

LAB4 (postgres functions)

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```
-- 1
CREATE OR REPLACE FUNCTION mul(a INTEGER, b INTEGER) RETURNS INTEGER AS $
$
    BEGIN
        RETURN a * b
    END;
$$ LANGUAGE plpgsql;
```

```
-- 2
CREATE OR REPLACE FUNCTION check_even_odd(a integer) RETURNS INTEGER AS $$
BEGIN
    IF MOD(a, 2) = 0 THEN RETURN 0;
    ELSE RETURN 1;
    END IF;
END;
$$ LANGUAGE plpgsql
```

```
-- 3
// CREATE TABLE FIRST

CREATE TABLE LAB4(first_name varchar(30), last_name varchar(30), birthdate date, track_name
varchar(30));
```

```
CREATE OR REPLACE FUNCTION AddNewStudent(firstName varchar, lastName varchar,
birthdate date, trackName varchar) RETURNS void AS
$$
```

```
    BEGIN
        INSERT INTO LAB4 VALUES(firstName, lastName, birthdate, trackName);
    END;
$$ LANGUAGE plpgsql
```

```
SELECT AddNewStudent('Mohamed', 'ali', '2001-09-28', 'python');
```

```
-- 4
```

```
CREATE OR REPLACE FUNCTION student_score(student_id integer, subject_id integer)
RETURNS INTEGER AS
```

```
$$
declare res int;
  BEGIN
    select std_id, max_score into res from student inner join subject on subject.subject_id =
student.std_id;
    return res;
  END;
$$ LANGUAGE plpgsql
```

```
select student_score(1, 1);
```

```
-- 5
CREATE OR REPLACE FUNCTION student_fail(subject_id integer) RETURNS integer AS
$$
declare res int;
  BEGIN
    perform count(*) from subject where max_score < 50;
    return res;
  END;
$$ LANGUAGE plpgsql
```

```
select student_fail(1);
```

```
-- 6

CREATE OR REPLACE FUNCTION avg_grade(subject_name varchar) RETURNS integer AS

$$
declare res int;
  BEGIN
    select sum(max_score) / count(*) into res from subject;
    return res;
  END;
$$ LANGUAGE plpgsql
```

```
select avg_grade('web');
```

```
-- 7
CREATE TABLE persons(id INT NOT NULL PRIMARY KEY, name VARCHAR(100), gender
BOOLEAN);
```

```
-- 8
```

```
CREATE TABLE staff_members(dept_name VARCHAR(100), course_name VARCHAR(100))
INHERITS(persons);
```