

Упражнение: Работа с булев и числов(DECIMAL, FLOAT / DOUBLE) тип данни

```
-- Извеждане на средната възраст на ученици по специалности  
-- ВАРИАНТ 1 - FLOAT
```

```
Create table Students  
( ID_student int primary key, Name nvarchar(50), Klas  
int, Specialnost nvarchar(50), Godini float);  
insert into Students values  
(1, 'Ivan Ivanov', 12, 'KTT', 18),  
(2, 'Petur Petrov', 10, 'ATT', 16),  
(3, 'Ivan Petrov', 12, 'KTT', 18),  
(4, 'Dian Ivanov', 11, 'KTT', 17),  
(5, 'Georgi Petrov', 11, 'ATT', 17),  
(6, 'Pavel Iliev', 11, 'ATT', 17);  
select * from Students;
```

```
SELECT specialnost, avg(godini)  
AS avg_god FROM Students GROUP BY Specialnost  
SELECT Specialnost, CAST(AVG (godini) as decimal(10,2))  
AS avg_god FROM Students GROUP BY Specialnost;  
SELECT Specialnost, ROUND(AVG(godini), 2)  
AS avg_god FROM Students GROUP BY Specialnost;
```

-- ROUND закръгля число до определен брой знаци след десетичната точка.

-- CAST променя типа на дадена стойност (например от текст към число, от число към текст, от число към десетично и т.н.).

```
-- ВАРИАНТ 2 - DOUBLE
```

```
Create table Students  
(  
ID_student int primary key, Name nvarchar(50), Klas int,  
Specialnost nvarchar(50), Godini DOUBLE;  
)  
insert into Students values  
(1, 'Ivan Ivanov', 12, 'KTT', 18),  
(2, 'Petur Petrov', 10, 'ATT', 16),  
(3, 'Ivan Petrov', 12, 'KTT', 18),  
(4, 'Dian Ivanov', 11, 'KTT', 17),  
(5, 'Georgi Petrov', 11, 'ATT', 17),  
(6, 'Pavel Iliev', 11, 'ATT', 17);  
select * from Students;
```

```
SELECT specialnost, avg(godini)  
AS avg_god FROM Students GROUP BY Specialnost  
  
SELECT Specialnost, CAST(AVG (godini) as decimal(10,2))  
AS avg_god FROM Students GROUP BY Specialnost
```

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Пример за SQL Server – BIT (0 = не, 1 = да)

```
CREATE TABLE Students (  
    Id INT IDENTITY PRIMARY KEY,  
    Name VARCHAR(50) NOT NULL,  
    IsActive BIT NOT NULL DEFAULT 1  
);  
INSERT INTO Students (Name, IsActive)  
VALUES  
    ('Ivan Petrov', 1),    -- да  
    ('Maria Georgieva', 0), -- не  
    ('Petar Dimitrov', 1);  
SELECT * FROM Students;
```

Пример за MySQL – TINYINT(1) (1 = да, 0 = не)

```
CREATE TABLE students (  
    id INT PRIMARY KEY AUTO_INCREMENT,  
    name VARCHAR(50) NOT NULL,  
    is_active TINYINT(1) NOT NULL DEFAULT 1  
);  
INSERT INTO students (name, is_active)  
VALUES  
    ('Ivan Petrov', 1),  
    ('Maria Georgieva', 0),  
    ('Petar Dimitrov', 1);  
SELECT * FROM students;
```

Пример за SQLite – INTEGER NOT NULL DEFAULT 1

```
CREATE TABLE Students (  
    Id INTEGER PRIMARY KEY AUTOINCREMENT,  
    Name TEXT NOT NULL,  
    IsActive INTEGER NOT NULL DEFAULT 1    -- 1 = да, 0 = не  
);  
INSERT INTO Students (Name, IsActive)  
VALUES  
    ('Ivan Petrov', 1),  
    ('Maria Georgieva', 0),  
    ('Petar Dimitrov', 1);  
  
SELECT * FROM Students;
```