) REFERENCES Volunteer (VolunteerID),
    FOREIGN KEY (EventID) REFERENCES Event (EventID)
    );
```

```
Table created.
```

1.8 Coding

9- VolunteerEventAssignment

- insert into table



```sql
INSERT INTO VolunteerEventAssignment VALUES (1144644900,11654667,'Management',240);
INSERT INTO VolunteerEventAssignment VALUES (1056435670,11764637,'Photography',180);
INSERT INTO VolunteerEventAssignment VALUES (1123256743,11938738,'Parking management',240);
INSERT INTO VolunteerEventAssignment VALUES (1023656432,11838838,'Tickets registration',250);
INSERT INTO VolunteerEventAssignment VALUES (1221564389,11726763,'Event management',280);
```

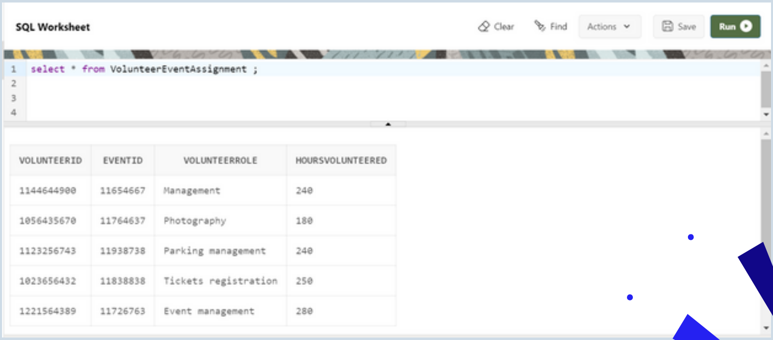
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



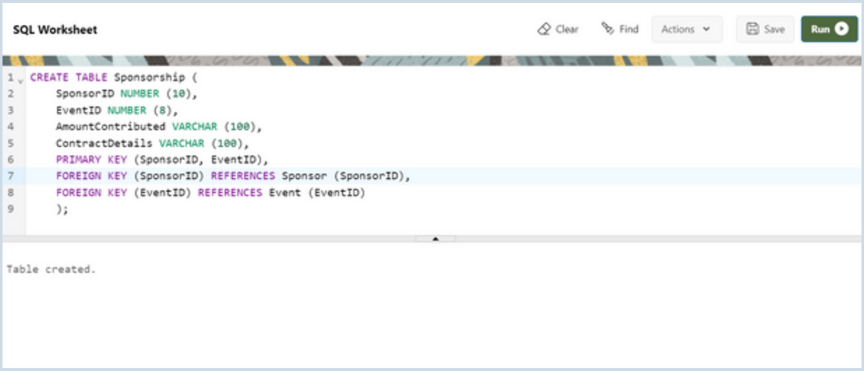
```sql
select * from VolunteerEventAssignment ;
```

VOLUNTEERID	EVENTID	VOLUNTEERROLE	HOURSVOLUNTEERED
1144644900	11654667	Management	240
1056435670	11764637	Photography	180
1123256743	11938738	Parking management	240
1023656432	11838838	Tickets registration	250
1221564389	11726763	Event management	280

1.8 Coding

10- Sponsorship entity

- create table



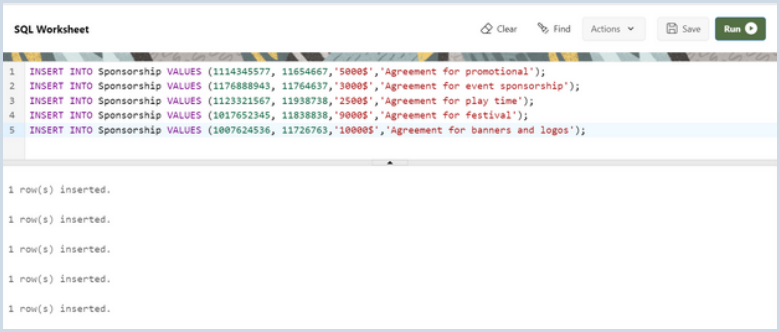
```
CREATE TABLE Sponsorship (
    SponsorID NUMBER (10),
    EventID NUMBER (8),
    AmountContributed VARCHAR (100),
    ContractDetails VARCHAR (100),
    PRIMARY KEY (SponsorID, EventID),
    FOREIGN KEY (SponsorID) REFERENCES Sponsor (SponsorID),
    FOREIGN KEY (EventID) REFERENCES Event (EventID)
    );
```

```
Table created.
```

1.8 Coding

10- Sponsorship entity

- insert into table



```
INSERT INTO Sponsorship VALUES (1114345577, 11654667,'5000$','Agreement for promotional');
INSERT INTO Sponsorship VALUES (1176888943, 11764637,'3000$','Agreement for event sponsorship');
INSERT INTO Sponsorship VALUES (1123321567, 11938738,'2500$','Agreement for play time');
INSERT INTO Sponsorship VALUES (1017652345, 11838838,'9000$','Agreement for festival');
INSERT INTO Sponsorship VALUES (1007624536, 11726763,'10000$','Agreement for banners and logos');
```

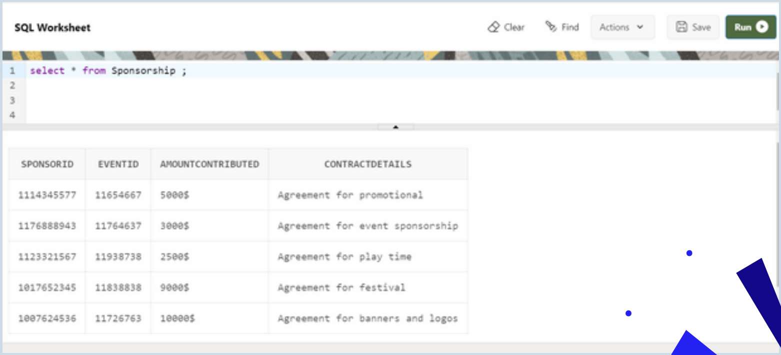
```
1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.

1 row(s) inserted.
```



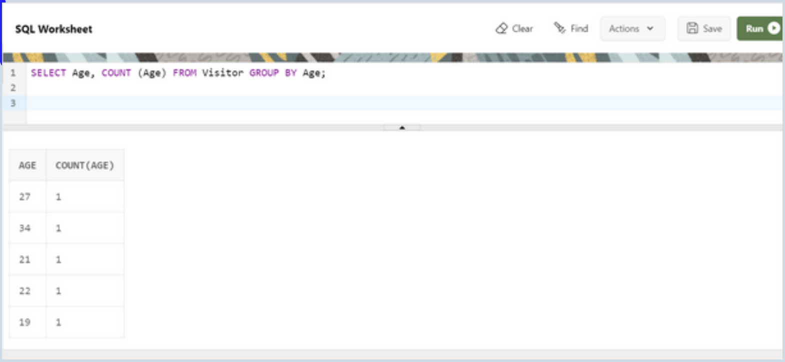
```
select * from Sponsorship ;
```

SPONSORID	EVENTID	AMOUNTCONTRIBUTED	CONTRACTDETAILS
1114345577	11654667	5000$	Agreement for promotional
1176888943	11764637	3000$	Agreement for event sponsorship
1123321567	11938738	2500$	Agreement for play time
1017652345	11838838	9000$	Agreement for festival
1007624536	11726763	10000$	Agreement for banners and logos

1.8 Coding

The Queries:

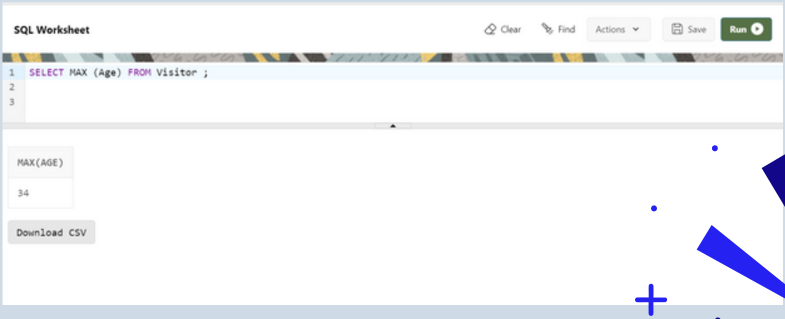
1-



```
SELECT Age, COUNT (Age) FROM Visitor GROUP BY Age;
```

AGE	COUNT(AGE)
27	1
34	1
21	1
22	1
19	1

2-



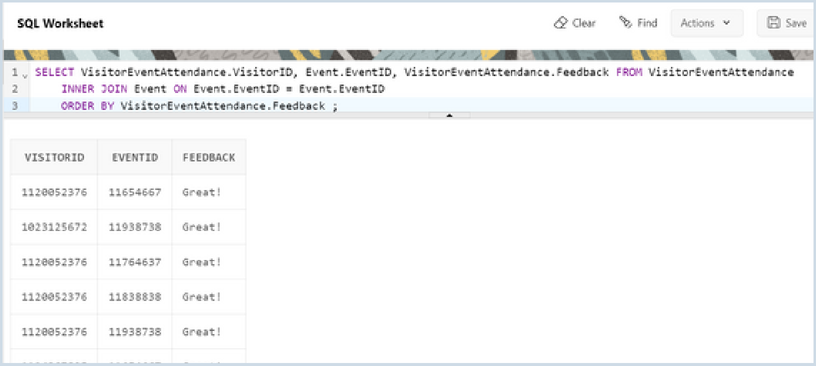
```
SELECT MAX (Age) FROM Visitor ;
```

MAX(AGE)
34

1.8 Coding

The Queries :

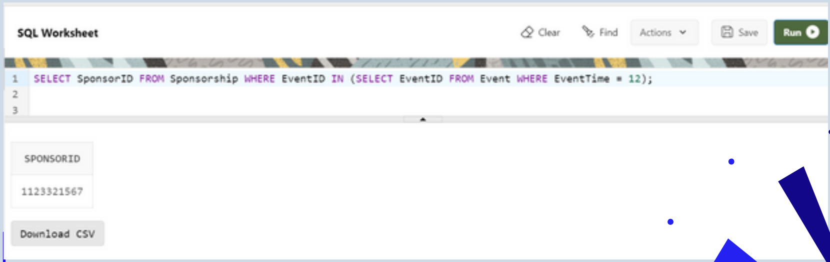
3-



```
SELECT VisitorEventAttendance.VisitorID, Event.EventID, VisitorEventAttendance.Feedback FROM VisitorEventAttendance
    INNER JOIN Event ON Event.EventID = Event.EventID
    ORDER BY VisitorEventAttendance.Feedback ;
```

VISITORID	EVENTID	FEEDBACK
1120052376	11654667	Great!
1023125672	11938738	Great!
1120052376	11764637	Great!
1120052376	11838838	Great!
1120052376	11938738	Great!

4-



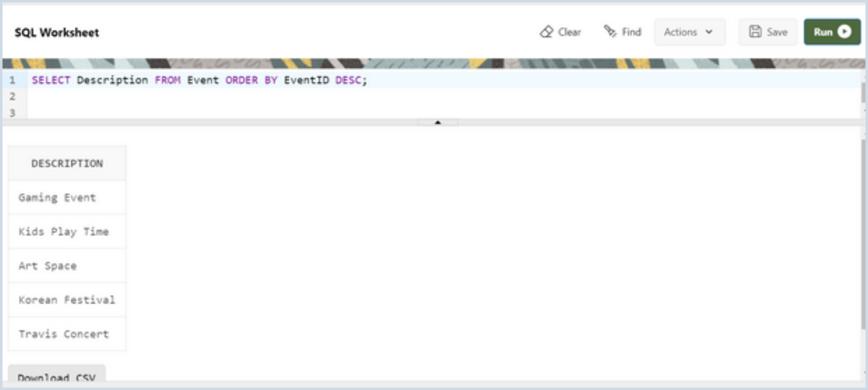
```
SELECT SponsorID FROM Sponsorship WHERE EventID IN (SELECT EventID FROM Event WHERE EventTime = 12);
```

SPONSORID
1123321567

1.8 Coding

The Queries :

5-

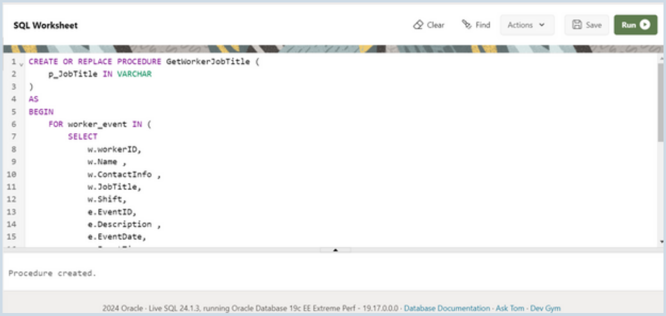


```
SELECT Description FROM Event ORDER BY EventID DESC;
```

```
DESCRIPTION
Gaming Event
Kids Play Time
Art Space
Korean Festival
Travis Concert
```

1.8 Coding

The procedures:



```sql
CREATE OR REPLACE PROCEDURE GetWorkerJobTitle (
    p_JobTitle IN VARCHAR
)
AS
BEGIN
    FOR worker_event IN (
        SELECT
            w.workerID,
            w.Name ,
            w.ContactInfo ,
            w.JobTitle,
            w.Shift,
            e.EventID,
            e.Description ,
            e.EventDate,
```

```
Procedure created.
```

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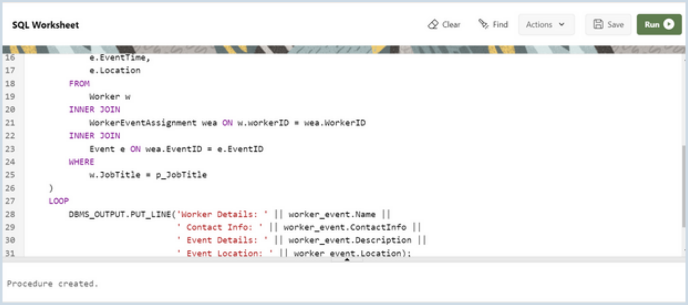
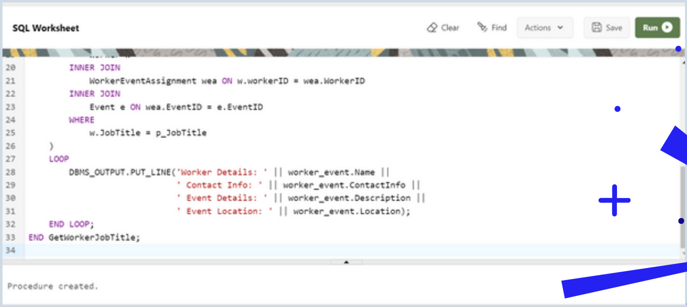


```sql
            e.EventTime,
            e.Location
        FROM
            Worker w
        INNER JOIN
            WorkerEventAssignment wea ON w.workerID = wea.WorkerID
        INNER JOIN
            Event e ON wea.EventID = e.EventID
        WHERE
            w.JobTitle = p_JobTitle
    )
    LOOP
        DBMS_OUTPUT.PUT_LINE('Worker Details: ' || worker_event.Name ||
                             ' Contact Info: ' || worker_event.ContactInfo ||
                             ' Event Details: ' || worker_event.Description ||
                             ' Event Location: ' || worker_event.Location);
```

```
Procedure created.
```

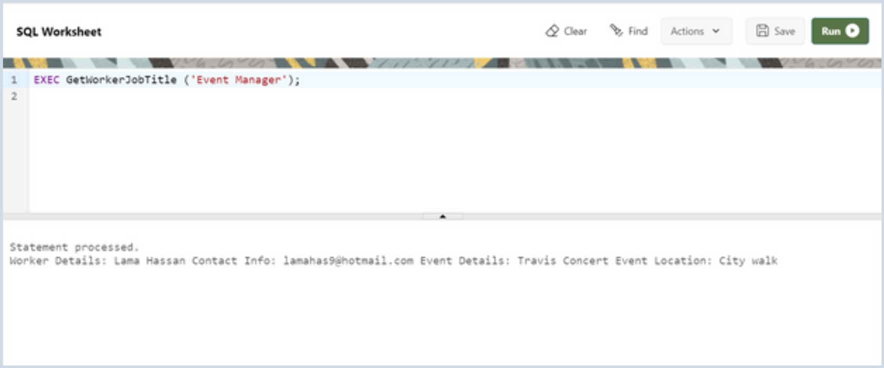


```sql
        INNER JOIN
            WorkerEventAssignment wea ON w.workerID = wea.WorkerID
        INNER JOIN
            Event e ON wea.EventID = e.EventID
        WHERE
            w.JobTitle = p_JobTitle
    )
    LOOP
        DBMS_OUTPUT.PUT_LINE('Worker Details: ' || worker_event.Name ||
                             ' Contact Info: ' || worker_event.ContactInfo ||
                             ' Event Details: ' || worker_event.Description ||
                             ' Event Location: ' || worker_event.Location);
    END LOOP;
END GetWorkerJobTitle;
```

```
Procedure created.
```

1.8 Coding

Call procedures:

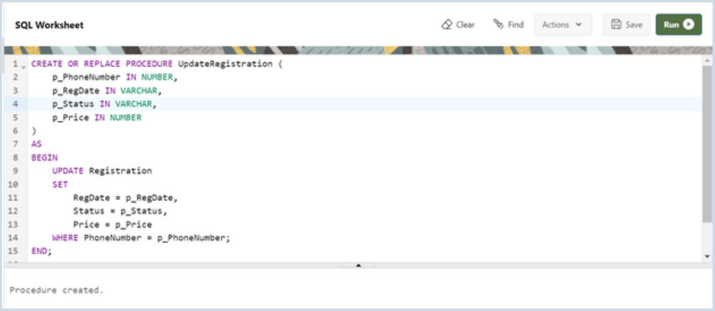


```
EXEC GetWorkerJobTitle ('Event Manager');
```

```
Statement processed.
Worker Details: Lama Hassan Contact Info: lamahas9@hotmail.com Event Details: Travis Concert Event Location: City walk
```

1.8 Coding

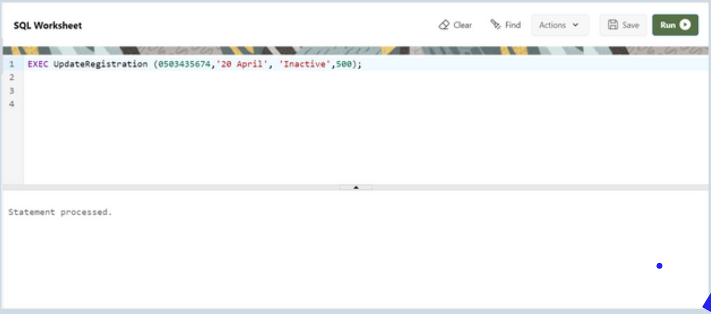
The Updated procedures:



```
CREATE OR REPLACE PROCEDURE UpdateRegistration (
    p_PhoneNumber IN NUMBER,
    p_RegDate IN VARCHAR,
    p_Status IN VARCHAR,
    p_Price IN NUMBER
)
AS
BEGIN
    UPDATE Registration
    SET
        RegDate = p_RegDate,
        Status = p_Status,
        Price = p_Price
    WHERE PhoneNumber = p_PhoneNumber;
END;
```

```
Procedure created.
```

Call procedures:



```
EXEC UpdateRegistration (0503435674,'20 April', 'Inactive',500);
```

```
Statement processed.
```

1.9 Project Team Task

Tasks	Made by
E-R Diagram, Problem description, Relational schema, Logical model, Update procedures, Editing	Shifa Albadri
E-R Diagram, Normalization, Functional dependencies, Select procedures, Update procedures, Editing	Hadeel Alharthi
E-R Diagram, Query (1,2,3), Create & Insert into tables (Sponsor, VisitorEventAttendance, Worker, Sponsorship, Visitor)	Aya Alhazmi
E-R Diagram, Query (4,5), Create & Insert into tables (Volunteer, Event, Registration, VolunteerEventAssignment, WorkerEventAssignment)	Kholod Althbeny