We will AES to store passwords where the secret key of the will be concatenation of SHA2 of the row’s id and some string I’ll make up

* **aes** - these functions use the official AES algorithm (also known as "Rijndael") that provides encoding with a 128-bit key.

To encrypt a password use the AES\_ENCRYPT(str,key\_str) function:

mysql> INSERT INTO `users` (`email`, `pswd`) VALUES ('user6@example.com', AES\_ENCRYPT('pass123', 'secret'));

Query OK, 1 row affected (0.01 sec)

To decrypt a password previously encypted with the AES algorithm use the AES\_DECRYPT(crypt\_str,key\_str) function:

mysql> SELECT AES\_DECRYPT(`pswd`, 'secret') AS `pswd` FROM `users` WHERE `email` = 'user6@example.com';

+-----------+

| pswd |

+-----------+

| pass123 |

+-----------+

1 row in set (0.00 sec)

* **des** - these functions use the Triple-DES algorithm. Note that they work only if MySQL has been configured with SSL support.

To encrypt a password use the DES\_ENCRYPT(str[,(key\_num|key\_str)]) function:

mysql> INSERT INTO `users` (`email`, `pswd`) VALUES ('user7@example.com', DES\_ENCRYPT('pass123', 'secret'));

Query OK, 1 row affected (0.00 sec)

To decrypt a password previously encypted with the DES algorithm use the DES\_DECRYPT(crypt\_str[,key\_str]) function:

mysql> SELECT DES\_DECRYPT(`pswd`, 'secret') AS `pswd` FROM `users` WHERE `email` = 'user7@example.com';

+-----------+

| pswd |

+-----------+

| pass123 |

+-----------+

1 row in set (0.00 sec)

**CONCLUSION**

The [AES](https://zinoui.com/blog/storing-passwords-securely#aes) standard provides the best defense in terms of security than the rest of algorithms described in this article. The AES\_ENCRYPT and AES\_DECRYPT functions are the best choices to store a sensitive data (e.g. passwords, credit card numbers, etc.).