

MySQL C++ (mysqlclient) Cheat Sheet

1. Include MySQL Header

```
#include <mysql/mysql.h>
```

2. Initialize and Connect

```
MYSQL* conn = mysql_init(nullptr);
mysql_real_connect(conn, "localhost", "user", "password", "database", 0, NULL, 0);
```

3. Execute INSERT

```
char query[256];
snprintf(query, sizeof(query), "INSERT INTO users (name,email) VALUES ('%s','%s')", name, email);
mysql_query(conn, query);
```

4. Check Insert Success

```
if (mysql_query(conn, query) == 0) {
    my_ulonglong id = mysql_insert_id(conn); // auto-increment id
    my_ulonglong affected = mysql_affected_rows(conn);
}
```

5. Execute SELECT

```
mysql_query(conn, "SELECT id, name FROM users");
MYSQL_RES* res = mysql_store_result(conn);
MYSQL_ROW row;
while ((row = mysql_fetch_row(res))) {
    int id = atoi(row[0]);
    std::string name = row[1];
}
mysql_free_result(res);
```

6. UPDATE Query

```
snprintf(query, sizeof(query), "UPDATE users SET name='%s' WHERE id=%d", new_name, id);
mysql_query(conn, query);
```

7. DELETE Query

```
snprintf(query, sizeof(query), "DELETE FROM users WHERE id=%d", id);
mysql_query(conn, query);
```

8. Escape Strings Safely

```
char escaped[256];
mysql_real_escape_string(conn, escaped, input_str, strlen(input_str));
```

9. Error Handling

```
if (mysql_query(conn, query) != 0) {
    fprintf(stderr, "Error: %s\n", mysql_error(conn));
}
```

10. Close Connection

```
mysql_close(conn);
```

11. Prepare MySQL with APT (Ubuntu)

```
sudo apt install libmysqlclient-dev
```

12. Link During Compile

```
g++ your_file.cpp -o app -lmysqlclient
```