

```
-- 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);
```