Procedures

A procedure (often called a stored procedure) is a collection of pre-compiled SQL statements stored inside the database.

A procedure always contains a name, parameter lists, and SQL statements.

Syntax

- 1. DELIMITER \$\$
- 2. **CREATE PROCEDURE** procedure_name [[IN | **OUT** | INOUT] parameter_name datatype [, parameter datatype])]
- 3. BEGIN
- 4. Declaration section
- 5. Executable section
- 6. END \$\$
- 7. DELIMITER;

Parameter Name

procedure name

parameter

Declaration_section Executable section

Descriptions

It represents the name of the stored

procedure.

It represents the number of parameters. It can

be one or more than one.

It represents the declarations of all variables.

It represents the code for the function

execution

MySQL procedure parameter has one of three modes:

IN parameter

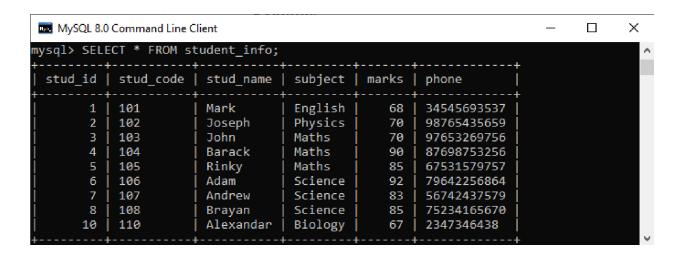
It is the default mode. It takes a parameter as input, such as an attribute. When we define it, the calling program has to pass an argument to the stored procedure. This parameter's value is always protected.

OUT parameters

It is used to pass a parameter as output. Its value can be changed inside the stored procedure, and the changed (new) value is passed back to the calling program. It is noted that a procedure cannot access the OUT parameter's initial value when it starts.

INOUT parameters

It is a combination of IN and OUT parameters. It means the calling program can pass the argument, and the procedure can modify the INOUT parameter, and then passes the new value back to the calling program.

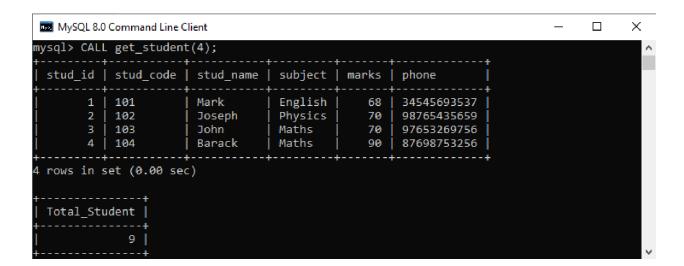


Procedure without Parameter

```
MySQL 8.0 Command Line Client
                                                                                            X
nysql> CALL get merit student();
  stud_id | stud_code | stud_name | subject | marks | phone
                                         | Maths | 90 | 87698753256
| Maths | 85 | 67531579757
| Science | 92 | 79642256864
| Science | 83 | 56742437579
         4 | 104 | Barack
5 | 105 | Rinky
         6 | 106
                          Adam
         7 | 107
                          Andrew
                        | Brayan | Science |
         8 | 108
                                                          85 75234165670
5 rows in set (0.00 sec)
  Total Student |
                9 |
1 row in set (0.03 sec)
```

Procedures with IN Parameter

- 1. DELIMITER \$\$
- 2. **CREATE PROCEDURE** get student (IN var1 INT)
- 3. BEGIN
- 4. **SELECT * FROM** student info LIMIT var1;
- 5. **SELECT COUNT**(stud code) **AS** Total Student **FROM** student info;
- 6. END \$\$
- 7. DELIMITER;



Procedures with OUT Parameter

- 1. DELIMITER \$\$
- 2. **CREATE PROCEDURE** display_max_mark (**OUT** highestmark **INT**)
- 3. BEGIN
- 4. **SELECT MAX**(marks) **INTO** highestmark **FROM** student_info;
- 5. END \$\$
- 6. DELIMITER;

Procedures with INOUT Parameter

- 1. DELIMITER \$\$
- 2. **CREATE PROCEDURE** display marks (INOUT var1 INT)
- 3. BEGIN
- 4. **SELECT** marks **INTO** var1 **FROM** student info **WHERE** stud id = var1;
- 5. END \$\$
- 6. DELIMITER;