

```
-- create db to practise, normalizations (eliminates redundancy), using Primary Key, DDL
```

```
CREATE DATABASE House_of_Instruments;
USE House_of_Instruments;
```

```
CREATE TABLE Students (
stud_id INT (10) NOT NULL,
firstname VARCHAR (30) NOT NULL,
surname VARCHAR (30) NOT NULL,
parent_firstname VARCHAR (30) NOT NULL,
parent_surname VARCHAR (30) NOT NULL,
parent_email VARCHAR (30),
parent_phone VARCHAR (30) NOT NULL,
school_student BOOL DEFAULT TRUE,
PRIMARY KEY (stud_id)
);
```

```
CREATE TABLE Rental (
instr_id INT NOT NULL,
date_rent_start DATE,
date_rent_stop DATE,
stud_id INT NOT NULL,
PRIMARY KEY (instr_id)
);
```

```
CREATE TABLE Instruments (
instr_id INT NOT NULL,
instr_type VARCHAR (30),
date_production DATE,
producer VARCHAR (30),
remark TEXT
);
```

```
-- insert data, DML
```

```
INSERT INTO Students
(stud_id, firstname, surname, parent_firstname, parent_surname, parent_email, parent_phone,
school_student)
VALUES
(001, 'Maria', 'Nowak', 'Joanna', 'Nowak', 'jnowak@wp.pl', 48664999818, TRUE),
(002, 'Jan', 'Rudy', 'Anna', 'Rudy', 'arudy@op.pl', 48532449800, TRUE),
(003, 'Aleksandra', 'Mocna', 'Ewa', 'Mocna-Jasna', 'emocjas@wp.pl', 48505987123, FALSE ),
(004, 'Patryk', 'Kowal', 'Mateusz', 'Kowal', 'mkowal@gmail.com', 48765765111, TRUE);
```

```
INSERT INTO Rental
(instr_id, date_rent_start, date_rent_stop, stud_id)
VALUES
(102, '2020-08-30', '2027-06-26', 003),
(101, '2016-09-20', '2023-05-30', 001),
(104, '2019-09-10', '2024-06-23', 002),
```

```
(103, '2022-10-01', '2027-06-26', 004);
```

```
INSERT INTO Instruments  
(instr_id, instr_type, date_production, producer, remark)  
VALUES  
(101, 'clarinet', '1995-07-30', 'Buffet', 'without mouthpiece'),  
(102, 'violin', '2015-08-08', 'Amati', 'size 1/2'),  
(103, 'bassoon', '2002-03-10', 'Yamaha', 'none'),  
(104, 'cello', '2006-12-11', 'Toto', 'new endpin');
```

```
-- modify table
```

```
CREATE TABLE Parents_data (  
stud_id INT NOT NULL,  
parent_firstname VARCHAR (30) NOT NULL,  
parent_surname VARCHAR (30) NOT NULL,  
parent_email VARCHAR (30),  
parent_phone VARCHAR (30) NOT NULL  
);
```

```
INSERT INTO Parents_data  
(stud_id, parent_firstname, parent_surname, parent_email, parent_phone)  
SELECT stud_id, parent_firstname, parent_surname, parent_email, parent_phone  
FROM Students;
```

```
SELECT * FROM Students;  
SELECT* FROM Parents_data;
```

```
ALTER TABLE Students  
DROP COLUMN parent_firstname,  
DROP COLUMN parent_surname,  
DROP COLUMN parent_email,  
DROP COLUMN parent_phone;
```

```
SELECT * FROM Students;  
SELECT * FROM Parents_data;
```

```
-- changing existing tables
```

```
ALTER TABLE Instruments  
ADD COLUMN instr_value INT NOT NULL;
```

```
SELECT * FROM Instruments;
```

```
UPDATE Instruments  
SET instr_value = 9300  
WHERE instr_id = 101;
```

```
UPDATE Instruments  
SET instr_value = 6400  
WHERE instr_id = 102;
```

```
UPDATE Instruments  
SET instr_value = 12500  
WHERE instr_id = 103;
```

```
UPDATE Instruments  
SET instr_value = 15300  
WHERE instr_id = 104;
```

```
-- adding Foreign Keys to existing tables
```

```
ALTER TABLE Parents_data  
ADD FOREIGN KEY (stud_id) REFERENCES Students(stud_id);
```

```
ALTER TABLE Instruments  
ADD FOREIGN KEY (instr_id) REFERENCES Rental(instr_id);
```

```
ALTER TABLE Rental  
ADD FOREIGN KEY (stud_id) REFERENCES Students(stud_id);
```