

## Задача 1.

### 1.1 создаем таблицы в DBEAUER при помощи sql-скрипта

```
CREATE TABLE students(  
    id BIGSERIAL PRIMARY KEY,  
    name TEXT,  
    total_score INTEGER,  
    scholarship INTEGER  
);
```

```
CREATE TABLE activity_scores(  
    student_id INTEGER,  
    activity_type TEXT,  
    score INTEGER,  
    FOREIGN KEY (student_id) REFERENCES students (id)  
);
```

Статистика 1	
Name	Value
Queries	2
Updated Rows	0
Execute time (ms)	119
Fetch time (ms)	0
Total time (ms)	119
Start time	2023-09-01 16:50:38.745
Finish time	2023-09-01 16:50:38.868

1.2 создаем функцию update\_total\_score() и триггер update\_total\_score\_trigger

```
CREATE OR REPLACE FUNCTION update_total_score()
  RETURNS trigger AS
$$
BEGIN
  UPDATE students SET total_score = (SELECT sum(score) FROM activity_scores WHERE
student_id = NEW.student_id) WHERE id = NEW.student_id;
  RETURN NULL;
END;
$$
LANGUAGE 'plpgsql';

CREATE OR REPLACE TRIGGER update_total_score_trigger
  AFTER UPDATE OR INSERT OR DELETE
  ON "activity_scores"
  FOR EACH ROW
  EXECUTE FUNCTION update_total_score();
```

Статистика 1	
Name	Value
Queries	2
Updated Rows	0
Execute time (ms)	104
Fetch time (ms)	0
Total time (ms)	104
Start time	2023-09-04 19:34:24.073
Finish time	2023-09-04 19:34:24.180

## Задача 2.

### 2. Создаем функцию calculate\_scholarship() и триггер update\_scholarship\_trigger

```
CREATE OR REPLACE FUNCTION calculate_scholarship()
  RETURNS trigger AS
$$
BEGIN
  CASE WHEN NEW.total_score >= 90 THEN UPDATE students SET scholarship = 1000 WHERE
id = NEW.id;
    WHEN NEW.total_score < 90 AND NEW.total_score >= 80 THEN UPDATE students SET
scholarship = 500 WHERE id = NEW.id;
    ELSE UPDATE students SET scholarship = 0 WHERE id = NEW.id;
  END CASE;
RETURN NEW;
END;
$$
LANGUAGE 'plpgsql';

create or replace TRIGGER update_scholarship_trigger
  AFTER UPDATE OF total_score OR INSERT OR DELETE
  ON students
  FOR EACH ROW
  EXECUTE FUNCTION calculate_scholarship();
```

Статистика 1	
Name	Value
Queries	2
Updated Rows	0
Execute time (ms)	8
Fetch time (ms)	0
Total time (ms)	8
Start time	2023-09-05 15:33:22.463
Finish time	2023-09-05 15:33:22.483

### 3. Проверяем, что всё работает

```
SELECT *  
FROM activity_scores
```

Таблица	123 student_id ▼	ABC activity_type ▼	123 score ▼
1	1 ↗	Homework	75
2	1 ↗	Lesson	9

```
SELECT *  
FROM students
```

Таблица	123 id ▼	ABC name ▼	123 total_score ▼	123 scholarship ▼
1	1	Petr	84	500