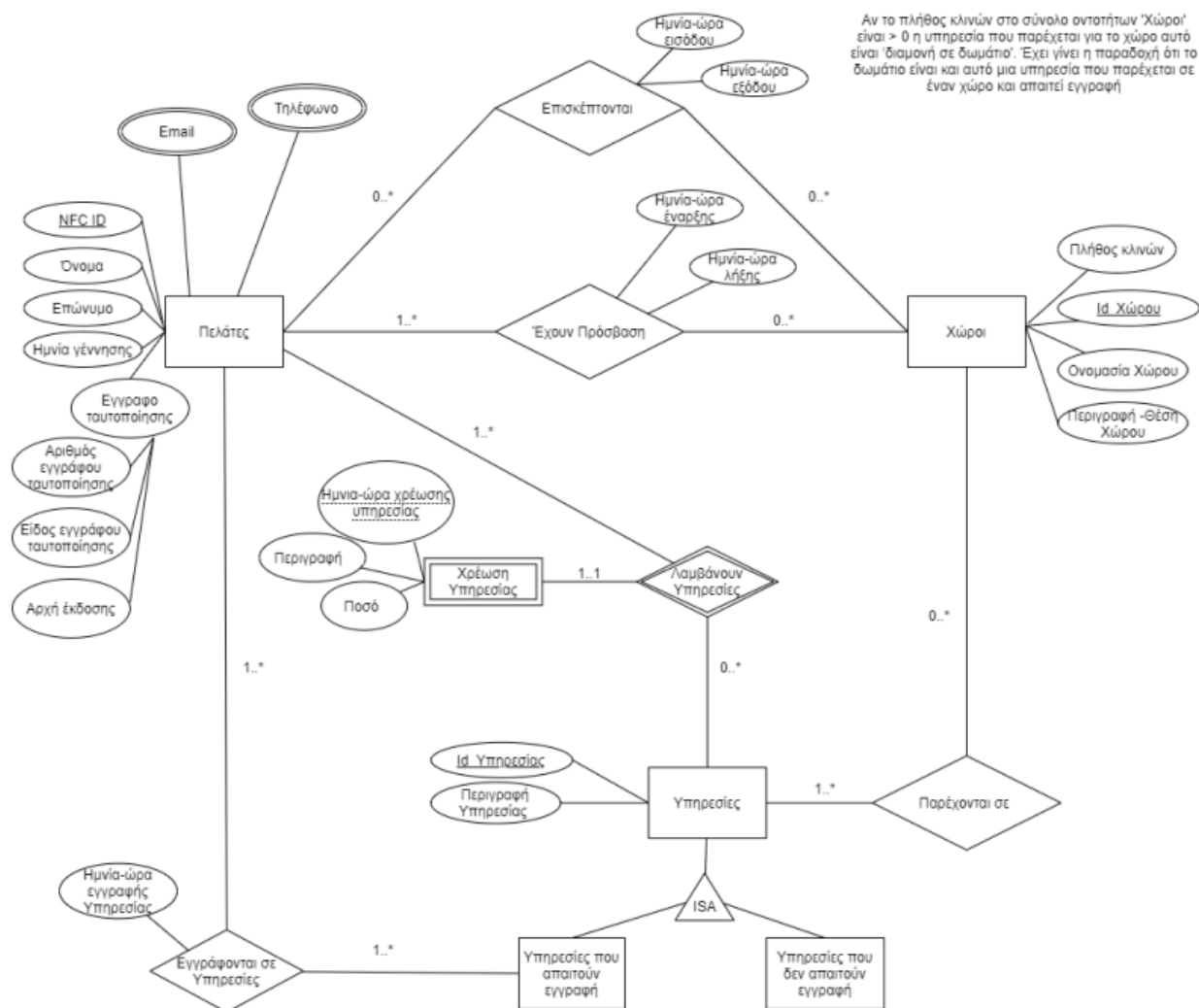## ASDF Palace Report

Δεληγιάννης Γεράσιμος – el18807
Κυριακόπουλος Γεώργιος – el18153
Τζελέπης Σεραφείμ – el18849

1. Επιλέξαμε να χρησιμοποιήσουμε το απλό Entity-Relationship Diagram το οποίο μας δόθηκε και ακολουθεί, καθώς θεωρούμε πως έχει υλοποιήσει κάποιες σχέσεις με πιο βολικό τρόπο, αναφορικά με τη διαχείριση και την απεικόνιση στη βάση δεδομένων που θα κατασκευάσουμε.

Το σχεσιακό διάγραμμα που υλοποιήθηκε βάσει αυτού του ER είναι το εξής (με **bold** η κάθε σχέση, με <u>underline</u> τα primary keys και με *italics* τα foreign keys):

- **Πελάτες** (<u>NFC ID</u>, Όνομα, Επώνυμο, Ημερομηνία γέννησης, Αριθμός εγγράφου ταυτοποίησης, Είδος εγγράφου ταυτοποίησης, Αρχή έκδοσης)
- **Email** (*<u>NFC ID</u>*, <u>Email address</u>)
- **Τηλέφωνο** (*<u>NFC ID</u>*, <u>Αριθμός τηλεφώνου</u>)
- **Χώροι** (<u>ID χώρου</u>, Ονομασία χώρου, Πλήθος κλινών, Περιγραφή-θέση χώρου)
- **Υπηρεσίες** (<u>ID υπηρεσίας</u>, Περιγραφή υπηρεσίας, Απαιτεί εγγραφή)
- **Χρέωση Υπηρεσίας** (*<u>NFC ID</u>*, *<u>ID υπηρεσίας</u>*, <u>Ημερομηνία-ώρα χρέωσης υπηρεσίας</u>, Περιγραφή, Ποσό)
- **Επισκέπτονται** (*<u>NFC ID</u>*, *<u>ID χώρου</u>*, Ημερομηνία-ώρα εισόδου, Ημερομηνία-ώρα εξόδου)
- **Έχουν πρόσβαση** (*<u>NFC ID</u>*, *<u>ID χώρου</u>*, Ημερομηνία-ώρα έναρξης, Ημερομηνία-ώρα λήξης)
- **Παρέχονται σε** (*<u>ID υπηρεσίας</u>*, *<u>ID χώρου</u>*)
- **Εγγράφονται σε υπηρεσίες** (*<u>NFC ID</u>*, *<u>ID υπηρεσίας</u>*, Ημερομηνία εγγραφής υπηρεσίας)

α) Σχετικά με τους περιορισμούς που λήφθηκαν υπόψη, έχουμε για όλα τα πεδία NOT NULL, καθώς δεν θέλαμε να έχουμε πουθενά NULL τιμές, έχουμε σε μερικά generated πρωτεύοντα κλειδιά auto-increment (id_nfc, id_place, id_service) και πιο συγκεκριμένα για κάθε σχέση έχουμε ορίσει τον κατάλληλο συνδυασμό primary keys με βάση το ER διάγραμμα, το σχεσιακό που χρησιμοποιήσαμε και έχουμε συμπεριλάβει και τα αντίστοιχα foreign keys, όπου αυτά υπάρχουν. Αναλυτική:

- **Πελάτες**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το NFC ID ως unique με auto-increment
- **Email**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το Email address ως unique με το NFC ID ως foreign key
- **Τηλέφωνο**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί ο Αριθμός τηλεφώνου ως unique με το NFC ID ως foreign key
- **Χώροι**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το ID χώρου ως unique με auto-increment
- **Υπηρεσίες**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το ID υπηρεσίας ως unique με auto-increment
- **Χρέωση Υπηρεσίας**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το Ημερομηνία-ώρα χρέωσης υπηρεσίας με το NFC ID και το ID υπηρεσίας ως foreign keys

- **Επισκέπτονται**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το NFC ID με το ID χώρου ως foreign keys
- **Έχουν πρόσβαση**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το NFC ID με το ID χώρου ως foreign keys
- **Παρέχονται σε**: όλα τα πεδία NOT NULL, πρωτεύον κλειδί το ID χώρου με το ID υπηρεσίας ως foreign keys
- **Εγγράφονται σε υπηρεσίες:** όλα τα πεδία NOT NULL, πρωτεύον κλειδί το NFC ID με το ID υπηρεσίας ως foreign keys.

b) Δεν έχουμε ορίσει περαιτέρω ευρετήρια για κάποιο optimization στα queries μας, καθώς δε βρήκαμε κάποιο πιθανό index που να μας προσφέρει κάποια διαφορά. Έχουμε βασιστεί μόνο στα ευρετήρια που ορίζει αυτόματα το MySQL Workbench, δηλαδή ένα ευρετήριο για κάθε primary key των πινάκων μας συν ένα για κάθε foreign key.

c) Χρησιμοποιήσαμε MySQL Server για Database Management System και το εργαλείο MySQL Workbench για την ευκολότερη διαχείριση της βάσης μας. Στη συνέχεια, για τη δημιουργία του User Interface διαλέξαμε JavaScript, και πιο συγκεκριμένα το framework React.js, ενώ για τον server και την διασύνδεση διεπαφής με τη βάση δεδομένων μας, διαλέξαμε το Node.js runtime μαζί με τη χρήση του Express framework. Όλη η ανάπτυξη έγινε σε Windows 10 Platform και χρησιμοποιήσαμε και το GitHub για version control και ως μέρος της παράδοσης της εργασίας (εγκατάσταση της εφαρμογής από άλλο χρήστη).

d) Ακολουθούν τα αναλυτικά βήματα για την εγκατάσταση της εφαρμογής μας:
- Αρχικά θα πρέπει ο χρήστης να εγκαταστήσει τον MySQL Server, το MySQL Workbench, το GitHub και το Node.js μαζί με το npm.
- Έπειτα θα χρειαστεί να γίνει import η ολοκληρωμένη βάση δεδομένων που περιλαμβάνει τα tables, τα views και όλα τα data στο MySQL Workbench. Αυτό θα γίνει με τα παρακάτω βήματα:
  - Δημιουργία ή σύνδεση σε ήδη υπάρχον MySQL connection,
  - Server → Data Import → Import from Self-Contained File → Επιλογή του αρχείου database.sql που θα βρει στο github repository της εργασίας ([geokyr/asdf_palace: Repository for the Databases course Project. (github.com)](#),
  - Default Target Schema → New → Επιλογή ενός ονόματος για τη νέα βάση δεδομένων (πχ. asdf_palace) → Επιλογή Dump Structure and Data → Start Import
- Στη συνέχεια πρέπει να τρέξει την εντολή
  $ git clone https://github.com/geokyr/asdf_palace.git
  στο terminal της επιλογής του ή στο git bash.

- Μετά, να τρέξει npm install ξεχωριστά στα δύο directory του κώδικα δηλαδή στο /server και στο /ui , ώστε να εγκατασταθούν τα node_modules.
- Τέλος, npm start στο /server directory και στη συνέχεια npm start στο /ui directory, έχοντας φυσικά τη βάση δεδομένων να τρέχει στο background - MySQL80 Service (by default) και θα ανοίξει η σελίδα της εφαρμογής στον default browser σας με διεύθυνση localhost:3000 (προϋπόθεση να είναι ανοιχτά τα terminals που τρέχουν τα npm start και το service της βάσης δεδομένων).

2. Παρακάτω βρίσκεται όλος ο κώδικας SQL που χρησιμοποιήθηκε για να υποστηριχθεί η εφαρμογή μας (δείτε και το αρχείο sql.sql στο github repository):

```sql
-- SQL Code that was used for creating the tables of our database:

-- Table customers:
CREATE TABLE `customers` (
  `id_nfc` int NOT NULL AUTO_INCREMENT,
  `first_name` varchar(45) NOT NULL,
  `last_name` varchar(45) NOT NULL,
  `birthdate` date NOT NULL,
  `id_number` varchar(45) NOT NULL,
  `id_type` varchar(45) NOT NULL,
  `id_issuing_authority` varchar(45) NOT NULL,
  PRIMARY KEY (`id_nfc`),
  UNIQUE KEY `id_customers_UNIQUE` (`id_nfc`)
) ENGINE=InnoDB AUTO_INCREMENT=31 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

--Table emails:
CREATE TABLE `emails` (
  `email_address` varchar(45) NOT NULL,
  `id_nfc` int NOT NULL,
  PRIMARY KEY (`email_address`,`id_nfc`),
  UNIQUE KEY `email_address_UNIQUE` (`email_address`),
  KEY `email_id_nfc_idx` (`id_nfc`),
  CONSTRAINT `email_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

-- Table has_access:
CREATE TABLE `has_access` (
  `date_of_registration` datetime NOT NULL,
  `date_of_deregistration` datetime NOT NULL,
  `id_nfc` int NOT NULL,
  `id_place` int NOT NULL,
  PRIMARY KEY (`id_nfc`,`id_place`),
  KEY `acess_id_place_idx` (`id_place`),
  CONSTRAINT `access_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`),
  CONSTRAINT `acess_id_place` FOREIGN KEY (`id_place`) REFERENCES `places` (`id_place`)
```

```sql
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

--Table is_provided_on :
CREATE TABLE `is_provided_on` (
  `id_service` int NOT NULL,
  `id_place` int NOT NULL,
  PRIMARY KEY (`id_service`,`id_place`),
  KEY `provided_id_place_idx` (`id_place`),
  CONSTRAINT `provided_id_place` FOREIGN KEY (`id_place`) REFERENCES `places` (`id_place`),
  CONSTRAINT `provided_id_service` FOREIGN KEY (`id_service`) REFERENCES `services` (`id_service`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;


-- Table phone_numbers:
CREATE TABLE `phone_numbers` (
  `phone_number` varchar(45) NOT NULL,
  `id_nfc` int NOT NULL,
  PRIMARY KEY (`phone_number`,`id_nfc`),
  UNIQUE KEY `phone_number_UNIQUE` (`phone_number`),
  KEY `phone_id_nfc_idx` (`id_nfc`),
  CONSTRAINT `phone_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

-- Table places:
CREATE TABLE `places` (
  `id_place` int NOT NULL AUTO_INCREMENT,
  `place_name` varchar(45) NOT NULL,
  `bed_count` tinyint(1) NOT NULL,
  `place_location` varchar(45) NOT NULL,
  PRIMARY KEY (`id_place`),
  UNIQUE KEY `id_place_UNIQUE` (`id_place`)
) ENGINE=InnoDB AUTO_INCREMENT=101 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

-- Table register_for:
CREATE TABLE `register_for` (
  `date_of_registration` datetime NOT NULL,
  `id_nfc` int NOT NULL,
  `id_service` int NOT NULL,
  PRIMARY KEY (`id_nfc`,`id_service`),
```

```sql
  KEY `register_id_service_idx` (`id_service`),
  CONSTRAINT `register_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`),
  CONSTRAINT `register_id_service` FOREIGN KEY (`id_service`) REFERENCES `services` (`id_service`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

-- Table service_charge:
CREATE TABLE `service_charge` (
  `date_time_of_charge` datetime(1) NOT NULL,
  `charge_description` varchar(45) NOT NULL,
  `charge_amount` float NOT NULL,
  `id_nfc` int NOT NULL,
  `id_service` int NOT NULL,
  PRIMARY KEY (`date_time_of_charge`,`id_service`,`id_nfc`),
  KEY `charge_id_nfc_idx` (`id_nfc`),
  KEY `charge_id_service_idx` (`id_service`),
  CONSTRAINT `charge_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`),
  CONSTRAINT `charge_id_service` FOREIGN KEY (`id_service`) REFERENCES `services` (`id_service`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

-- Table services:
CREATE TABLE `services` (
  `id_service` int NOT NULL AUTO_INCREMENT,
  `service_description` varchar(45) NOT NULL,
  `needs_registration` tinyint(1) NOT NULL,
  PRIMARY KEY (`id_service`),
  UNIQUE KEY `id_service_UNIQUE` (`id_service`)
) ENGINE=InnoDB AUTO_INCREMENT=8 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;

-- Table visit:
CREATE TABLE `visit` (
  `date_of_entry` datetime NOT NULL,
  `date_of_exit` datetime NOT NULL,
  `id_nfc` int NOT NULL,
  `id_place` int NOT NULL,
  PRIMARY KEY (`id_nfc`,`id_place`),
  KEY `visit_id_place_idx` (`id_place`),
  CONSTRAINT `visit_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`),
```

```sql
  CONSTRAINT `visit_id_place` FOREIGN KEY (`id_place`) REFERENCES `pl
aces` (`id_place`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;


-------------------------------------------------------------------
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-- SQL Code that was used for inserting the data on our database:

-- Data for customers:
INSERT INTO `customers` VALUES (1,'Alec','Ramos','1978-12-
28','GP931119','ID Card','Police Department of Peiraias'),(2,'Tatiana
','Adams','2005-08-
02','HI537387','ID Card','Police Department of Zografos'),(3,'Nelle',
'Melton','2012-06-
27','ME166639','ID Card','Police Department of Palaio Falhro'),(4,'Ka
rina','Small','1982-06-
28','HV313327','ID Card','Police Department of Keratsini'),(5,'Lara',
'Merritt','1963-10-
14','BH004848','ID Card','Police Department of Glyfada'),(6,'Lareina'
,'Bell','1973-04-
22','OX704861','ID Card','Police Department of Glyfada'),(7,'Rina','I
rwin','1997-01-
23','RK813881','ID Card','Police Department of Alimos'),(8,'Adrian','
Dorsey','1996-10-
12','HQ344329','ID Card','Police Department of Menidi'),(9,'Riley','G
reen','2009-05-
01','UX041266','ID Card','Police Department of Elliniko'),(10,'France
s','Villarreal','1983-02-
21','ND172069','ID Card','Police Department of Palaio Falhro'),(11,'A
urora','Howard','1981-11-
27','IX231800','ID Card','Police Department of Glyfada'),(12,'Herrod'
,'Burns','1982-10-
18','UU226101','ID Card','Police Department of Nea Smyrni'),(13,'Alde
n','Banks','1973-12-
23','AG787755','ID Card','Police Department of Keratsini'),(14,'Kimbe
rly','Adkins','1981-05-
21','SK246792','ID Card','Police Department of Palaio Falhro'),(15,'H
ammett','Stone','1985-09-
16','HC755915','ID Card','Police Department of Nea Smyrni'),(16,'Sybi
ll','Guy','2001-04-
20','WI611535','ID Card','Police Department of Menidi'),(17,'Mannix',
'Sandoval','2007-06-
```

```sql
29','ZS506517','ID Card','Police Department of Glyfada'),(18,'Holly',
'Stephens','1985-09-
17','TE058461','ID Card','Police Department of Athina'),(19,'Danielle
','Savage','1960-12-
22','RS915045','ID Card','Police Department of Keratsini'),(20,'Mia',
'Joyce','1964-09-
11','RT346265','ID Card','Police Department of Alimos'),(21,'Beverly'
,'Knox','1961-02-
22','FQ2225692','Passport','Police Department of Korydallos'),(22,'Ru
ssell','Jenkins','2001-10-
06','EI2546693','Passport','Police Department of Nea Smyrni'),(23,'Wi
llow','Holt','2017-10-
22','FV9407229','Passport','Police Department of Palaio Falhro'),(24,
'Felicia','Bond','1999-11-
18','GV4169106','Passport','Police Department of Kallithea'),(25,'Mer
edith','Doyle','1999-03-
19','VN8441383','Passport','Police Department of Palaio Falhro'),(26,
'Autumn','Hanson','1961-12-
24','GM2268626','Passport','Police Department of Nikaia'),(27,'Cassan
dra','Kennedy','2015-02-
26','ZR7792741','Passport','Police Department of Peristeri'),(28,'Ste
wart','Fields','2020-11-
05','IA9784544','Passport','Police Department of Glyfada'),(29,'Coope
r','Bass','1994-09-
27','WD0721222','Passport','Police Department of Korydallos'),(30,'Ja
rrod','Grant','1958-01-
01','IG4708477','Passport','Police Department of Glyfada');

-- Data for emails:
INSERT INTO `emails` VALUES ('alecramos65@gmail.com',1),('tatianaadam
s15@gmail.com',2),('nellemelton71@gmail.com',3),('karinasmall87@gmail
.com',4),('laramerritt48@gmail.com',5),('lareinabell86@gmail.com',6),
('rinairwin62@gmail.com',7),('adriandorsey12@gmail.com',8),('rileygre
en39@gmail.com',9),('francesvillarreal99@gmail.com',10),('aurorahowar
d88@gmail.com',11),('herrodburns91@gmail.com',12),('aldenbanks34@gmai
l.com',13),('kimberlyadkins11@gmail.com',14),('hammettstone28@gmail.c
om',15),('sybillguy44@gmail.com',16),('mannixsandoval16@gmail.com',17
),('hollystephens78@gmail.com',18),('daniellesavage81@gmail.com',19),
('miajoyce85@gmail.com',20),('beverlyknox78@gmail.com',21),('russellj
enkins75@gmail.com',22),('willowholt37@gmail.com',23),('feliciabond23
@gmail.com',24),('meredithdoyle74@gmail.com',25),('autumnhanson73@gma
il.com',26),('cassandrakennedy44@gmail.com',27),('stewartfields28@gma
```

```sql
il.com',28),('cooperbass57@gmail.com',29),('jarrodgrant54@gmail.com',
30);

-- Data for has_access:
INSERT INTO `has_access` VALUES ('2021-06-15 23:24:58','2021-06-
22 23:24:58',1,1),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,86),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,87),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,90),('2021-06-17 09:20:10','2021-06-
24 09:20:10',1,92),('2021-06-17 09:20:10','2021-06-
24 09:20:10',1,93),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,94),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,95),('2021-06-16 07:15:48','2021-06-
23 07:15:48',2,2),('2021-06-21 13:51:55','2021-06-
28 13:51:55',2,83),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,86),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,87),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,90),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,94),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,95),('2021-06-15 05:37:47','2021-06-
22 05:37:47',3,3),('2021-06-20 03:15:00','2021-06-
27 03:15:00',3,88),('2021-06-20 03:15:00','2021-06-
27 03:15:00',3,89),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,96),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,97),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,98),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,99),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,100),('2021-06-16 06:58:18','2021-06-
23 06:58:18',4,4),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,86),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,87),('2021-06-17 18:39:19','2021-06-
24 18:39:19',4,88),('2021-06-17 18:39:19','2021-06-
24 18:39:19',4,89),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,90),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,94),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,95),('2021-06-14 14:20:21','2021-06-
21 14:20:21',5,5),('2021-06-19 16:57:27','2021-06-
26 16:57:27',5,83),('2021-06-21 01:51:19','2021-06-
28 01:51:19',5,84),('2021-06-21 01:51:19','2021-06-
28 01:51:19',5,85),('2021-06-15 04:40:11','2021-06-
22 04:40:11',6,6),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,86),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,87),('2021-06-18 14:05:29','2021-06-
```

25 14:05:29',6,90),('2021-06-18 18:35:36','2021-06-
25 18:35:36',6,92),('2021-06-18 18:35:36','2021-06-
25 18:35:36',6,93),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,94),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,95),('2021-06-16 16:10:10','2021-06-
23 16:10:10',7,7),('2021-06-17 23:13:44','2021-06-
24 23:13:44',7,86),('2021-06-17 23:13:44','2021-06-
24 23:13:44',7,87),('2021-06-17 23:13:44','2021-06-
24 23:13:44',7,90),('2021-06-19 09:51:44','2021-06-
26 09:51:44',7,92),('2021-06-19 09:51:44','2021-06-
26 09:51:44',7,93),('2021-06-17 23:13:44','2021-06-
24 23:13:44',7,94),('2021-06-17 23:13:44','2021-06-
24 23:13:44',7,95),('2021-06-15 09:20:49','2021-06-
22 09:20:49',8,8),('2021-06-18 08:40:43','2021-06-
25 08:40:43',8,84),('2021-06-18 08:40:43','2021-06-
25 08:40:43',8,85),('2021-06-18 01:24:26','2021-06-
25 01:24:26',8,88),('2021-06-18 01:24:26','2021-06-
25 01:24:26',8,89),('2021-06-14 11:09:05','2021-06-
21 11:09:05',9,9),('2021-06-20 22:38:21','2021-06-
27 22:38:21',9,83),('2021-06-21 07:36:29','2021-06-
28 07:36:29',9,86),('2021-06-21 07:36:29','2021-06-
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14 09:44:03',30,1),('2021-06-21 03:11:48',30,4),('2021-06-
17 01:26:31',30,5);

-- Data for service_charge:
INSERT INTO `service_charge` VALUES ('2021-06-
14 00:41:32.0','Accommodation fee',200,13,1),('2021-06-
14 03:09:12.0','Accommodation fee',500,12,1),('2021-06-
14 09:44:03.0','Accommodation fee',200,30,1),('2021-06-
14 11:09:05.0','Accommodation fee',500,9,1),('2021-06-
14 11:52:31.0','Accommodation fee',200,25,1),('2021-06-
14 11:56:44.0','Accommodation fee',200,23,1),('2021-06-
14 14:20:21.0','Accommodation fee',500,5,1),('2021-06-
14 15:34:02.0','Accommodation fee',200,15,1),('2021-06-
14 20:46:40.0','Accommodation fee',500,22,1),('2021-06-
14 22:22:30.0','Accommodation fee',200,29,1),('2021-06-
15 02:14:15.0','Accommodation fee',200,27,1),('2021-06-
15 04:18:35.0','Accommodation fee',200,24,1),('2021-06-
15 04:40:11.0','Accommodation fee',500,6,1),('2021-06-
```

```
15 05:37:47.0','Accommodation fee',500,3,1),('2021-06-
15 06:36:11.0','Accommodation fee',200,28,1),('2021-06-
15 09:20:49.0','Accommodation fee',200,8,1),('2021-06-
15 10:40:17.0','Accommodation fee',200,11,1),('2021-06-
15 10:44:33.0','Accommodation fee',500,16,1),('2021-06-
15 11:15:28.0','Accommodation fee',500,10,1),('2021-06-
15 13:15:57.0','Accommodation fee',500,18,1),('2021-06-
15 14:18:05.0','Accommodation fee',500,20,1),('2021-06-
15 23:24:58.0','Accommodation fee',500,1,1),('2021-06-
16 02:33:25.0','Accommodation fee',200,26,1),('2021-06-
16 04:03:26.0','Accommodation fee',200,19,1),('2021-06-
16 04:13:03.0','Accommodation fee',200,21,1),('2021-06-
16 04:46:25.0','Accommodation fee',500,14,1),('2021-06-
16 06:58:18.0','Accommodation fee',200,4,1),('2021-06-
16 07:15:48.0','Accommodation fee',200,2,1),('2021-06-
16 12:11:22.0','Accommodation fee',200,17,1),('2021-06-
16 16:10:10.0','Accommodation fee',500,7,1),('2021-06-
17 01:26:31.0','Meeting room rental fee',100,30,5),('2021-06-
17 02:25:58.0','Meeting room rental fee',100,20,5),('2021-06-
17 04:17:38.0','Haircut fee',15,29,3),('2021-06-
17 08:57:47.0','Gym membership fee',25,13,7),('2021-06-
17 09:20:10.0','Beverage fee',10,1,2),('2021-06-
17 13:52:11.0','Steam room fee',20,14,6),('2021-06-
17 14:26:15.0','Meeting room rental fee',100,22,5),('2021-06-
17 14:35:31.0','Beverage fee',10,10,2),('2021-06-
17 15:42:54.0','Haircut fee',15,12,3),('2021-06-
17 16:44:42.0','Beverage fee',10,20,2),('2021-06-
17 17:57:01.0','Haircut fee',15,11,3),('2021-06-
17 18:24:28.0','Dining fee',30,15,4),('2021-06-
17 18:39:19.0','Dining fee',30,4,4),('2021-06-
17 23:13:44.0','Meeting room rental fee',100,7,5),('2021-06-
17 23:39:36.0','Beverage fee',10,27,2),('2021-06-
18 01:24:26.0','Dining fee',30,8,4),('2021-06-
18 06:30:08.0','Haircut fee',15,22,3),('2021-06-
18 08:40:43.0','Gym membership fee',25,8,7),('2021-06-
18 11:54:13.0','Haircut fee',15,25,3),('2021-06-
18 14:00:16.0','Beverage fee',10,16,2),('2021-06-
18 14:05:29.0','Meeting room rental fee',100,6,5),('2021-06-
18 15:42:33.0','Meeting room rental fee',100,2,5),('2021-06-
18 17:08:20.0','Gym membership fee',25,29,7),('2021-06-
18 17:23:09.0','Dining fee',30,13,4),('2021-06-
18 18:35:36.0','Beverage fee',10,6,2),('2021-06-
18 19:26:33.0','Beverage fee',10,24,2),('2021-06-
```

```sql
18 19:33:17.0','Meeting room rental fee',100,11,5),('2021-06-
19 01:40:40.0','Meeting room rental fee',100,24,5),('2021-06-
19 02:27:59.0','Haircut fee',15,14,3),('2021-06-
19 02:38:25.0','Meeting room rental fee',100,26,5),('2021-06-
19 02:42:15.0','Dining fee',30,26,4),('2021-06-
19 09:51:44.0','Beverage fee',10,7,2),('2021-06-
19 15:57:55.0','Beverage fee',10,28,2),('2021-06-
19 16:24:51.0','Gym membership fee',25,18,7),('2021-06-
19 16:57:27.0','Haircut fee',15,5,3),('2021-06-
19 17:43:04.0','Beverage fee',10,23,2),('2021-06-
19 17:45:36.0','Steam room fee',20,3,6),('2021-06-
19 23:44:53.0','Steam room fee',20,19,6),('2021-06-
20 00:11:27.0','Meeting room rental fee',100,1,5),('2021-06-
20 03:15:00.0','Dining fee',30,3,4),('2021-06-
20 03:31:18.0','Meeting room rental fee',100,16,5),('2021-06-
20 06:08:41.0','Meeting room rental fee',100,4,5),('2021-06-
20 06:36:26.0','Haircut fee',15,18,3),('2021-06-
20 07:38:49.0','Steam room fee',20,23,6),('2021-06-
20 08:12:33.0','Meeting room rental fee',100,25,5),('2021-06-
20 20:05:21.0','Dining fee',30,19,4),('2021-06-
20 22:38:21.0','Haircut fee',15,9,3),('2021-06-
21 01:51:19.0','Gym membership fee',25,5,7),('2021-06-
21 03:11:48.0','Dining fee',30,30,4),('2021-06-
21 05:57:36.0','Steam room fee',20,15,6),('2021-06-
21 06:01:11.0','Haircut fee',15,17,3),('2021-06-
21 07:36:29.0','Meeting room rental fee',100,9,5),('2021-06-
21 09:16:49.0','Steam room fee',20,10,6),('2021-06-
21 11:08:24.0','Steam room fee',20,27,6),('2021-06-
21 13:51:55.0','Haircut fee',15,2,3),('2021-06-
21 17:07:17.0','Steam room fee',20,28,6),('2021-06-
21 17:59:58.0','Meeting room rental fee',100,12,5),('2021-06-
21 20:15:25.0','Meeting room rental fee',100,21,5),('2021-06-
21 20:24:29.0','Gym membership fee',25,17,7),('2021-06-
21 23:37:13.0','Beverage fee',10,21,2);

-- Data for services:
INSERT INTO `services` VALUES (1,'Room',1),(2,'Bar',0),(3,'Barbershop
',0),(4,'Restaurant',0),(5,'Conference Room',1),(6,'Sauna',1),(7,'Gym
',1);

-- Data for visit:
INSERT INTO `visit` VALUES ('2021-06-15 23:24:58','2021-06-
16 23:24:58',1,1),('2021-06-20 00:11:27','2021-06-
```

```
21 00:11:27',1,86),('2021-06-17 09:20:10','2021-06-
18 09:20:10',1,92),('2021-06-16 07:15:48','2021-06-
17 07:15:48',2,2),('2021-06-21 13:51:55','2021-06-
22 13:51:55',2,83),('2021-06-18 15:42:33','2021-06-
19 15:42:33',2,86),('2021-06-15 05:37:47','2021-06-
16 05:37:47',3,3),('2021-06-20 03:15:00','2021-06-
21 03:15:00',3,88),('2021-06-19 17:45:36','2021-06-
20 17:45:36',3,96),('2021-06-16 06:58:18','2021-06-
17 06:58:18',4,4),('2021-06-20 06:08:41','2021-06-
21 06:08:41',4,86),('2021-06-17 18:39:19','2021-06-
18 18:39:19',4,88),('2021-06-14 14:20:21','2021-06-
15 14:20:21',5,5),('2021-06-19 16:57:27','2021-06-
20 16:57:27',5,83),('2021-06-21 01:51:19','2021-06-
22 01:51:19',5,84),('2021-06-15 04:40:11','2021-06-
16 04:40:11',6,6),('2021-06-18 14:05:29','2021-06-
19 14:05:29',6,86),('2021-06-18 18:35:36','2021-06-
19 18:35:36',6,92),('2021-06-16 16:10:10','2021-06-
17 16:10:10',7,7),('2021-06-17 23:13:44','2021-06-
18 23:13:44',7,86),('2021-06-19 09:51:44','2021-06-
20 09:51:44',7,92),('2021-06-15 09:20:49','2021-06-
16 09:20:49',8,8),('2021-06-18 08:40:43','2021-06-
19 08:40:43',8,84),('2021-06-18 01:24:26','2021-06-
19 01:24:26',8,88),('2021-06-14 11:09:05','2021-06-
15 11:09:05',9,9),('2021-06-20 22:38:21','2021-06-
21 22:38:21',9,83),('2021-06-21 07:36:29','2021-06-
22 07:36:29',9,86),('2021-06-15 11:15:28','2021-06-
16 11:15:28',10,10),('2021-06-17 14:35:31','2021-06-
18 14:35:31',10,92),('2021-06-21 09:16:49','2021-06-
22 09:16:49',10,96),('2021-06-15 10:40:17','2021-06-
16 10:40:17',11,11),('2021-06-17 17:57:01','2021-06-
18 17:57:01',11,83),('2021-06-18 19:33:17','2021-06-
19 19:33:17',11,86),('2021-06-14 03:09:12','2021-06-
15 03:09:12',12,12),('2021-06-17 15:42:54','2021-06-
18 15:42:54',12,83),('2021-06-21 17:59:58','2021-06-
22 17:59:58',12,86),('2021-06-14 00:41:32','2021-06-
15 00:41:32',13,13),('2021-06-17 08:57:47','2021-06-
18 08:57:47',13,84),('2021-06-18 17:23:09','2021-06-
19 17:23:09',13,88),('2021-06-16 04:46:25','2021-06-
17 04:46:25',14,14),('2021-06-19 02:27:59','2021-06-
20 02:27:59',14,83),('2021-06-17 13:52:11','2021-06-
18 13:52:11',14,96),('2021-06-14 15:34:02','2021-06-
15 15:34:02',15,15),('2021-06-17 18:24:28','2021-06-
18 18:24:28',15,88),('2021-06-21 05:57:36','2021-06-
```

```
22 05:57:36',15,96),('2021-06-15 10:44:33','2021-06-
16 10:44:33',16,16),('2021-06-20 03:31:18','2021-06-
21 03:31:18',16,86),('2021-06-18 14:00:16','2021-06-
19 14:00:16',16,92),('2021-06-16 12:11:22','2021-06-
17 12:11:22',17,17),('2021-06-21 06:01:11','2021-06-
22 06:01:11',17,83),('2021-06-21 20:24:29','2021-06-
22 20:24:29',17,84),('2021-06-15 13:15:57','2021-06-
16 13:15:57',18,18),('2021-06-20 06:36:26','2021-06-
21 06:36:26',18,83),('2021-06-19 16:24:51','2021-06-
20 16:24:51',18,84),('2021-06-16 04:03:26','2021-06-
17 04:03:26',19,19),('2021-06-20 20:05:21','2021-06-
21 20:05:21',19,88),('2021-06-19 23:44:53','2021-06-
20 23:44:53',19,96),('2021-06-15 14:18:05','2021-06-
16 14:18:05',20,20),('2021-06-17 02:25:58','2021-06-
18 02:25:58',20,86),('2021-06-17 16:44:42','2021-06-
18 16:44:42',20,92),('2021-06-16 04:13:03','2021-06-
17 04:13:03',21,21),('2021-06-21 20:15:25','2021-06-
22 20:15:25',21,86),('2021-06-21 23:37:13','2021-06-
22 23:37:13',21,92),('2021-06-14 20:46:40','2021-06-
15 20:46:40',22,22),('2021-06-18 06:30:08','2021-06-
19 06:30:08',22,83),('2021-06-17 14:26:15','2021-06-
18 14:26:15',22,86),('2021-06-14 11:56:44','2021-06-
15 11:56:44',23,23),('2021-06-19 17:43:04','2021-06-
20 17:43:04',23,92),('2021-06-20 07:38:49','2021-06-
21 07:38:49',23,96),('2021-06-15 04:18:35','2021-06-
16 04:18:35',24,24),('2021-06-19 01:40:40','2021-06-
20 01:40:40',24,86),('2021-06-18 19:26:33','2021-06-
19 19:26:33',24,92),('2021-06-14 11:52:31','2021-06-
15 11:52:31',25,25),('2021-06-18 11:54:13','2021-06-
19 11:54:13',25,83),('2021-06-20 08:12:33','2021-06-
21 08:12:33',25,86),('2021-06-16 02:33:25','2021-06-
17 02:33:25',26,26),('2021-06-19 02:38:25','2021-06-
20 02:38:25',26,86),('2021-06-19 02:42:15','2021-06-
20 02:42:15',26,88),('2021-06-15 02:14:15','2021-06-
16 02:14:15',27,27),('2021-06-17 23:39:36','2021-06-
18 23:39:36',27,92),('2021-06-21 11:08:24','2021-06-
22 11:08:24',27,96),('2021-06-15 06:36:11','2021-06-
16 06:36:11',28,28),('2021-06-19 15:57:55','2021-06-
20 15:57:55',28,92),('2021-06-21 17:07:17','2021-06-
22 17:07:17',28,96),('2021-06-14 22:22:30','2021-06-
15 22:22:30',29,29),('2021-06-17 04:17:38','2021-06-
18 04:17:38',29,83),('2021-06-18 17:08:20','2021-06-
19 17:08:20',29,84),('2021-06-14 09:44:03','2021-06-
```

```sql
15 09:44:03',30,30),('2021-06-17 01:26:31','2021-06-
18 01:26:31',30,86),('2021-06-21 03:11:48','2021-06-
22 03:11:48',30,88);


-----------------------------------------------------------
----------------------


-
- SQL Code that was used for creating, displaying and updating the vi
ews of our database:

-- sales view creation:
CREATE VIEW sales as
SELECT B.service_description, COUNT(A.id_service) as sales_per_servic
e
FROM service_charge as A, services as B
WHERE A.id_service = B.id_service
GROUP BY B.service_description;

-- sales view display:
SELECT * FROM sales;


-
- sales view update: (the following one fails, as we'll see on the vi
deo question #8)
UPDATE sales
SET sales_per_service = 20
WHERE service_description = 'Restaurant';

-- customer_details view create:
CREATE VIEW customer_details as
SELECT * FROM customers;

-- customer_details view display:
SELECT * FROM customer_details;

-- customer_details view update:
UPDATE customer_details
SET first_name = 'John'
WHERE id_nfc = 1;


-----------------------------------------------------------
----------------------
```

```sql
-- SQL Code that was used for querying our database:

-- Query 7.1: Display all services available in our hotel:
SELECT *
FROM services;


- Query 7.2: Display all the service visits by our customers plus filters for further customization (1 sample filtered query):
SELECT S.id_service, C.id_nfc, SC.date_time_of_charge, SC.charge_description, SC.charge_amount, C.first_name, C.last_name, S.service_description
FROM service_charge AS SC, customers AS C, services AS S
WHERE SC.id_nfc = C.id_nfc AND SC.id_service = S.id_service AND S.service_description IN ("Room", "Restaurant", "Sauna") AND SC.charge_amount BETWEEN 0 AND 250 AND SC.date_time_of_charge BETWEEN '2021-06-18' AND '2021-06-21';


- Query 9: Display all places that are infected based on the id_nfc of Covid-19 infected customer (1 sample query with id_nfc = 1):
SELECT P.id_place, P.place_name, P.place_location, V.date_of_entry, V.date_of_exit
FROM visit AS V, customers AS C, places AS P
WHERE V.id_nfc = C.id_nfc AND V.id_place = P.id_place AND C.id_nfc = 1;


- Query 10 Display all the customers at risk based on the id_nfc of Covid-19 infected customer (1 sample query with id_nfc = 1):
SELECT C.first_name, C.last_name, C.id_nfc, B.id_place, B.date_of_entry, B.date_of_exit
FROM visit A, visit B, customers C
WHERE A.id_nfc = 1 AND B.id_nfc = C.id_nfc AND A.id_nfc <> B.id_nfc AND A.id_place = B.id_place AND NOT(B.date_of_entry > DATE_ADD(A.date_of_exit, INTERVAL 1 DAY) OR B.date_of_exit < A.date_of_entry);


- Query 11.1: Display most visited places for selected age group and time frame (2 sample queries for 2 age groups and past month/past year):
SELECT P.id_place, P.place_name, COUNT(P.id_place) as visits_count
```

```sql
FROM visit as V, places as P, customers as C
WHERE V.id_place = P.id_place AND V.id_nfc = C.id_nfc AND C.birthdate
 BETWEEN DATE_SUB(CURDATE(), INTERVAL 41 YEAR) AND DATE_SUB(CURDATE()
, INTERVAL 20 YEAR) AND V.date_of_entry >= DATE_SUB(CURDATE(), INTERV
AL 1 MONTH)
GROUP BY P.id_place
ORDER BY COUNT(P.id_place) DESC;

SELECT P.id_place, P.place_name, COUNT(P.id_place) as visits_count
FROM visit as V, places as P, customers as C
WHERE V.id_place = P.id_place AND V.id_nfc = C.id_nfc AND C.birthdate
 <= DATE_SUB(CURDATE(), INTERVAL 61 YEAR) AND V.date_of_entry >= DATE
_SUB(CURDATE(), INTERVAL 1 YEAR)
GROUP BY P.id_place
ORDER BY COUNT(P.id_place) DESC;


-
- Query 11.2: Display most used services for selected age group and t
ime frame (2 sample queries for 2 age groups and past month/past year
):
SELECT S.service_description, COUNT(V.id_service) as times_used
FROM service_charge as V, customers as C, services as S
WHERE  V.id_nfc = C.id_nfc AND V.id_service = S.id_service AND C.birt
hdate BETWEEN DATE_SUB(CURDATE(), INTERVAL 61 YEAR) AND DATE_SUB(CURD
ATE(), INTERVAL 41 YEAR) AND V.date_time_of_charge >= DATE_SUB(CURDAT
E(), INTERVAL 1 MONTH)
GROUP BY S.service_description
ORDER BY COUNT(V.id_service) DESC;

SELECT S.service_description, COUNT(V.id_service) as times_used
FROM service_charge as V, customers as C, services as S
WHERE  V.id_nfc = C.id_nfc AND V.id_service = S.id_service AND C.birt
hdate <= DATE_SUB(CURDATE(), INTERVAL 61 YEAR) AND V.date_time_of_cha
rge >= DATE_SUB(CURDATE(), INTERVAL 1 YEAR)
GROUP BY S.service_description
ORDER BY COUNT(V.id_service) DESC;


-
- Query 11.3: Display services with most customers for selected age g
roup and time frame (2 sample queries for 2 age groups and past month
/past year):
SELECT S.service_description, COUNT(DISTINCT C.id_nfc) as customers_c
ount
```

```sql
FROM customers as C, services as S, service_charge as R
WHERE R.id_service = S.id_service AND R.id_nfc = C.id_nfc AND C.birth
date BETWEEN DATE_SUB(CURDATE(), INTERVAL 41 YEAR) AND DATE_SUB(CURDA
TE(), INTERVAL 20 YEAR) AND R.date_time_of_charge >= DATE_SUB(CURDATE
(), INTERVAL 1 MONTH)
GROUP BY S.service_description
ORDER BY COUNT(DISTINCT C.id_nfc) DESC;

SELECT S.service_description, COUNT(DISTINCT C.id_nfc) as customers_c
ount
FROM customers as C, services as S, service_charge as R
WHERE R.id_service = S.id_service AND R.id_nfc = C.id_nfc AND C.birth
date BETWEEN DATE_SUB(CURDATE(), INTERVAL 61 YEAR) AND DATE_SUB(CURDA
TE(), INTERVAL 41 YEAR) AND R.date_time_of_charge >= DATE_SUB(CURDATE
(), INTERVAL 1 YEAR)
GROUP BY S.service_description
ORDER BY COUNT(DISTINCT C.id_nfc) DESC;
```

3. Παρακάτω βρίσκεται το μοναδικό αρχείο τεχνοδιαμόρφωσης (configuration) που χρειάζεται για την εγκατάσταση της εφαρμογής μας (δείτε και το αρχείο database.sql στο github repository, καθώς και τις οδηγίες εγκατάστασης της εφαρμογής μας στο ζητούμενο 1.d):

```sql
-- MySQL dump 10.13  Distrib 8.0.25, for Win64 (x86_64)
--
-- Host: localhost    Database: asdf_palace
-- ------------------------------------------------------
-- Server version 8.0.25

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!50503 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KE
Y_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZER
O' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;


--
-- Temporary view structure for view `customer_details`
--

DROP TABLE IF EXISTS `customer_details`;
/*!50001 DROP VIEW IF EXISTS `customer_details`*/;
SET @saved_cs_client     = @@character_set_client;
/*!50503 SET character_set_client = utf8mb4 */;
/*!50001 CREATE VIEW `customer_details` AS SELECT
 1 AS `id_nfc`,
 1 AS `first_name`,
 1 AS `last_name`,
 1 AS `birthdate`,
 1 AS `id_number`,
 1 AS `id_type`,
 1 AS `id_issuing_authority`*/;
SET character_set_client = @saved_cs_client;


--
```

```sql
-- Table structure for table `customers`
--

DROP TABLE IF EXISTS `customers`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `customers` (
  `id_nfc` int NOT NULL AUTO_INCREMENT,
  `first_name` varchar(45) NOT NULL,
  `last_name` varchar(45) NOT NULL,
  `birthdate` date NOT NULL,
  `id_number` varchar(45) NOT NULL,
  `id_type` varchar(45) NOT NULL,
  `id_issuing_authority` varchar(45) NOT NULL,
  PRIMARY KEY (`id_nfc`),
  UNIQUE KEY `id_customers_UNIQUE` (`id_nfc`)
) ENGINE=InnoDB AUTO_INCREMENT=31 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `customers`
--

LOCK TABLES `customers` WRITE;
/*!40000 ALTER TABLE `customers` DISABLE KEYS */;
INSERT INTO `customers` VALUES (1,'Alec','Ramos','1978-12-28','GP931119','ID Card','Police Department of Peiraias'),(2,'Tatiana','Adams','2005-08-02','HI537387','ID Card','Police Department of Zografos'),(3,'Nelle','Melton','2012-06-27','ME166639','ID Card','Police Department of Palaio Falhro'),(4,'Karina','Small','1982-06-28','HV313327','ID Card','Police Department of Keratsini'),(5,'Lara','Merritt','1963-10-14','BH004848','ID Card','Police Department of Glyfada'),(6,'Lareina','Bell','1973-04-22','OX704861','ID Card','Police Department of Glyfada'),(7,'Rina','Irwin','1997-01-23','RK813881','ID Card','Police Department of Alimos'),(8,'Adrian','Dorsey','1996-10-12','HQ344329','ID Card','Police Department of Menidi'),(9,'Riley','Green','2009-05-
```

01','UX041266','ID Card','Police Department of Elliniko'),(10,'Frances','Villarreal','1983-02-21','ND172069','ID Card','Police Department of Palaio Falhro'),(11,'Aurora','Howard','1981-11-27','IX231800','ID Card','Police Department of Glyfada'),(12,'Herrod','Burns','1982-10-18','UU226101','ID Card','Police Department of Nea Smyrni'),(13,'Alden','Banks','1973-12-23','AG787755','ID Card','Police Department of Keratsini'),(14,'Kimberly','Adkins','1981-05-21','SK246792','ID Card','Police Department of Palaio Falhro'),(15,'Hammett','Stone','1985-09-16','HC755915','ID Card','Police Department of Nea Smyrni'),(16,'Sybill','Guy','2001-04-20','WI611535','ID Card','Police Department of Menidi'),(17,'Mannix','Sandoval','2007-06-29','ZS506517','ID Card','Police Department of Glyfada'),(18,'Holly','Stephens','1985-09-17','TE058461','ID Card','Police Department of Athina'),(19,'Danielle','Savage','1960-12-22','RS915045','ID Card','Police Department of Keratsini'),(20,'Mia','Joyce','1964-09-11','RT346265','ID Card','Police Department of Alimos'),(21,'Beverly','Knox','1961-02-22','FQ2225692','Passport','Police Department of Korydallos'),(22,'Russell','Jenkins','2001-10-06','EI2546693','Passport','Police Department of Nea Smyrni'),(23,'Willow','Holt','2017-10-22','FV9407229','Passport','Police Department of Palaio Falhro'),(24,'Felicia','Bond','1999-11-18','GV4169106','Passport','Police Department of Kallithea'),(25,'Meredith','Doyle','1999-03-19','VN8441383','Passport','Police Department of Palaio Falhro'),(26,'Autumn','Hanson','1961-12-24','GM2268626','Passport','Police Department of Nikaia'),(27,'Cassandra','Kennedy','2015-02-26','ZR7792741','Passport','Police Department of Peristeri'),(28,'Stewart','Fields','2020-11-05','IA9784544','Passport','Police Department of Glyfada'),(29,'Cooper','Bass','1994-09-27','WD0721222','Passport','Police Department of Korydallos'),(30,'Jarrod','Grant','1958-01-01','IG4708477','Passport','Police Department of Glyfada');

```
/*!40000 ALTER TABLE `customers` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `emails`
--

DROP TABLE IF EXISTS `emails`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `emails` (
  `email_address` varchar(45) NOT NULL,
  `id_nfc` int NOT NULL,
  PRIMARY KEY (`email_address`,`id_nfc`),
  UNIQUE KEY `email_address_UNIQUE` (`email_address`),
  KEY `email_id_nfc_idx` (`id_nfc`),
  CONSTRAINT `email_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `custom
ers` (`id_nfc`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `emails`
--

LOCK TABLES `emails` WRITE;
/*!40000 ALTER TABLE `emails` DISABLE KEYS */;
INSERT INTO `emails` VALUES ('alecramos65@gmail.com',1),('tatianaadam
s15@gmail.com',2),('nellemelton71@gmail.com',3),('karinasmall87@gmail
.com',4),('laramerritt48@gmail.com',5),('lareinabell86@gmail.com',6),
('rinairwin62@gmail.com',7),('adriandorsey12@gmail.com',8),('rileygre
en39@gmail.com',9),('francesvillarreal99@gmail.com',10),('aurorahowar
d88@gmail.com',11),('herrodburns91@gmail.com',12),('aldenbanks34@gmai
l.com',13),('kimberlyadkins11@gmail.com',14),('hammettstone28@gmail.c
om',15),('sybillguy44@gmail.com',16),('mannixsandoval16@gmail.com',17
),('hollystephens78@gmail.com',18),('daniellesavage81@gmail.com',19),
('miajoyce85@gmail.com',20),('beverlyknox78@gmail.com',21),('russellj
enkins75@gmail.com',22),('willowholt37@gmail.com',23),('feliciabond23
@gmail.com',24),('meredithdoyle74@gmail.com',25),('autumnhanson73@gma
il.com',26),('cassandrakennedy44@gmail.com',27),('stewartfields28@gma
il.com',28),('cooperbass57@gmail.com',29),('jarrodgrant54@gmail.com',
30);
/*!40000 ALTER TABLE `emails` ENABLE KEYS */;
```

```sql
UNLOCK TABLES;

--
-- Table structure for table `has_access`
--

DROP TABLE IF EXISTS `has_access`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `has_access` (
  `date_of_registration` datetime NOT NULL,
  `date_of_deregistration` datetime NOT NULL,
  `id_nfc` int NOT NULL,
  `id_place` int NOT NULL,
  PRIMARY KEY (`id_nfc`,`id_place`),
  KEY `acess_id_place_idx` (`id_place`),
  CONSTRAINT `access_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `custo
mers` (`id_nfc`),
  CONSTRAINT `acess_id_place` FOREIGN KEY (`id_place`) REFERENCES `pl
aces` (`id_place`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `has_access`
--

LOCK TABLES `has_access` WRITE;
/*!40000 ALTER TABLE `has_access` DISABLE KEYS */;
INSERT INTO `has_access` VALUES ('2021-06-15 23:24:58','2021-06-
22 23:24:58',1,1),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,86),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,87),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,90),('2021-06-17 09:20:10','2021-06-
24 09:20:10',1,92),('2021-06-17 09:20:10','2021-06-
24 09:20:10',1,93),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,94),('2021-06-20 00:11:27','2021-06-
27 00:11:27',1,95),('2021-06-16 07:15:48','2021-06-
23 07:15:48',2,2),('2021-06-21 13:51:55','2021-06-
28 13:51:55',2,83),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,86),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,87),('2021-06-18 15:42:33','2021-06-
25 15:42:33',2,90),('2021-06-18 15:42:33','2021-06-
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25 15:42:33',2,95),('2021-06-15 05:37:47','2021-06-
22 05:37:47',3,3),('2021-06-20 03:15:00','2021-06-
27 03:15:00',3,88),('2021-06-20 03:15:00','2021-06-
27 03:15:00',3,89),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,96),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,97),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,98),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,99),('2021-06-19 17:45:36','2021-06-
26 17:45:36',3,100),('2021-06-16 06:58:18','2021-06-
23 06:58:18',4,4),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,86),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,87),('2021-06-17 18:39:19','2021-06-
24 18:39:19',4,88),('2021-06-17 18:39:19','2021-06-
24 18:39:19',4,89),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,90),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,94),('2021-06-20 06:08:41','2021-06-
27 06:08:41',4,95),('2021-06-14 14:20:21','2021-06-
21 14:20:21',5,5),('2021-06-19 16:57:27','2021-06-
26 16:57:27',5,83),('2021-06-21 01:51:19','2021-06-
28 01:51:19',5,84),('2021-06-21 01:51:19','2021-06-
28 01:51:19',5,85),('2021-06-15 04:40:11','2021-06-
22 04:40:11',6,6),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,86),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,87),('2021-06-18 14:05:29','2021-06-
25 14:05:29',6,90),('2021-06-18 18:35:36','2021-06-
25 18:35:36',6,92),('2021-06-18 18:35:36','2021-06-
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25 14:05:29',6,95),('2021-06-16 16:10:10','2021-06-
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24 23:13:44',7,90),('2021-06-19 09:51:44','2021-06-
26 09:51:44',7,92),('2021-06-19 09:51:44','2021-06-
26 09:51:44',7,93),('2021-06-17 23:13:44','2021-06-
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25 01:24:26',8,89),('2021-06-14 11:09:05','2021-06-
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28 07:36:29',9,90),('2021-06-21 07:36:29','2021-06-
28 07:36:29',9,94),('2021-06-21 07:36:29','2021-06-
28 07:36:29',9,95),('2021-06-15 11:15:28','2021-06-
22 11:15:28',10,10),('2021-06-17 14:35:31','2021-06-
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24 14:35:31',10,93),('2021-06-21 09:16:49','2021-06-
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28 09:16:49',10,99),('2021-06-21 09:16:49','2021-06-
28 09:16:49',10,100),('2021-06-15 10:40:17','2021-06-
22 10:40:17',11,11),('2021-06-17 17:57:01','2021-06-
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25 19:33:17',11,86),('2021-06-18 19:33:17','2021-06-
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25 19:33:17',11,95),('2021-06-14 03:09:12','2021-06-
21 03:09:12',12,12),('2021-06-17 15:42:54','2021-06-
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28 17:59:58',12,94),('2021-06-21 17:59:58','2021-06-
28 17:59:58',12,95),('2021-06-14 00:41:32','2021-06-
21 00:41:32',13,13),('2021-06-17 08:57:47','2021-06-
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24 13:52:11',14,100),('2021-06-14 15:34:02','2021-06-
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28 05:57:36',15,99),('2021-06-21 05:57:36','2021-06-
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26 02:38:25',26,95),('2021-06-15 02:14:15','2021-06-
22 02:14:15',27,27),('2021-06-17 23:39:36','2021-06-
24 23:39:36',27,92),('2021-06-17 23:39:36','2021-06-
```

```
24 23:39:36',27,93),('2021-06-21 11:08:24','2021-06-
28 11:08:24',27,96),('2021-06-21 11:08:24','2021-06-
28 11:08:24',27,97),('2021-06-21 11:08:24','2021-06-
28 11:08:24',27,98),('2021-06-21 11:08:24','2021-06-
28 11:08:24',27,99),('2021-06-21 11:08:24','2021-06-
28 11:08:24',27,100),('2021-06-15 06:36:11','2021-06-
22 06:36:11',28,28),('2021-06-19 15:57:55','2021-06-
26 15:57:55',28,92),('2021-06-19 15:57:55','2021-06-
26 15:57:55',28,93),('2021-06-21 17:07:17','2021-06-
28 17:07:17',28,96),('2021-06-21 17:07:17','2021-06-
28 17:07:17',28,97),('2021-06-21 17:07:17','2021-06-
28 17:07:17',28,98),('2021-06-21 17:07:17','2021-06-
28 17:07:17',28,99),('2021-06-21 17:07:17','2021-06-
28 17:07:17',28,100),('2021-06-14 22:22:30','2021-06-
21 22:22:30',29,29),('2021-06-17 04:17:38','2021-06-
24 04:17:38',29,83),('2021-06-18 17:08:20','2021-06-
25 17:08:20',29,84),('2021-06-18 17:08:20','2021-06-
25 17:08:20',29,85),('2021-06-14 09:44:03','2021-06-
21 09:44:03',30,30),('2021-06-17 01:26:31','2021-06-
24 01:26:31',30,86),('2021-06-17 01:26:31','2021-06-
24 01:26:31',30,87),('2021-06-21 03:11:48','2021-06-
28 03:11:48',30,88),('2021-06-21 03:11:48','2021-06-
28 03:11:48',30,89),('2021-06-17 01:26:31','2021-06-
24 01:26:31',30,90),('2021-06-17 01:26:31','2021-06-
24 01:26:31',30,94),('2021-06-17 01:26:31','2021-06-
24 01:26:31',30,95);
/*!40000 ALTER TABLE `has_access` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `is_provided_on`
--

DROP TABLE IF EXISTS `is_provided_on`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `is_provided_on` (
  `id_service` int NOT NULL,
  `id_place` int NOT NULL,
  PRIMARY KEY (`id_service`,`id_place`),
  KEY `provided_id_place_idx` (`id_place`),
  CONSTRAINT `provided_id_place` FOREIGN KEY (`id_place`) REFERENCES
`places` (`id_place`),
```

```sql
  CONSTRAINT `provided_id_service` FOREIGN KEY (`id_service`) REFEREN
CES `services` (`id_service`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `is_provided_on`
--

LOCK TABLES `is_provided_on` WRITE;
/*!40000 ALTER TABLE `is_provided_on` DISABLE KEYS */;
INSERT INTO `is_provided_on` VALUES (1,1),(1,2),(1,3),(1,4),(1,5),(1,
6),(1,7),(1,8),(1,9),(1,10),(1,11),(1,12),(1,13),(1,14),(1,15),(1,16)
,(1,17),(1,18),(1,19),(1,20),(1,21),(1,22),(1,23),(1,24),(1,25),(1,26
),(1,27),(1,28),(1,29),(1,30),(1,31),(1,32),(1,33),(1,34),(1,35),(1,3
6),(1,37),(1,38),(1,39),(1,40),(1,41),(1,42),(1,43),(1,44),(1,45),(1,
46),(1,47),(1,48),(1,49),(1,50),(1,51),(1,52),(1,53),(1,54),(1,55),(1
,56),(1,57),(1,58),(1,59),(1,60),(1,61),(1,62),(1,63),(1,64),(1,65),(
1,66),(1,67),(1,68),(1,69),(1,70),(1,71),(1,72),(1,73),(1,74),(1,75),
(1,76),(1,77),(1,78),(1,79),(1,80),(3,83),(7,84),(7,85),(5,86),(5,87)
,(4,88),(4,89),(5,90),(2,92),(2,93),(5,94),(5,95),(6,96),(6,97),(6,98
),(6,99),(6,100);
/*!40000 ALTER TABLE `is_provided_on` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `phone_numbers`
--

DROP TABLE IF EXISTS `phone_numbers`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `phone_numbers` (
  `phone_number` varchar(45) NOT NULL,
  `id_nfc` int NOT NULL,
  PRIMARY KEY (`phone_number`,`id_nfc`),
  UNIQUE KEY `phone_number_UNIQUE` (`phone_number`),
  KEY `phone_id_nfc_idx` (`id_nfc`),
  CONSTRAINT `phone_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `custom
ers` (`id_nfc`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```sql
--
-- Dumping data for table `phone_numbers`
--

LOCK TABLES `phone_numbers` WRITE;
/*!40000 ALTER TABLE `phone_numbers` DISABLE KEYS */;
INSERT INTO `phone_numbers` VALUES ('306971425751',1),('306992000593'
,2),('306978387325',3),('306966392689',4),('306963355682',5),('306914
031388',6),('306922866300',7),('306946469204',8),('306996896971',9),(
'306920886896',10),('306930489270',11),('306919226114',12),('30692056
8115',13),('306981768415',14),('306939903642',15),('306958115721',16)
,('306935483209',17),('306990863739',18),('306964200890',19),('306900
723826',20),('306931340699',21),('306994539814',22),('306930251430',2
3),('306918765120',24),('306914368190',25),('306918823870',26),('3069
99956040',27),('306917041561',28),('306914756514',29),('306983929486'
,30);
/*!40000 ALTER TABLE `phone_numbers` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `places`
--

DROP TABLE IF EXISTS `places`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `places` (
  `id_place` int NOT NULL AUTO_INCREMENT,
  `place_name` varchar(45) NOT NULL,
  `bed_count` tinyint(1) NOT NULL,
  `place_location` varchar(45) NOT NULL,
  PRIMARY KEY (`id_place`),
  UNIQUE KEY `id_place_UNIQUE` (`id_place`)
) ENGINE=InnoDB AUTO_INCREMENT=101 DEFAULT CHARSET=utf8mb4 COLLATE=ut
f8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `places`
--

LOCK TABLES `places` WRITE;
/*!40000 ALTER TABLE `places` DISABLE KEYS */;
```

```sql
INSERT INTO `places` VALUES (1,'Room',2,'4 South'),(2,'Room',2,'4 Sou
th'),(3,'Room',3,'1 North'),(4,'Room',2,'2 South'),(5,'Room',2,'1 Sou
th'),(6,'Room',4,'1 East'),(7,'Room',4,'1 North'),(8,'Room',2,'4 West
'),(9,'Room',1,'4 West'),(10,'Room',3,'4 West'),(11,'Room',2,'3 North
'),(12,'Room',2,'2 West'),(13,'Room',4,'4 West'),(14,'Room',1,'4 East
'),(15,'Room',4,'1 North'),(16,'Room',1,'5 North'),(17,'Room',2,'4 So
uth'),(18,'Room',3,'3 South'),(19,'Room',4,'3 North'),(20,'Room',2,'1
 South'),(21,'Room',3,'4 West'),(22,'Room',4,'2 South'),(23,'Room',4,
'2 North'),(24,'Room',4,'2 South'),(25,'Room',2,'4 East'),(26,'Room',
4,'1 West'),(27,'Room',3,'1 West'),(28,'Room',3,'5 West'),(29,'Room',
2,'2 East'),(30,'Room',4,'1 West'),(31,'Room',1,'1 North'),(32,'Room'
,4,'5 East'),(33,'Room',3,'3 North'),(34,'Room',4,'5 East'),(35,'Room
',3,'1 North'),(36,'Room',3,'2 East'),(37,'Room',1,'1 South'),(38,'Ro
om',3,'3 South'),(39,'Room',2,'5 West'),(40,'Room',3,'3 North'),(41,'
Room',4,'1 South'),(42,'Room',2,'4 South'),(43,'Room',3,'3 North'),(4
4,'Room',2,'2 West'),(45,'Room',4,'1 North'),(46,'Room',1,'1 South'),
(47,'Room',4,'2 West'),(48,'Room',4,'3 North'),(49,'Room',2,'1 North'
),(50,'Room',2,'5 West'),(51,'Room',4,'3 North'),(52,'Room',1,'3 Sout
h'),(53,'Room',2,'3 East'),(54,'Room',3,'1 North'),(55,'Room',3,'5 We
st'),(56,'Room',1,'5 East'),(57,'Room',3,'5 East'),(58,'Room',1,'4 Ea
st'),(59,'Room',2,'2 South'),(60,'Room',4,'4 North'),(61,'Room',4,'3
East'),(62,'Room',3,'1 North'),(63,'Room',1,'4 East'),(64,'Room',3,'4
 West'),(65,'Room',2,'3 West'),(66,'Room',2,'3 North'),(67,'Room',1,'
5 East'),(68,'Room',1,'2 South'),(69,'Room',1,'1 East'),(70,'Room',4,
'2 North'),(71,'Room',1,'2 South'),(72,'Room',2,'5 North'),(73,'Room'
,3,'1 North'),(74,'Room',3,'1 South'),(75,'Room',3,'1 North'),(76,'Ro
om',1,'1 North'),(77,'Room',3,'4 East'),(78,'Room',3,'1 East'),(79,'R
oom',4,'1 West'),(80,'Room',1,'3 North'),(81,'Reception',0,'1 South')
,(82,'Elevator',0,'1 North'),(83,'Barbershop',0,'1 East'),(84,'Gym',0
,'5 South'),(85,'Gym',0,'3 East'),(86,'Conference Room',0,'1 North'),
(87,'Conference Room',0,'1 West'),(88,'Restaurant',0,'5 West'),(89,'R
estaurant',0,'1 South'),(90,'Conference Room',0,'5 North'),(91,'Eleva
tor',0,'1 South'),(92,'Bar',0,'5 South'),(93,'Bar',0,'4 East'),(94,'C
onference Room',0,'4 North'),(95,'Conference Room',0,'1 North'),(96,'
Sauna',0,'2 West'),(97,'Sauna',0,'3 West'),(98,'Sauna',0,'3 East'),(9
9,'Sauna',0,'5 South'),(100,'Sauna',0,'3 West');
/*!40000 ALTER TABLE `places` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `register_for`
--
```

```sql
DROP TABLE IF EXISTS `register_for`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `register_for` (
  `date_of_registration` datetime NOT NULL,
  `id_nfc` int NOT NULL,
  `id_service` int NOT NULL,
  PRIMARY KEY (`id_nfc`,`id_service`),
  KEY `register_id_service_idx` (`id_service`),
  CONSTRAINT `register_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `cus
tomers` (`id_nfc`),
  CONSTRAINT `register_id_service` FOREIGN KEY (`id_service`) REFEREN
CES `services` (`id_service`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `register_for`
--

LOCK TABLES `register_for` WRITE;
/*!40000 ALTER TABLE `register_for` DISABLE KEYS */;
INSERT INTO `register_for` VALUES ('2021-06-15 23:24:58',1,1),('2021-
06-17 09:20:10',1,2),('2021-06-20 00:11:27',1,5),('2021-06-
16 07:15:48',2,1),('2021-06-21 13:51:55',2,3),('2021-06-
18 15:42:33',2,5),('2021-06-15 05:37:47',3,1),('2021-06-
20 03:15:00',3,4),('2021-06-19 17:45:36',3,6),('2021-06-
16 06:58:18',4,1),('2021-06-17 18:39:19',4,4),('2021-06-
20 06:08:41',4,5),('2021-06-14 14:20:21',5,1),('2021-06-
19 16:57:27',5,3),('2021-06-21 01:51:19',5,7),('2021-06-
15 04:40:11',6,1),('2021-06-18 18:35:36',6,2),('2021-06-
18 14:05:29',6,5),('2021-06-16 16:10:10',7,1),('2021-06-
19 09:51:44',7,2),('2021-06-17 23:13:44',7,5),('2021-06-
15 09:20:49',8,1),('2021-06-18 01:24:26',8,4),('2021-06-
18 08:40:43',8,7),('2021-06-14 11:09:05',9,1),('2021-06-
20 22:38:21',9,3),('2021-06-21 07:36:29',9,5),('2021-06-
15 11:15:28',10,1),('2021-06-17 14:35:31',10,2),('2021-06-
21 09:16:49',10,6),('2021-06-15 10:40:17',11,1),('2021-06-
17 17:57:01',11,3),('2021-06-18 19:33:17',11,5),('2021-06-
14 03:09:12',12,1),('2021-06-17 15:42:54',12,3),('2021-06-
21 17:59:58',12,5),('2021-06-14 00:41:32',13,1),('2021-06-
18 17:23:09',13,4),('2021-06-17 08:57:47',13,7),('2021-06-
16 04:46:25',14,1),('2021-06-19 02:27:59',14,3),('2021-06-
```

```
17 13:52:11',14,6),('2021-06-14 15:34:02',15,1),('2021-06-
17 18:24:28',15,4),('2021-06-21 05:57:36',15,6),('2021-06-
15 10:44:33',16,1),('2021-06-18 14:00:16',16,2),('2021-06-
20 03:31:18',16,5),('2021-06-16 12:11:22',17,1),('2021-06-
21 06:01:11',17,3),('2021-06-21 20:24:29',17,7),('2021-06-
15 13:15:57',18,1),('2021-06-20 06:36:26',18,3),('2021-06-
19 16:24:51',18,7),('2021-06-16 04:03:26',19,1),('2021-06-
20 20:05:21',19,4),('2021-06-19 23:44:53',19,6),('2021-06-
15 14:18:05',20,1),('2021-06-17 16:44:42',20,2),('2021-06-
17 02:25:58',20,5),('2021-06-16 04:13:03',21,1),('2021-06-
21 23:37:13',21,2),('2021-06-21 20:15:25',21,5),('2021-06-
14 20:46:40',22,1),('2021-06-18 06:30:08',22,3),('2021-06-
17 14:26:15',22,5),('2021-06-14 11:56:44',23,1),('2021-06-
19 17:43:04',23,2),('2021-06-20 07:38:49',23,6),('2021-06-
15 04:18:35',24,1),('2021-06-18 19:26:33',24,2),('2021-06-
19 01:40:40',24,5),('2021-06-14 11:52:31',25,1),('2021-06-
18 11:54:13',25,3),('2021-06-20 08:12:33',25,5),('2021-06-
16 02:33:25',26,1),('2021-06-19 02:42:15',26,4),('2021-06-
19 02:38:25',26,5),('2021-06-15 02:14:15',27,1),('2021-06-
17 23:39:36',27,2),('2021-06-21 11:08:24',27,6),('2021-06-
15 06:36:11',28,1),('2021-06-19 15:57:55',28,2),('2021-06-
21 17:07:17',28,6),('2021-06-14 22:22:30',29,1),('2021-06-
17 04:17:38',29,3),('2021-06-18 17:08:20',29,7),('2021-06-
14 09:44:03',30,1),('2021-06-21 03:11:48',30,4),('2021-06-
17 01:26:31',30,5);
/*!40000 ALTER TABLE `register_for` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Temporary view structure for view `sales`
--

DROP TABLE IF EXISTS `sales`;
/*!50001 DROP VIEW IF EXISTS `sales`*/;
SET @saved_cs_client     = @@character_set_client;
/*!50503 SET character_set_client = utf8mb4 */;
/*!50001 CREATE VIEW `sales` AS SELECT
 1 AS `service_description`,
 1 AS `sales_per_service`*/;
SET character_set_client = @saved_cs_client;

--
-- Table structure for table `service_charge`
```

```sql
--

DROP TABLE IF EXISTS `service_charge`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `service_charge` (
  `date_time_of_charge` datetime(1) NOT NULL,
  `charge_description` varchar(45) NOT NULL,
  `charge_amount` float NOT NULL,
  `id_nfc` int NOT NULL,
  `id_service` int NOT NULL,
  PRIMARY KEY (`date_time_of_charge`,`id_service`,`id_nfc`),
  KEY `charge_id_nfc_idx` (`id_nfc`),
  KEY `charge_id_service_idx` (`id_service`),
  CONSTRAINT `charge_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `custo
mers` (`id_nfc`),
  CONSTRAINT `charge_id_service` FOREIGN KEY (`id_service`) REFERENCE
S `services` (`id_service`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `service_charge`
--

LOCK TABLES `service_charge` WRITE;
/*!40000 ALTER TABLE `service_charge` DISABLE KEYS */;
INSERT INTO `service_charge` VALUES ('2021-06-
14 00:41:32.0','Accommodation fee',200,13,1),('2021-06-
14 03:09:12.0','Accommodation fee',500,12,1),('2021-06-
14 09:44:03.0','Accommodation fee',200,30,1),('2021-06-
14 11:09:05.0','Accommodation fee',500,9,1),('2021-06-
14 11:52:31.0','Accommodation fee',200,25,1),('2021-06-
14 11:56:44.0','Accommodation fee',200,23,1),('2021-06-
14 14:20:21.0','Accommodation fee',500,5,1),('2021-06-
14 15:34:02.0','Accommodation fee',200,15,1),('2021-06-
14 20:46:40.0','Accommodation fee',500,22,1),('2021-06-
14 22:22:30.0','Accommodation fee',200,29,1),('2021-06-
15 02:14:15.0','Accommodation fee',200,27,1),('2021-06-
15 04:18:35.0','Accommodation fee',200,24,1),('2021-06-
15 04:40:11.0','Accommodation fee',500,6,1),('2021-06-
15 05:37:47.0','Accommodation fee',500,3,1),('2021-06-
15 06:36:11.0','Accommodation fee',200,28,1),('2021-06-
```

```
15 09:20:49.0','Accommodation fee',200,8,1),('2021-06-
15 10:40:17.0','Accommodation fee',200,11,1),('2021-06-
15 10:44:33.0','Accommodation fee',500,16,1),('2021-06-
15 11:15:28.0','Accommodation fee',500,10,1),('2021-06-
15 13:15:57.0','Accommodation fee',500,18,1),('2021-06-
15 14:18:05.0','Accommodation fee',500,20,1),('2021-06-
15 23:24:58.0','Accommodation fee',500,1,1),('2021-06-
16 02:33:25.0','Accommodation fee',200,26,1),('2021-06-
16 04:03:26.0','Accommodation fee',200,19,1),('2021-06-
16 04:13:03.0','Accommodation fee',200,21,1),('2021-06-
16 04:46:25.0','Accommodation fee',500,14,1),('2021-06-
16 06:58:18.0','Accommodation fee',200,4,1),('2021-06-
16 07:15:48.0','Accommodation fee',200,2,1),('2021-06-
16 12:11:22.0','Accommodation fee',200,17,1),('2021-06-
16 16:10:10.0','Accommodation fee',500,7,1),('2021-06-
17 01:26:31.0','Meeting room rental fee',100,30,5),('2021-06-
17 02:25:58.0','Meeting room rental fee',100,20,5),('2021-06-
17 04:17:38.0','Haircut fee',15,29,3),('2021-06-
17 08:57:47.0','Gym membership fee',25,13,7),('2021-06-
17 09:20:10.0','Beverage fee',10,1,2),('2021-06-
17 13:52:11.0','Steam room fee',20,14,6),('2021-06-
17 14:26:15.0','Meeting room rental fee',100,22,5),('2021-06-
17 14:35:31.0','Beverage fee',10,10,2),('2021-06-
17 15:42:54.0','Haircut fee',15,12,3),('2021-06-
17 16:44:42.0','Beverage fee',10,20,2),('2021-06-
17 17:57:01.0','Haircut fee',15,11,3),('2021-06-
17 18:24:28.0','Dining fee',30,15,4),('2021-06-
17 18:39:19.0','Dining fee',30,4,4),('2021-06-
17 23:13:44.0','Meeting room rental fee',100,7,5),('2021-06-
17 23:39:36.0','Beverage fee',10,27,2),('2021-06-
18 01:24:26.0','Dining fee',30,8,4),('2021-06-
18 06:30:08.0','Haircut fee',15,22,3),('2021-06-
18 08:40:43.0','Gym membership fee',25,8,7),('2021-06-
18 11:54:13.0','Haircut fee',15,25,3),('2021-06-
18 14:00:16.0','Beverage fee',10,16,2),('2021-06-
18 14:05:29.0','Meeting room rental fee',100,6,5),('2021-06-
18 15:42:33.0','Meeting room rental fee',100,2,5),('2021-06-
18 17:08:20.0','Gym membership fee',25,29,7),('2021-06-
18 17:23:09.0','Dining fee',30,13,4),('2021-06-
18 18:35:36.0','Beverage fee',10,6,2),('2021-06-
18 19:26:33.0','Beverage fee',10,24,2),('2021-06-
18 19:33:17.0','Meeting room rental fee',100,11,5),('2021-06-
19 01:40:40.0','Meeting room rental fee',100,24,5),('2021-06-
```

```sql
19 02:27:59.0','Haircut fee',15,14,3),('2021-06-
19 02:38:25.0','Meeting room rental fee',100,26,5),('2021-06-
19 02:42:15.0','Dining fee',30,26,4),('2021-06-
19 09:51:44.0','Beverage fee',10,7,2),('2021-06-
19 15:57:55.0','Beverage fee',10,28,2),('2021-06-
19 16:24:51.0','Gym membership fee',25,18,7),('2021-06-
19 16:57:27.0','Haircut fee',15,5,3),('2021-06-
19 17:43:04.0','Beverage fee',10,23,2),('2021-06-
19 17:45:36.0','Steam room fee',20,3,6),('2021-06-
19 23:44:53.0','Steam room fee',20,19,6),('2021-06-
20 00:11:27.0','Meeting room rental fee',100,1,5),('2021-06-
20 03:15:00.0','Dining fee',30,3,4),('2021-06-
20 03:31:18.0','Meeting room rental fee',100,16,5),('2021-06-
20 06:08:41.0','Meeting room rental fee',100,4,5),('2021-06-
20 06:36:26.0','Haircut fee',15,18,3),('2021-06-
20 07:38:49.0','Steam room fee',20,23,6),('2021-06-
20 08:12:33.0','Meeting room rental fee',100,25,5),('2021-06-
20 20:05:21.0','Dining fee',30,19,4),('2021-06-
20 22:38:21.0','Haircut fee',15,9,3),('2021-06-
21 01:51:19.0','Gym membership fee',25,5,7),('2021-06-
21 03:11:48.0','Dining fee',30,30,4),('2021-06-
21 05:57:36.0','Steam room fee',20,15,6),('2021-06-
21 06:01:11.0','Haircut fee',15,17,3),('2021-06-
21 07:36:29.0','Meeting room rental fee',100,9,5),('2021-06-
21 09:16:49.0','Steam room fee',20,10,6),('2021-06-
21 11:08:24.0','Steam room fee',20,27,6),('2021-06-
21 13:51:55.0','Haircut fee',15,2,3),('2021-06-
21 17:07:17.0','Steam room fee',20,28,6),('2021-06-
21 17:59:58.0','Meeting room rental fee',100,12,5),('2021-06-
21 20:15:25.0','Meeting room rental fee',100,21,5),('2021-06-
21 20:24:29.0','Gym membership fee',25,17,7),('2021-06-
21 23:37:13.0','Beverage fee',10,21,2);
/*!40000 ALTER TABLE `service_charge` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `services`
--

DROP TABLE IF EXISTS `services`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `services` (
```

```sql
  `id_service` int NOT NULL AUTO_INCREMENT,
  `service_description` varchar(45) NOT NULL,
  `needs_registration` tinyint(1) NOT NULL,
  PRIMARY KEY (`id_service`),
  UNIQUE KEY `id_service_UNIQUE` (`id_service`)
) ENGINE=InnoDB AUTO_INCREMENT=8 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `services`
--

LOCK TABLES `services` WRITE;
/*!40000 ALTER TABLE `services` DISABLE KEYS */;
INSERT INTO `services` VALUES (1,'Room',1),(2,'Bar',0),(3,'Barbershop',0),(4,'Restaurant',0),(5,'Conference Room',1),(6,'Sauna',1),(7,'Gym',1);
/*!40000 ALTER TABLE `services` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Table structure for table `visit`
--

DROP TABLE IF EXISTS `visit`;
/*!40101 SET @saved_cs_client     = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `visit` (
  `date_of_entry` datetime NOT NULL,
  `date_of_exit` datetime NOT NULL,
  `id_nfc` int NOT NULL,
  `id_place` int NOT NULL,
  PRIMARY KEY (`id_nfc`,`id_place`),
  KEY `visit_id_place_idx` (`id_place`),
  CONSTRAINT `visit_id_nfc` FOREIGN KEY (`id_nfc`) REFERENCES `customers` (`id_nfc`),
  CONSTRAINT `visit_id_place` FOREIGN KEY (`id_place`) REFERENCES `places` (`id_place`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
```

```
-- Dumping data for table `visit`
--

LOCK TABLES `visit` WRITE;
/*!40000 ALTER TABLE `visit` DISABLE KEYS */;
INSERT INTO `visit` VALUES ('2021-06-15 23:24:58','2021-06-
16 23:24:58',1,1),('2021-06-20 00:11:27','2021-06-
21 00:11:27',1,86),('2021-06-17 09:20:10','2021-06-
18 09:20:10',1,92),('2021-06-16 07:15:48','2021-06-
17 07:15:48',2,2),('2021-06-21 13:51:55','2021-06-
22 13:51:55',2,83),('2021-06-18 15:42:33','2021-06-
19 15:42:33',2,86),('2021-06-15 05:37:47','2021-06-
16 05:37:47',3,3),('2021-06-20 03:15:00','2021-06-
21 03:15:00',3,88),('2021-06-19 17:45:36','2021-06-
20 17:45:36',3,96),('2021-06-16 06:58:18','2021-06-
17 06:58:18',4,4),('2021-06-20 06:08:41','2021-06-
21 06:08:41',4,86),('2021-06-17 18:39:19','2021-06-
18 18:39:19',4,88),('2021-06-14 14:20:21','2021-06-
15 14:20:21',5,5),('2021-06-19 16:57:27','2021-06-
20 16:57:27',5,83),('2021-06-21 01:51:19','2021-06-
22 01:51:19',5,84),('2021-06-15 04:40:11','2021-06-
16 04:40:11',6,6),('2021-06-18 14:05:29','2021-06-
19 14:05:29',6,86),('2021-06-18 18:35:36','2021-06-
19 18:35:36',6,92),('2021-06-16 16:10:10','2021-06-
17 16:10:10',7,7),('2021-06-17 23:13:44','2021-06-
18 23:13:44',7,86),('2021-06-19 09:51:44','2021-06-
20 09:51:44',7,92),('2021-06-15 09:20:49','2021-06-
16 09:20:49',8,8),('2021-06-18 08:40:43','2021-06-
19 08:40:43',8,84),('2021-06-18 01:24:26','2021-06-
19 01:24:26',8,88),('2021-06-14 11:09:05','2021-06-
15 11:09:05',9,9),('2021-06-20 22:38:21','2021-06-
21 22:38:21',9,83),('2021-06-21 07:36:29','2021-06-
22 07:36:29',9,86),('2021-06-15 11:15:28','2021-06-
16 11:15:28',10,10),('2021-06-17 14:35:31','2021-06-
18 14:35:31',10,92),('2021-06-21 09:16:49','2021-06-
22 09:16:49',10,96),('2021-06-15 10:40:17','2021-06-
16 10:40:17',11,11),('2021-06-17 17:57:01','2021-06-
18 17:57:01',11,83),('2021-06-18 19:33:17','2021-06-
19 19:33:17',11,86),('2021-06-14 03:09:12','2021-06-
15 03:09:12',12,12),('2021-06-17 15:42:54','2021-06-
18 15:42:54',12,83),('2021-06-21 17:59:58','2021-06-
22 17:59:58',12,86),('2021-06-14 00:41:32','2021-06-
15 00:41:32',13,13),('2021-06-17 08:57:47','2021-06-
```

18 08:57:47',13,84),('2021-06-18 17:23:09','2021-06-
19 17:23:09',13,88),('2021-06-16 04:46:25','2021-06-
17 04:46:25',14,14),('2021-06-19 02:27:59','2021-06-
20 02:27:59',14,83),('2021-06-17 13:52:11','2021-06-
18 13:52:11',14,96),('2021-06-14 15:34:02','2021-06-
15 15:34:02',15,15),('2021-06-17 18:24:28','2021-06-
18 18:24:28',15,88),('2021-06-21 05:57:36','2021-06-
22 05:57:36',15,96),('2021-06-15 10:44:33','2021-06-
16 10:44:33',16,16),('2021-06-20 03:31:18','2021-06-
21 03:31:18',16,86),('2021-06-18 14:00:16','2021-06-
19 14:00:16',16,92),('2021-06-16 12:11:22','2021-06-
17 12:11:22',17,17),('2021-06-21 06:01:11','2021-06-
22 06:01:11',17,83),('2021-06-21 20:24:29','2021-06-
22 20:24:29',17,84),('2021-06-15 13:15:57','2021-06-
16 13:15:57',18,18),('2021-06-20 06:36:26','2021-06-
21 06:36:26',18,83),('2021-06-19 16:24:51','2021-06-
20 16:24:51',18,84),('2021-06-16 04:03:26','2021-06-
17 04:03:26',19,19),('2021-06-20 20:05:21','2021-06-
21 20:05:21',19,88),('2021-06-19 23:44:53','2021-06-
20 23:44:53',19,96),('2021-06-15 14:18:05','2021-06-
16 14:18:05',20,20),('2021-06-17 02:25:58','2021-06-
18 02:25:58',20,86),('2021-06-17 16:44:42','2021-06-
18 16:44:42',20,92),('2021-06-16 04:13:03','2021-06-
17 04:13:03',21,21),('2021-06-21 20:15:25','2021-06-
22 20:15:25',21,86),('2021-06-21 23:37:13','2021-06-
22 23:37:13',21,92),('2021-06-14 20:46:40','2021-06-
15 20:46:40',22,22),('2021-06-18 06:30:08','2021-06-
19 06:30:08',22,83),('2021-06-17 14:26:15','2021-06-
18 14:26:15',22,86),('2021-06-14 11:56:44','2021-06-
15 11:56:44',23,23),('2021-06-19 17:43:04','2021-06-
20 17:43:04',23,92),('2021-06-20 07:38:49','2021-06-
21 07:38:49',23,96),('2021-06-15 04:18:35','2021-06-
16 04:18:35',24,24),('2021-06-19 01:40:40','2021-06-
20 01:40:40',24,86),('2021-06-18 19:26:33','2021-06-
19 19:26:33',24,92),('2021-06-14 11:52:31','2021-06-
15 11:52:31',25,25),('2021-06-18 11:54:13','2021-06-
19 11:54:13',25,83),('2021-06-20 08:12:33','2021-06-
21 08:12:33',25,86),('2021-06-16 02:33:25','2021-06-
17 02:33:25',26,26),('2021-06-19 02:38:25','2021-06-
20 02:38:25',26,86),('2021-06-19 02:42:15','2021-06-
20 02:42:15',26,88),('2021-06-15 02:14:15','2021-06-
16 02:14:15',27,27),('2021-06-17 23:39:36','2021-06-
18 23:39:36',27,92),('2021-06-21 11:08:24','2021-06-

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22 11:08:24',27,96),('2021-06-15 06:36:11','2021-06-
16 06:36:11',28,28),('2021-06-19 15:57:55','2021-06-
20 15:57:55',28,92),('2021-06-21 17:07:17','2021-06-
22 17:07:17',28,96),('2021-06-14 22:22:30','2021-06-
15 22:22:30',29,29),('2021-06-17 04:17:38','2021-06-
18 04:17:38',29,83),('2021-06-18 17:08:20','2021-06-
19 17:08:20',29,84),('2021-06-14 09:44:03','2021-06-
15 09:44:03',30,30),('2021-06-17 01:26:31','2021-06-
18 01:26:31',30,86),('2021-06-21 03:11:48','2021-06-
22 03:11:48',30,88);
/*!40000 ALTER TABLE `visit` ENABLE KEYS */;
UNLOCK TABLES;

--
-- Final view structure for view `customer_details`
--

/*!50001 DROP VIEW IF EXISTS `customer_details`*/;
/*!50001 SET @saved_cs_client          = @@character_set_client */;
/*!50001 SET @saved_cs_results         = @@character_set_results */;
/*!50001 SET @saved_col_connection     = @@collation_connection */;
/*!50001 SET character_set_client      = utf8mb4 */;
/*!50001 SET character_set_results     = utf8mb4 */;
/*!50001 SET collation_connection      = utf8mb4_0900_ai_ci */;
/*!50001 CREATE ALGORITHM=UNDEFINED */
/*!50013 DEFINER=`root`@`localhost` SQL SECURITY DEFINER */
/*!50001 VIEW `customer_details` AS select `customers`.`id_nfc` AS `i
d_nfc`,`customers`.`first_name` AS `first_name`,`customers`.`last_nam
e` AS `last_name`,`customers`.`birthdate` AS `birthdate`,`customers`.
`id_number` AS `id_number`,`customers`.`id_type` AS `id_type`,`custom
ers`.`id_issuing_authority` AS `id_issuing_authority` from `customers
` */;
/*!50001 SET character_set_client      = @saved_cs_client */;
/*!50001 SET character_set_results     = @saved_cs_results */;
/*!50001 SET collation_connection      = @saved_col_connection */;

--
-- Final view structure for view `sales`
--

/*!50001 DROP VIEW IF EXISTS `sales`*/;
/*!50001 SET @saved_cs_client          = @@character_set_client */;
/*!50001 SET @saved_cs_results         = @@character_set_results */;
```

```sql
/*!50001 SET @saved_col_connection     = @@collation_connection */;
/*!50001 SET character_set_client       = utf8mb4 */;
/*!50001 SET character_set_results      = utf8mb4 */;
/*!50001 SET collation_connection       = utf8mb4_0900_ai_ci */;
/*!50001 CREATE ALGORITHM=UNDEFINED */
/*!50013 DEFINER=`root`@`localhost` SQL SECURITY DEFINER */
/*!50001 VIEW `sales` AS select `b`.`service_description` AS `service
_description`,count(`a`.`id_service`) AS `sales_per_service` from (`s
ervice_charge` `a` join `services` `b`) where (`a`.`id_service` = `b`
.`id_service`) group by `b`.`service_description` */;
/*!50001 SET character_set_client       = @saved_cs_client */;
/*!50001 SET character_set_results      = @saved_cs_results */;
/*!50001 SET collation_connection       = @saved_col_connection */;
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;

/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;

-- Dump completed on 2021-06-28 18:59:39
```

4. Ακολουθεί ο πίνακας με τα περιεχόμενα του video - timestamps:

Ερώτημα	Αρχή	Τέλος
(a)	00:00	00:36
(b)	00:37	01:20
(c)	01:21	02:07
(d)	02:08	02:22
(e)	02:23	03:12
(f).7	03:13	03:55
(f).9	03:56	04:07
(f).10	04:08	04:21
(f).11	04:22	05:02
(g)	05:03	05:34