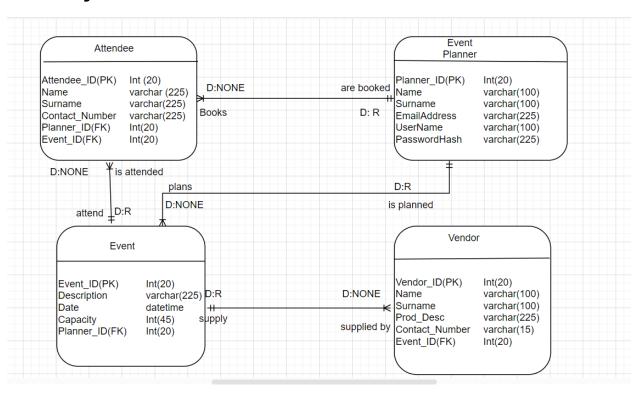


## **CMPG 223**

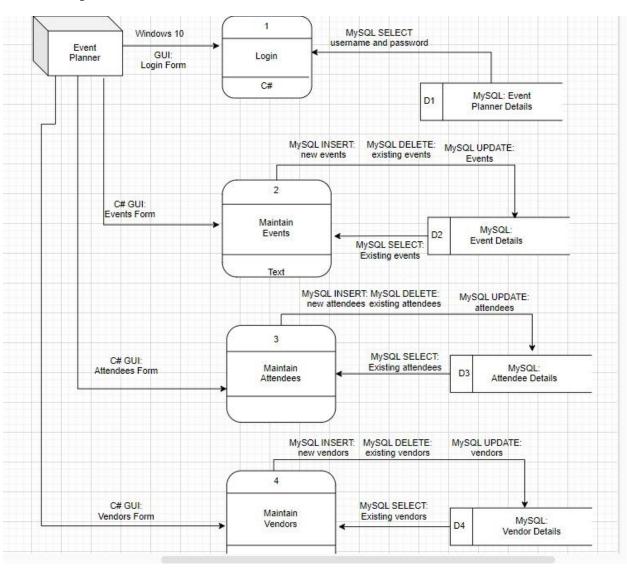
Dinah Zame

Moitshepi Hikwane Emely Machete

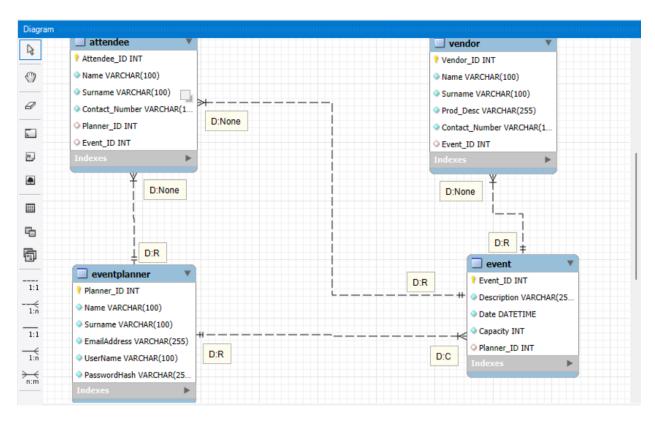
# 1. Physical data model



# 2. Physical Process Model



## 3. Database Schema



```
mysql> create table Event(
   -> Event_ID int(20),
    -> Description varchar(255),
    -> Date DATETIME,
    -> Capacity int(10)
    -> );
Query OK, 0 rows affected, 2 warnings (0.13 sec)
mysql> Desc Event;
+----+
| Field | Type | Null | Key | Default | Extra |
+----+
| Event ID | int | YES | NULL |
| Description | varchar(255) | YES | NULL |
| Date | datetime | YES | NULL |
| Capacity | int | YES | NULL |
+----+
4 rows in set (0.01 sec)
mysal> insert into Event(
    -> Event ID,
    -> Description,
    -> Date,
    -> Capacity)
    -> Values
    -> (55567, "Trade shows", "2024-08-20 12:00:00", 300),
-> (55568, "Seminar", "2024-08-08 08:30:00", 100),
-> (55569, "Shareholder meetings", "2024-08-16 07:00:00", 45),
-> (55570, "Award ceremony", "2024-11-28 18:00:00", 150),
-> (55571, "Charity event", "2024-08-24 10:45:00", 250);
Query OK, 5 rows affected (0.15 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

## mysql> select \* from Event; +-----| Event\_ID | Description | Date | Capacity | | 55567 | Trade shows | 2024-08-20 12:00:00 | 300 | 55568 | Seminar | 2024-08-08 08:30:00 | 100 | 55569 | Shareholder meetings | 2024-08-16 07:00:00 | 45 | 55570 | Award ceremony | 2024-11-28 18:00:00 | 150 | 55571 | Charity event | 2024-08-24 10:45:00 | 250 | +-----5 rows in set (0.01 sec) mysql> UPDATE Event SET Event ID = 55572 where Capacity = 250; Query OK, 1 row affected (0.15 sec) Rows matched: 1 Changed: 1 Warnings: 0 mysql> DELETE from Event WHERE Event ID = 55567 -> && Description = "Trade shows' -> && Date = "2024-08-20 12:00:00" -> && Capacity = 300; Query OK, 1 row affected, 3 warnings (0.04 sec) mysal> Select \* from Event; +----+ | Event\_ID | Description | Date | Capacity | | 55568 | Seminar | 2024-08-08 08:30:00 | 100 | 55569 | Shareholder meetings | 2024-08-16 07:00:00 | 45 | 55570 | Award ceremony | 2024-11-28 18:00:00 | 150 | 55572 | Charity event | 2024-08-24 10:45:00 | 250 |

+-----

4 rows in set (0.07 sec)

```
mysql> insert into Event(
   -> Event_ID,
    -> Description,
    -> Date,
    -> Capacity)
    -> Values
    -> (55567, "Trade shows", "2024-08-20 12:00:00", 300),
    -> (55568, "Seminar", "2024-08-08 08:30:00", 100),
-> (55569, "Shareholder meetings", "2024-08-16 07:00:00", 45),
-> (55570, "Award ceremony", "2024-11-28 18:00:00", 150),
-> (55571, "Charity event", "2024-08-24 10:45:00", 250);
Query OK, 5 rows affected (0.15 sec)
Records: 5 Duplicates: 0 Warnings: 0
mysql> select * from Event;
+----+
| Event_ID | Description | Date | Capacity |
+-----+
| 55567 | Trade shows | 2024-08-20 12:00:00 | 300 | 55568 | Seminar | 2024-08-08 08:30:00 | 100 | 55569 | Shareholder meetings | 2024-08-16 07:00:00 | 45 | 55570 | Award ceremony | 2024-11-28 18:00:00 | 150 | 55571 | Charity event | 2024-08-24 10:45:00 | 250 |
+-----+
5 rows in set (0.01 sec)
mysql> UPDATE Event SET Event ID = 55572 where Capacity = 250;
Query OK, 1 row affected (0.15 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysal> DELETE from Event WHERE Event ID = 55567
   -> && Description = "Trade shows"
    -> && Date = "2024-08-20 12:00:00"
    -> && Capacity = 300;
Query OK, 1 row affected, 3 warnings (0.04 sec)
```

```
mysql> Select * from Event;
+----+
| Event_ID | Description | Date | Capacity |
| 55568 | Seminar | 2024-08-08 08:30:00 | 100 | 55569 | Shareholder meetings | 2024-08-16 07:00:00 | 45 |
| 55570 | Award ceremony | 2024-11-28 18:00:00 | 150 | 55572 | Charity event | 2024-08-24 10:45:00 | 250 |
+-----+
4 rows in set (0.07 sec)
mysal> Select Description from Event where capacity = 45;
+----+
| Shareholder meetings |
+----+
1 row in set (0.02 sec)
mysql> Create table Vendor(
  -> Vendor ID int(20),
  -> Name varchar(100),
  -> Surname varchar(100),
  -> Prod Desc varchar(255),
  -> Contact Number varchar(15)
  -> );
Query OK, 0 rows affected, 1 warning (0.34 sec)
mysql> Desc Vendor;
| Field | Type | Null | Key | Default | Extra |
                      ---+----+
+-----
```

| Contact Number | varchar(15) | YES | NULL

```
mysal> insert into Vendor(
   -> Vendor ID,
    -> Name,
    -> Surname,
    -> Prod Desc,
    -> Contact_Number)
    -> Values
   -> (10112, "Sbu", "Ngwenya", "Bamboo cutley set", "0537732034"),
-> (10113, "Cleo", "Johan", "Eco-friendly food and beverages", "0126549087"),
-> (10114, "Mpho", "Nous", "Eco-friendly crafts", "0115428571"),
-> (10115, "Kat", "Machete", "Eco-friendly cleaning products", "0819990654");
Query OK, 4 rows affected (0.06 sec)
Records: 4 Duplicates: 0 Warnings: 0
mysql> Select * from Vendor;
+-----
| <u>Vendor ID</u> | Name | Surname | <u>Prod Desc</u> | <u>Contact Number</u> |
| 10112 | Sbu | Ngwenya | Bamboo cutley set | 0537732034
| 10113 | Cleo | Johan | Eco-friendly food and beverages | 0126549087 | 10114 | Mpho | Nous | Eco-friendly crafts | 0115428571 | 10115 | Kat | Machete | Eco-friendly cleaning products | 0819990654
<del>+-----</del>
4 rows in set (0.00 sec)
mysql> Update Vendor SET Surname = "Johnson" where Vendor ID = 10115;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from Vendor;
| <u>Vendor_ID</u> | Name | Surname | <u>Prod_Desc</u> | <u>Contact_Number</u> |
+-----
| 10112 | Sbu | Ngwenya | Bamboo <u>cutley</u> set | 0537732034
  10113 | Cleo | Johan | Eco-friendly food and beverages | 0126549087
10114 | Mpho | Nous | Eco-friendly crafts | 0115428571
| 10115 | Kat | Johnson | Eco-friendly cleaning products | 0819990654
```

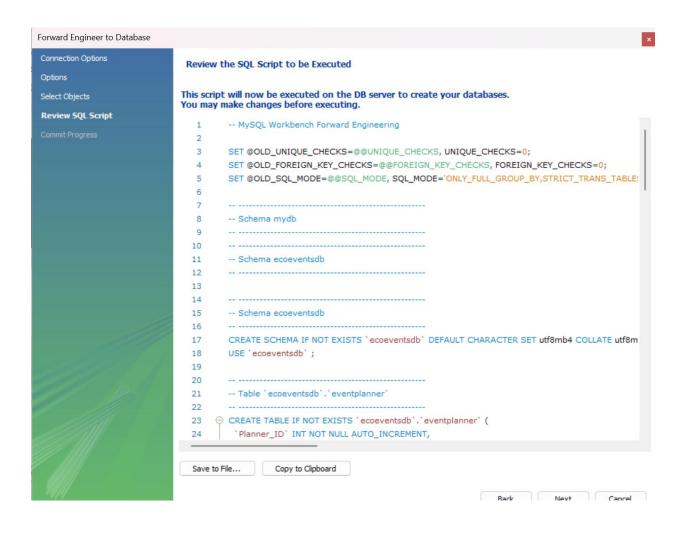
```
mysal> DELETE from Vendor where Vendor ID = 10114
   -> && Name = "Mpho"
   -> && Surname = "Nous"
   -> && Prod Desc = "Eco-friendly crafts"
  -> && Contact Number = "0115428571";
Query OK, 1 row affected, 4 warnings (0.02 sec)
mysql> Select Prod Desc from Vendor where Surname = "Ngwenya";
Prod_Desc |
+----+
| Bamboo cutley set |
+----+
1 row in set (0.00 sec)
mysql> Create table Attendee(
  -> Attendee ID int(20),
  -> Name varchar(100),
   -> Surname varchar(100),
   -> Contact Number varchar(15)
   -> );
Query OK, 0 rows affected, 1 warning (0.14 sec)
mysql> Desc Attendee;
| Field | Type | Null | Key | Default | Extra |
+-----
+-----
4 rows in set (0.01 sec)
```

```
mysal> insert into Attendee(
    -> Attendee ID,
    -> Name,
    -> Surname,
    -> Contact_Number)
    -> Values
-> Values
-> (43722628, "John", "Doe", "0162395057"),
-> (40172389, "Tanja", "Caps", "0786744032"),
-> (38123908, "Emma", "Noko", "0642349971"),
-> (41362918, "Elsa", "Cloete", "0722345055"),
-> (28111767, "Jerry", "Thomson", "0820833382");
Query OK, 5 rows affected (0.03 sec)
Records: 5 Duplicates: 0 Warnings: 0
mysql> select * from Attendee;
+-----+
| Attendee ID | Name | Surname | Contact Number |
+----+
| 43722628 | John | Doe | 0162395057
| 40172389 | Tanja | Caps | 0786744032
| 38123908 | Emma | Noko | 0642349971
| 41362918 | Elsa | Cloete | 0722345055 |
| 28111767 | Jerry | Thomson | 0820833382 |
+----+
5 rows in set (0.01 sec)
mysal> Delete from Attendee where Attendee ID = 40172389
    -> && Name = "Tanja"
    -> && Surname = "Caps"
   -> && Contact Number = "0786744032";
Query OK, 1 row affected, 3 warnings (0.01 sec)
```

```
mysql> select * from Attendee;
| Attendee ID | Name | Surname | Contact Number |
| 43722628 | John | Doe | 0162395057 |
| 38123908 | Emma | Noko | 0642349971
| 41362918 | Elsa | Cloete | 0722345055
| 28111767 | Jerry | Thomson | 0820833382
+----+
4 rows in set (0.00 sec)
mysql> Update Attendee SET Surname = "Dorigos" where Attendee ID = 43722628;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> Select Contact Number from Attendee where Surname = "Thomson";
+----+
| Contact_Number |
+----+
0820833382
+----+
1 row in set (0.01 sec)
mysql> select * from Attendee;
+----+
| Attendee ID | Name | Surname | Contact Number |
+----+
| 43722628 | John | <u>Dorigos</u> | 0162395057
| 38123908 | Emma | Noko | 0642349971
| 41362918 | Elsa | Cloete | 0722345055
| 28111767 | Jerry | Thomson | 0820833382
+----+
4 rows in set (0.00 sec)
```

```
mysql> create table EventPlanner(
   -> Planner ID int(20),
    -> Name varchar(100),
    -> Surname varchar(100),
    -> EmailAddress varchar(255),
    -> userName varchar(100),
    -> PasswordHash varchar(255)
   -> );
Query OK, 0 rows affected (0.42 sec)
mysql> desc EventPlanner;
+----+
| Field | Type | Null | Key | Default | Extra |
+----+
+----+
6 rows in set (0.02 sec)
mysql> insert into EventPlanner(
    -> Planner ID,
    -> Name,
    -> Surname,
    -> EmailAddress,
    -> userName,
    -> PasswordHash)
    -> values
   -> Values
-> ("096", "Mpho", "Sekwe", "msekwe@gmail.com", "msekwe", "sk234sekwe"),
-> ("088", "Lesego", "Johannes", "johannesl@gmail.com", "Les]", "joh345"),
-> ("075", "Thabo", "Sematla", "t.sematla@gmail.com", "thibos", "567#tsem"),
-> ("094", "Selina", "Isolo", "tsolos@gmail.com", "selzoT", "lina!67"),
-> ("042", "Mokgadi", "Queen", "kgadiQ@gmail.com", "QueenM", "Mok56!9");
Query OK, 5 rows affected (0.33 sec)
Records: 5 Duplicates: 0 Warnings: 0
```

# 4. Programming code for maintaining a child entity of the data Model



Forward Engineer to Database

Connection Options

Select Objects

Review SQL Script

#### Review the SQL Script to be Executed

```
○ CREATE TABLE IF NOT EXISTS `ecoeventsdb`.`eventplanner` (
24
        `Planner_ID` INT NOT NULL AUTO_INCREMENT,
25
        'Name' VARCHAR(100) NOT NULL,
        `Surname` VARCHAR(100) NOT NULL,
26
        'EmailAddress' VARCHAR(255) NOT NULL,
27
28
         'UserName' VARCHAR(100) NOT NULL,
29
        'PasswordHash' VARCHAR(255) NOT NULL,
30
        PRIMARY KEY ('Planner_ID'),
        UNIQUE INDEX 'EmailAddress' ('EmailAddress' ASC) VISIBLE,
31
     UNIQUE INDEX 'UserName' ('UserName' ASC) VISIBLE)
32
33
      ENGINE = InnoDB
34
       AUTO INCREMENT = 3
       DEFAULT CHARACTER SET = utf8mb4
36
       COLLATE = utf8mb4_0900_ai_ci;
37
38
39
40
       -- Table 'ecoeventsdb'.'event'
41
42
    ○ CREATE TABLE IF NOT EXISTS `ecoeventsdb`.`event` (
43
        `Event_ID` INT NOT NULL AUTO_INCREMENT,
        'Description' VARCHAR(255) NOT NULL,
44
        'Date' DATETIME NOT NULL,
45
```

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Forward Engineer to Database Connection Options Review the SQL Script to be Executed Select Objects Review SQL Script 38 39 40 -- Table 'ecoeventsdb'.'event' 41 42 

CREATE TABLE IF NOT EXISTS 'ecoeventsdb'.'event' ( 43 'Event\_ID' INT NOT NULL AUTO\_INCREMENT, 'Description' VARCHAR(255) NOT NULL, 44 'Date' DATETIME NOT NULL, 45 'Capacity' INT NOT NULL, 46 47 'Planner\_ID' INT NULL DEFAULT NULL, PRIMARY KEY ('Event\_ID'), 48 INDEX 'Planner\_ID' ('Planner\_ID' ASC) VISIBLE, 50 CONSTRAINT 'event\_ibfk\_1' FOREIGN KEY ('Planner\_ID') 51 REFERENCES `ecoeventsdb`.`eventplanner` (`Planner\_ID`)
ON DELETE SET NULL) 52 53 54 ENGINE = InnoDB 55 AUTO\_INCREMENT = 16 DEFAULT CHARACTER SET = utf8mb4 56

Rack Nevt Cancel

COLLATE = utf8mb4\_0900\_ai\_ci;

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57

58 59 60 Forward Engineer to Database

Connection Options

Select Objects

Review SQL Script

#### Review the SQL Script to be Executed

This script will now be executed on the DB server to create your databases. You may make changes before executing.

```
-- Table 'ecoeventsdb'.' attendee'
64
       `Attendee_ID` INT NOT NULL AUTO_INCREMENT,
       'Name' VARCHAR(100) NOT NULL,
65
66
        'Surname' VARCHAR(100) NOT NULL,
67
        'Contact_Number' VARCHAR(15) NOT NULL,
68
       'Planner_ID' INT NULL DEFAULT NULL,
       'Event_ID' INT NULL DEFAULT NULL,
69
      PRIMARY KEY ('Attendee_ID'),
70
71
      INDEX 'Planner_ID' ('Planner_ID' ASC) VISIBLE,
      INDEX 'Event_ID' ('Event_ID' ASC) VISIBLE,
72
      CONSTRAINT `attendee_ibfk_1`
73
       FOREIGN KEY ('Planner_ID')
75
       REFERENCES 'ecoeventsdb'.'eventplanner' ('Planner_ID')
76
        ON DELETE SET NULL,
      CONSTRAINT `attendee_ibfk_2`
77
78
        FOREIGN KEY ('Event_ID')
        REFERENCES 'ecoeventsdb'.'event' ('Event_ID')
79
        ON DELETE CASCADE)
80
81
      ENGINE = InnoDB
      AUTO_INCREMENT = 13
82
83
      DEFAULT CHARACTER SET = utf8mb4
      COLLATE = utf8mb4_0900_ai_ci;
84
```

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Forward Engineer to Database

Options

Review SQL Script

#### Review the SQL Script to be Executed

This script will now be executed on the DB server to create your databases. You may make changes before executing.

```
    ○ CREATE TABLE IF NOT EXISTS `ecoeventsdb`.`vendor` (

         `Vendor_ID` INT NOT NULL AUTO_INCREMENT,
91
92
         'Name' VARCHAR(100) NOT NULL,
 93
         'Surname' VARCHAR(100) NOT NULL,
 94
         'Prod_Desc' VARCHAR(255) NOT NULL,
 95
         'Contact_Number' VARCHAR(15) NOT NULL,
 96
         `Event_ID` INT NULL DEFAULT NULL,
         PRIMARY KEY ('Vendor_ID'),
 97
98
        INDEX `Event_ID` (`Event_ID` ASC) VISIBLE,
        CONSTRAINT `vendor_ibfk_1`
99
100
         FOREIGN KEY ('Event_ID')
101
         REFERENCES `ecoeventsdb`.`event` (`Event_ID`)
102
         ON DELETE CASCADE)
103
      ENGINE = InnoDB
        AUTO_INCREMENT = 9
104
        DEFAULT CHARACTER SET = utf8mb4
105
106
        COLLATE = utf8mb4_0900_ai_ci;
107
108
        SET SQL_MODE=@OLD_SQL_MODE;
109
        SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
110
        SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;
111
112
```

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# 5. Reports

### **Summary Report**



## **Exception Report**



Grand Total

42

Back to Dashboard

## 6. Detailed diary

