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# SQL CODE FOR DATABASE DESIGN AND MAINTENANCE OF DIGITAL BOOKING AND FILING SYSTEM

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BOPHELONG HOSPITAL



OCTOBER 9, 2021  
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### Code for Creating the Database (BophelongDB)

```
SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;

SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0;

SET @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';
```

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

```
-- Schema mydb
```

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

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

```
-- Schema bophelong_db
```

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

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

```
-- Schema bophelong_db
```

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

```
CREATE SCHEMA IF NOT EXISTS `bophelong_db` DEFAULT CHARACTER SET utf8mb4 COLLATE utf8mb4_0900_ai_ci ;
```

```
USE `bophelong_db` ;
```

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

```
-- Table `bophelong_db`.`admin`
```

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

```
CREATE TABLE IF NOT EXISTS `bophelong_db`.`admin` (
```

```
  `employee_id` INT NOT NULL,
```

```
  `date_accessed` DATE NULL DEFAULT NULL,
```

```
  `time_accessed` DATE NULL DEFAULT NULL,
```

```
  PRIMARY KEY (`employee_id`))
```

```
ENGINE = InnoDB
```

```
DEFAULT CHARACTER SET = utf8mb4
```

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COLLATE = utf8mb4\_0900\_ai\_ci;

```
-- Table `bophelong_db`.`patient`
```

```
CREATE TABLE IF NOT EXISTS `bophelong_db`.`patient` (
```

```
  `patient_id` INT NOT NULL,  
  `first_name` VARCHAR(20) NULL DEFAULT NULL,  
  `last_name` VARCHAR(20) NULL DEFAULT NULL,  
  `id_number` CHAR(13) NULL DEFAULT NULL,  
  `contact_number` CHAR(10) NULL DEFAULT NULL,  
  `email_address` VARCHAR(20) NULL DEFAULT NULL,  
  `house_number` INT NULL DEFAULT NULL,  
  `street_name` VARCHAR(20) NULL DEFAULT NULL,  
  `postal_code` INT NULL DEFAULT NULL,  
  PRIMARY KEY (`patient_id`))
```

```
ENGINE = InnoDB
```

```
DEFAULT CHARACTER SET = utf8mb4
```

```
COLLATE = utf8mb4_0900_ai_ci;
```

```
-- Table `bophelong_db`.`appointment`
```

```
CREATE TABLE IF NOT EXISTS `bophelong_db`.`appointment` (
```

```
  `booking_id` INT NOT NULL,  
  `patient_id` INT NULL DEFAULT NULL,  
  `employee_id` INT NULL DEFAULT NULL,  
  `first_name` VARCHAR(20) NULL DEFAULT NULL,  
  `last_name` VARCHAR(20) NULL DEFAULT NULL,
```

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```
`appointment_date` DATE NULL DEFAULT NULL,  
`appointment_time` DATE NULL DEFAULT NULL,  
PRIMARY KEY (`booking_id`),  
CONSTRAINT `appointment_ibfk_2`  
  FOREIGN KEY (`employee_id`)  
    REFERENCES `bophelong_db`.`admin` (`employee_id`),  
CONSTRAINT `appointment_ibfk_4`  
  FOREIGN KEY (`patient_id`)  
    REFERENCES `bophelong_db`.`patient` (`patient_id`))  
ENGINE = InnoDB  
DEFAULT CHARACTER SET = utf8mb4  
COLLATE = utf8mb4_0900_ai_ci;
```

```
-----  
-- Table `bophelong_db`.`file`  
-----
```

```
CREATE TABLE IF NOT EXISTS `bophelong_db`.`file` (  
  `patient_id` INT NOT NULL,  
  `employee_id` INT NULL DEFAULT NULL,  
  `record` TEXT NULL DEFAULT NULL,  
  PRIMARY KEY (`patient_id`),  
  CONSTRAINT `file_ibfk_3`  
    FOREIGN KEY (`patient_id`)  
      REFERENCES `bophelong_db`.`patient` (`patient_id`),  
  CONSTRAINT `file_ibfk_5`  
    FOREIGN KEY (`employee_id`)  
      REFERENCES `bophelong_db`.`admin` (`employee_id`))  
ENGINE = InnoDB  
DEFAULT CHARACTER SET = utf8mb4  
COLLATE = utf8mb4_0900_ai_ci;
```

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SET SQL\_MODE=@OLD\_SQL\_MODE;

SET FOREIGN\_KEY\_CHECKS=@OLD\_FOREIGN\_KEY\_CHECKS;

SET UNIQUE\_CHECKS=@OLD\_UNIQUE\_CHECKS;

### Code for maintaining tables in the database

- 1. Adding patient:** `"INSERT INTO [Patient] (First_name, Last_name, ID_number, Contact_number, Email_address, House_number, Street_name, Postal_code) VALUES('{txtPatientName.Text}', '{txtPatientSurname.Text}', '{txtPatientID.Text}', '{txtContactNumber.Text}', '{txtEmailAddress.Text}', '{txtPatientHouseNumber.Text}', '{txtPatientStreetName.Text}', '{txtPatientPostalCode.Text}')"`
- 2. Updating patient:** `"UPDATE [File] SET Record = '{txtRecord.Text}' WHERE Patient_ID = {int.Parse(Session["PatientID"].ToString())}"`
- 3. Deleting patient:** `"DELETE FROM [Patient] WHERE Patient_ID = {int.Parse(Session["PatientID"].ToString())}"`
- 4. Reserving bookings:** `"INSERT INTO Appointments(First_name, Last_name, Appointment_date, Appointment_time) VALUES('{Session["Name"].ToString()}', '{Session["Surname"]}', '{Calendar1.SelectedDate}', '{DropDownList1.SelectedItem}')"`
- 5. Backing up Patients:** `"SELECT * FROM [Patient] ORDER BY Patient_ID ASC"`
- 6. Backing up Files:** `"SELECT * FROM [File] ORDER BY Patient_ID ASC"`
- 7. Query for bookings:** `"SELECT Booking_ID, First_name, Last_name, Appointment_date, Appointment_time FROM Appointments"`