Faculté de génie
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Project

Deliverable #2

CSI2132 - Database I
Group #25

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Winter 2022

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Submission date: April, 15th 2022

a) Technologies Used:

- MySQL: used to create database
- Java: used to create UI's
- GitHub: used to share code

b) DDLs to create database:

```
CREATE DATABASE project;
USE project;
```

User Table:

```
CREATE TABLE `user` (
  `ID` int NOT NULL,
  `Email` varchar(45) NOT NULL,
  `AccountType` varchar(45) DEFAULT NULL,
  `Password` varchar(45) DEFAULT NULL,
  `SSN` INT NOT NULL,
  `PhoneNumber` decimal(10,0) NOT NULL,
  `FirstName` varchar(45) NOT NULL,
  `MidName` varchar(45),
  `SecondName` varchar(45) NOT NULL,
  `HouseNumber` int NOT NULL,
  `StreetName` varchar(45) NOT NULL,
  `City` varchar(45) NOT NULL,
  `Province` varchar(45) NOT NULL,
  `DateOfBirth` varchar(20) NOT NULL,
  `Age` int NOT NULL,
  PRIMARY KEY (`ID`,`SSN`)
);
```

Patient Table:

```
CREATE TABLE Patient(
  `InsuranceNumber` INTEGER,
  `Gender` VARCHAR(20),
```

```
  `ID` int NOT NULL,
  primary key(`InsuranceNumber`),
  FOREIGN KEY(`ID`) REFERENCES `user`(`ID`)
);
```

Employee Table:

```
CREATE TABLE Employees(
`EmployeeNumber` INTEGER PRIMARY KEY,
`EmployeeType` VARCHAR(20) NOT NULL,
`Salary` INTEGER,
`EmployeeRole` VARCHAR(20),
 `ID` int,
 `BranchName` VARCHAR(20),
 FOREIGN KEY(`ID`) REFERENCES `user`(`ID`)
);
```

Branches Table:

```
CREATE TABLE Branches(
`BranchName` VARCHAR(20) ,
`City` VARCHAR(20) PRIMARY KEY,
`Manager` varchar(20) NOT NULL,
`EmployeeNumber` INTEGER,
FOREIGN KEY(`EmployeeNumber`) REFERENCES `Employees`(`EmployeeNumber`)
ON DELETE CASCADE ON UPDATE CASCADE
);
```

Appointments Table:

```
CREATE TABLE Appointments(
`PatientNumber` int,
`DentistNO` INTEGER,
`Date` varchar(20) NOT NULL,
`StartTime` TIME NOT NULL,
`EndTime` TIME NOT NULL,
```

```
`AppointmentType` VARCHAR(20),
`Status` VARCHAR(20),
`Room` VARCHAR(20),
primary key(`PatientNumber`),
FOREIGN KEY(`DentistNO`) REFERENCES `employees`(`EmployeeNumber`)
ON DELETE CASCADE ON UPDATE CASCADE,
FOREIGN KEY(`PatientNumber`) REFERENCES `patient`(`InsuranceNumber`)
ON DELETE CASCADE ON UPDATE CASCADE
);
```

Patient Records Table:

```
CREATE TABLE PatientRecords(
`RecordId` INT PRIMARY KEY,
`Date` varchar(20),
`Notes` TEXT,
`EmployeeNumber` INTEGER,
FOREIGN KEY(`EmployeeNumber`) REFERENCES `Employees`(`EmployeeNumber`)
ON DELETE CASCADE ON UPDATE CASCADE
);
```

Appointment Procedure Table:

```
CREATE TABLE AppointmentProcedure(
`PatientNumber` int,
`Date` varchar(20),
`ProcedureCode` VARCHAR(20) PRIMARY KEY,
`ProcedureType` VARCHAR(20),
`Description` TEXT,
`Tooth` VARCHAR(50) unique,
`Amount` INTEGER,
`feeId` INT NOT NULL unique,
FOREIGN KEY(`PatientNumber`) References `patient`(`InsuranceNumber`)
ON DELETE CASCADE ON UPDATE CASCADE
);
```

Reviews Table:

```
CREATE TABLE Reviews(
        `ReviewDate` DATE primary key,
   `InsuranceNumber` INTEGER,
   `employeeNO` INTEGER,
   FOREIGN KEY(`InsuranceNumber`) References `patient`(`InsuranceNumber`)
   ON DELETE CASCADE ON UPDATE CASCADE,
      FOREIGN KEY(`employeeNO`) REFERENCES `Employees`(`EmployeeNumber`)
   ON DELETE CASCADE ON UPDATE CASCADE
);
```

Fee Charge:

```
CREATE TABLE feeCharge (
  `feeId` INT NOT NULL,
  `procedure` VARCHAR(20) NOT NULL,
  `feeCode` INT NOT NULL,
  `charge` FLOAT NOT NULL UNIQUE,
  PRIMARY KEY (`feeId`, `feeCode`),
  CONSTRAINT `procedureCode`
    FOREIGN KEY (`procedure`)
    REFERENCES appointmentprocedure (`ProcedureCode`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
  );
```

Invoice Table:

```
CREATE TABLE invoice(
  `invoiceDate` varchar(20) NOT NULL primary key,
  `contactInfo` VARCHAR(45) NULL,
  `patientCharge` FLOAT NULL unique,
  `insuranceCharge` FLOAT NULL unique,
  `discount` FLOAT NULL,
  `penalty` FLOAT NULL,
  `patientInsurance` INT NULL,
```

```
  `totalFeeCharge` FLOAT NOT NULL unique,
  `appointment` VARCHAR(45) NULL,
  CONSTRAINT `chargefk`
    FOREIGN KEY (`patientCharge`)
    REFERENCES `feecharge`(`charge`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION);
```

Patient Billing Table:

```
CREATE TABLE `patientBilling` (
  `InsuranceNumber` INT NOT NULL,
  `date` varchar(20) NOT NULL,
  `patientPortion` FLOAT NULL,
  `insurancePortion` FLOAT NULL,
  `totalFee` FLOAT NOT NULL,
  `paymentMethod` VARCHAR(45) NULL,
  PRIMARY KEY (`insuranceNumber`),

  CONSTRAINT `patientInfo`
        FOREIGN KEY(`InsuranceNumber`) REFERENCES patient(`InsuranceNumber`)
    ON DELETE CASCADE
    ON UPDATE CASCADE,

  CONSTRAINT `paymentDate`
        FOREIGN KEY(`date`) REFERENCES invoice(`invoiceDate`)
    ON DELETE CASCADE
    ON UPDATE CASCADE,

  CONSTRAINT `patientChargefk`
    FOREIGN KEY (`patientPortion`)
    REFERENCES invoice (`patientCharge`)
    ON DELETE CASCADE
    ON UPDATE CASCADE,
  CONSTRAINT `insuranceChargefk`
    FOREIGN KEY (`insurancePortion`)
    REFERENCES invoice (`insuranceCharge`)
```

```
   ON DELETE CASCADE
   ON UPDATE CASCADE,
  CONSTRAINT `totalFeeChargefk`
   FOREIGN KEY (totalFee)
   REFERENCES `invoice` (`totalFeeCharge`)
   ON DELETE CASCADE
   ON UPDATE CASCADE);
```

Responsible Party Table:

```
CREATE TABLE responsibleParty(
        `relationshipToPatient` VARCHAR(20),
    `InsuranceNumber` INTEGER not null,
    `ID` INTEGER not null,
    FOREIGN KEY (`InsuranceNumber`) REFERENCES patient(`InsuranceNumber`)
    ON DELETE CASCADE ON UPDATE CASCADE,
    FOREIGN KEY (`ID`) REFERENCES `user`(`ID`)
        ON DELETE CASCADE ON UPDATE CASCADE
);
```

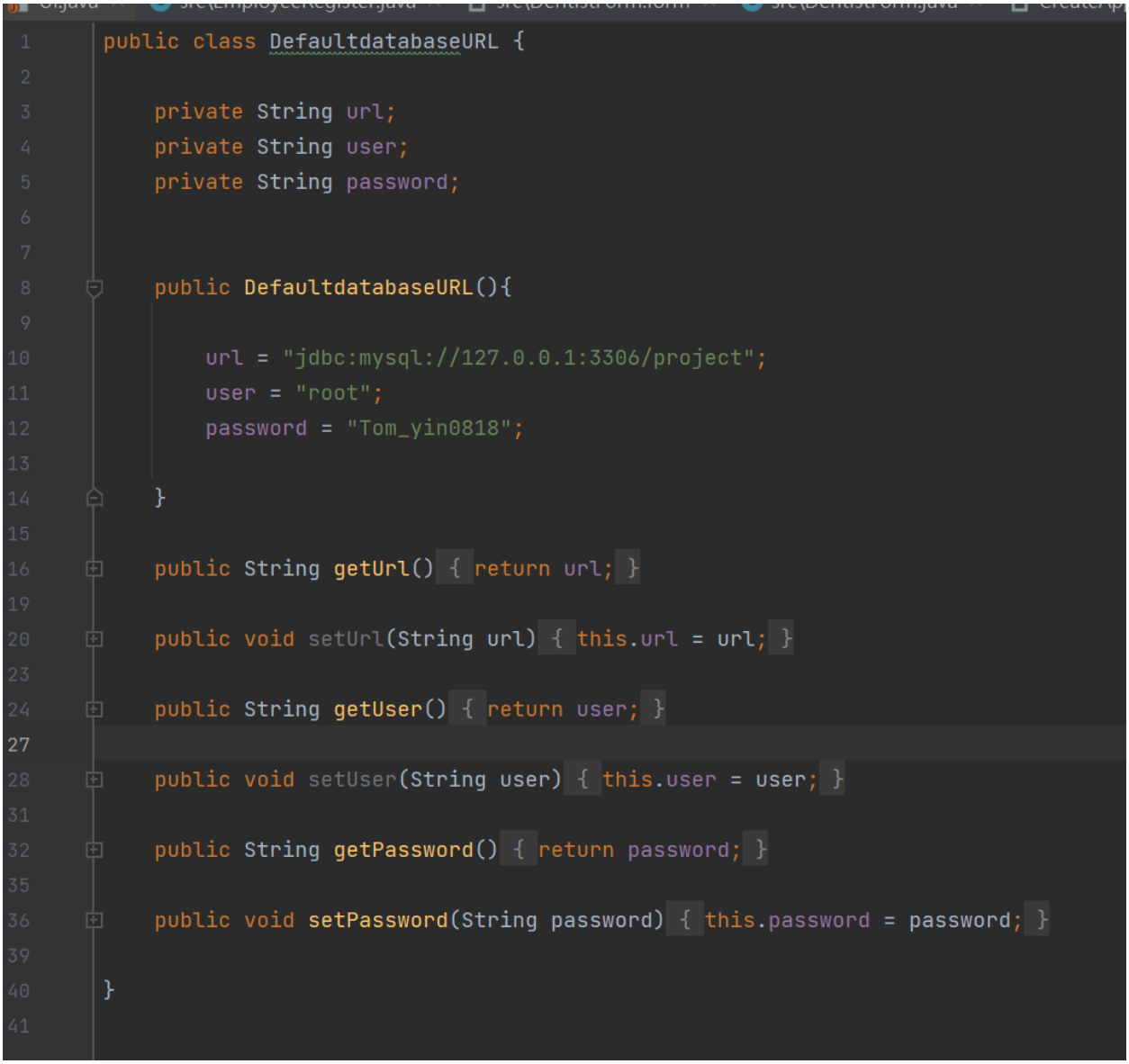
Treatment Table:

```
CREATE TABLE treatment(

        `AppointmentType` VARCHAR(20),
    `Treatment Type` INTEGER not null,
    `Medication` VARCHAR(20) not null,
    `Symtoms` VARCHAR(20) not null,
    `Tooth` VARCHAR(50),
    `Comments` VARCHAR(50) not null,

    FOREIGN KEY (`Tooth`) REFERENCES AppointmentProcedure(`Tooth`)
    ON DELETE CASCADE ON UPDATE CASCADE
);
```

c) Installation:

We will attach a zip file which contains everything in our directory. Use IntelliJ to open the project.

Before Start running, you need to have your mysql database created already.
Secondly, go to file DefaultdatabaseURL.java and change the url, user and password that match your screen.



```java
public class DefaultdatabaseURL {

    private String url;
    private String user;
    private String password;


    public DefaultdatabaseURL(){

        url = "jdbc:mysql://127.0.0.1:3306/project";
        user = "root";
        password = "Tom_yin0818";

    }

    public String getUrl() { return url; }

    public void setUrl(String url) { this.url = url; }

    public String getUser() { return user; }

    public void setUser(String user) { this.user = user; }

    public String getPassword() { return password; }

    public void setPassword(String password) { this.password = password; }

}
```

After everything is ready, you can go to file DashboardForm to run the code.