

# Práctica 01

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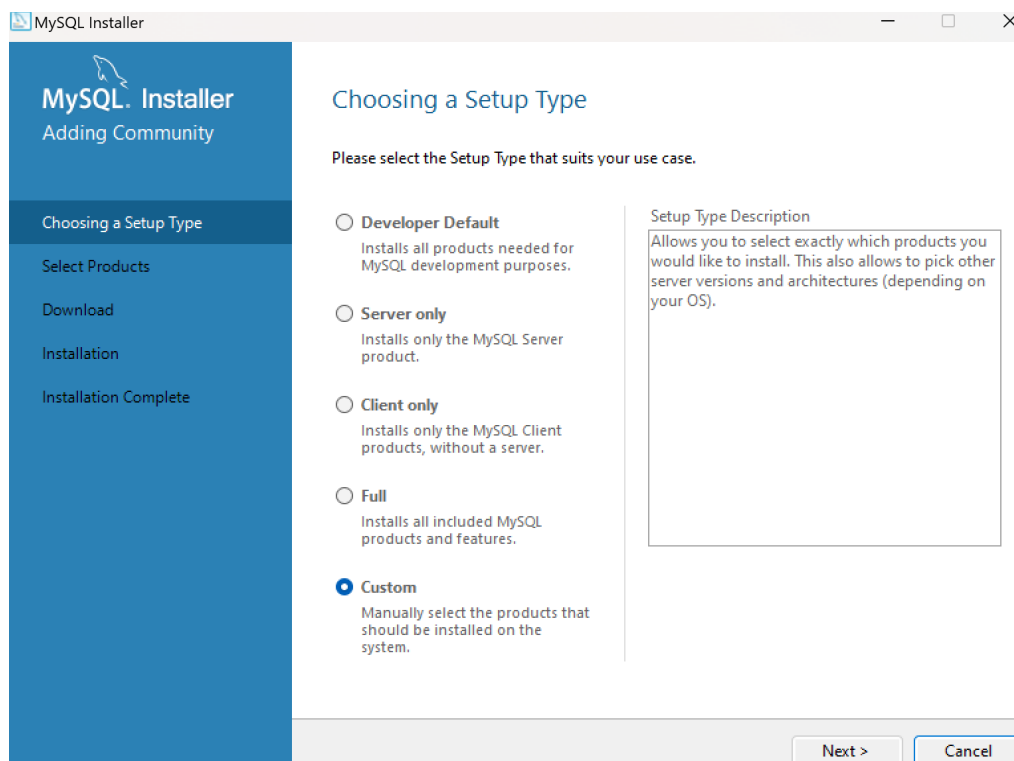
## A) Búsqueda y descarga de la última versión estable y libre de MySQL (versión Community)

1. Entramos en la página oficial de MySQL: [MySQL :: MySQL Community Edition](#)
2. Nos descargamos sql community server y el instalador para windows (el de mayor espacio, puesto que los paquetes ya están descargados, si seleccionamos el de menor tamaño se descargarán dinámicamente) : [MySQL :: Download MySQL Community Server](#)

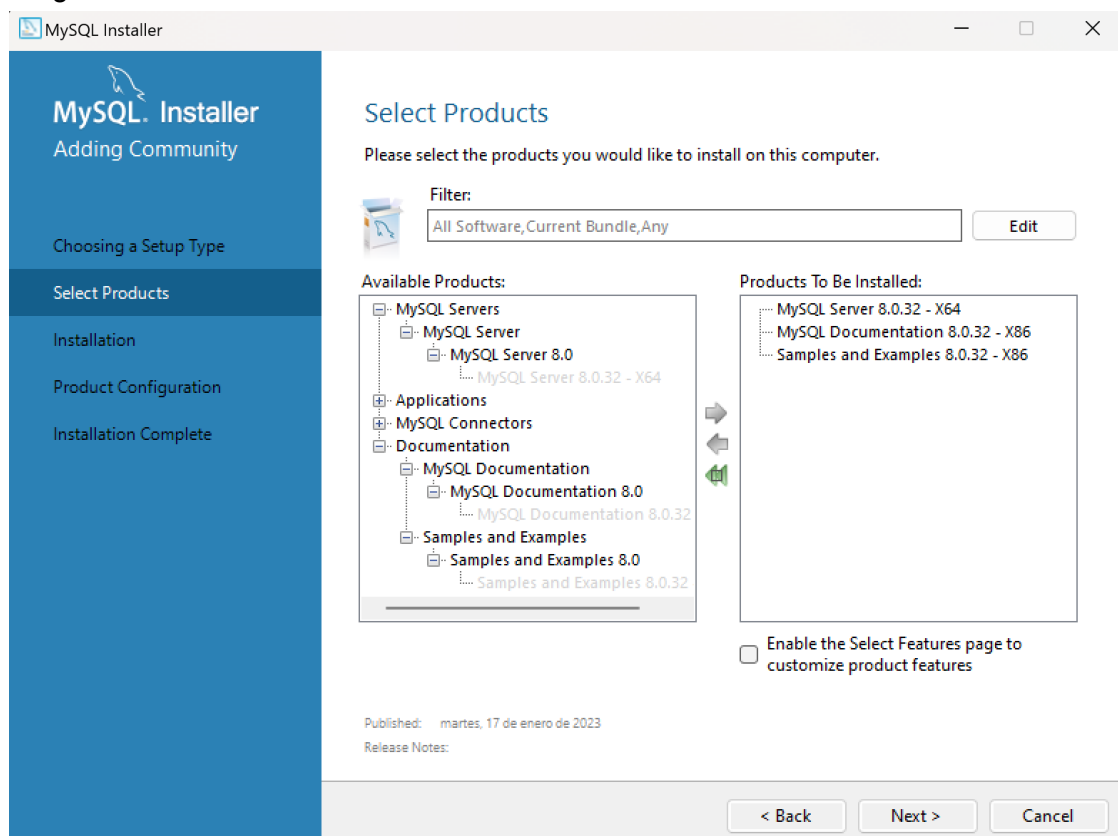
## B) Instalación del SGBD MySQL

Una vez descargado todos los archivos, seguiremos los siguientes pasos para la completa instalación del programa, todas las acciones vendrán indicadas con capturas de cada paso a realizar:

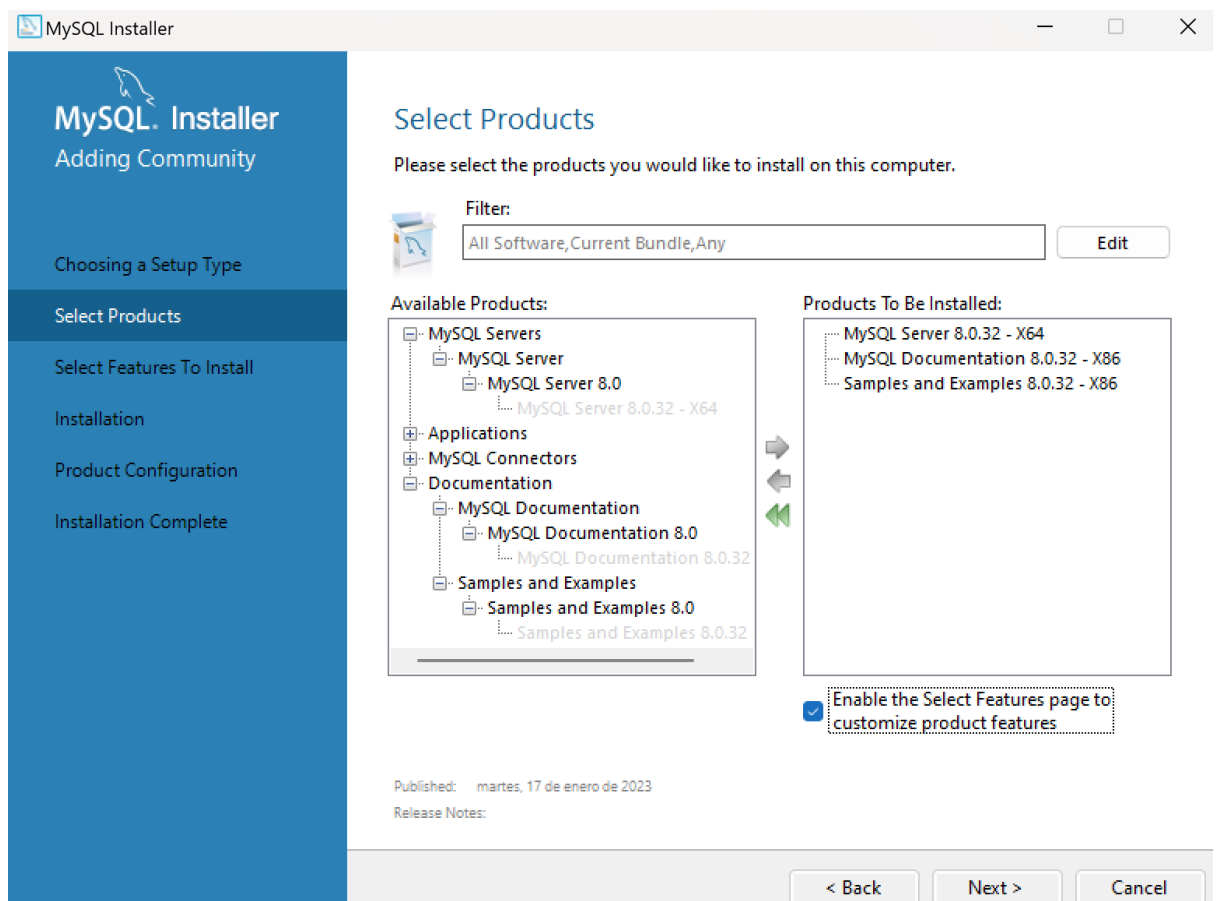
1. Iniciamos el instalador y seleccionamos la personalizada (*custom*):



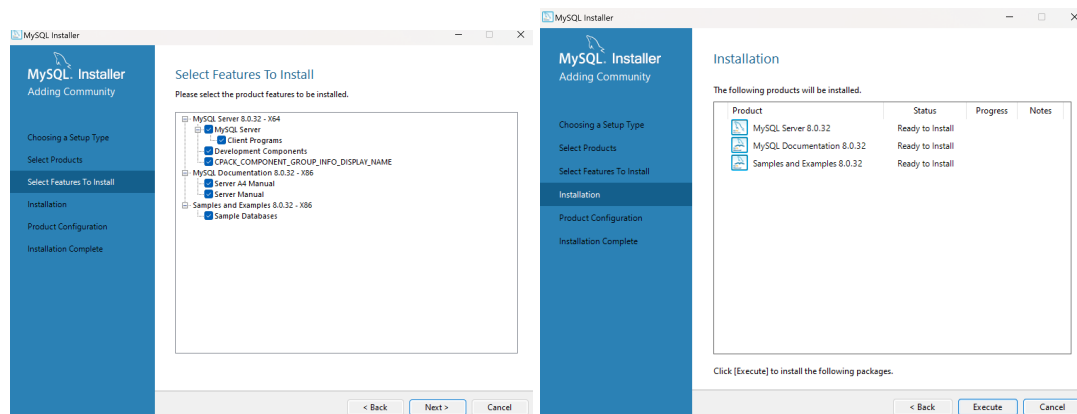
1. Instalamos el servidor de MySQL, la documentación y los ejemplos mostrados en la imagen.



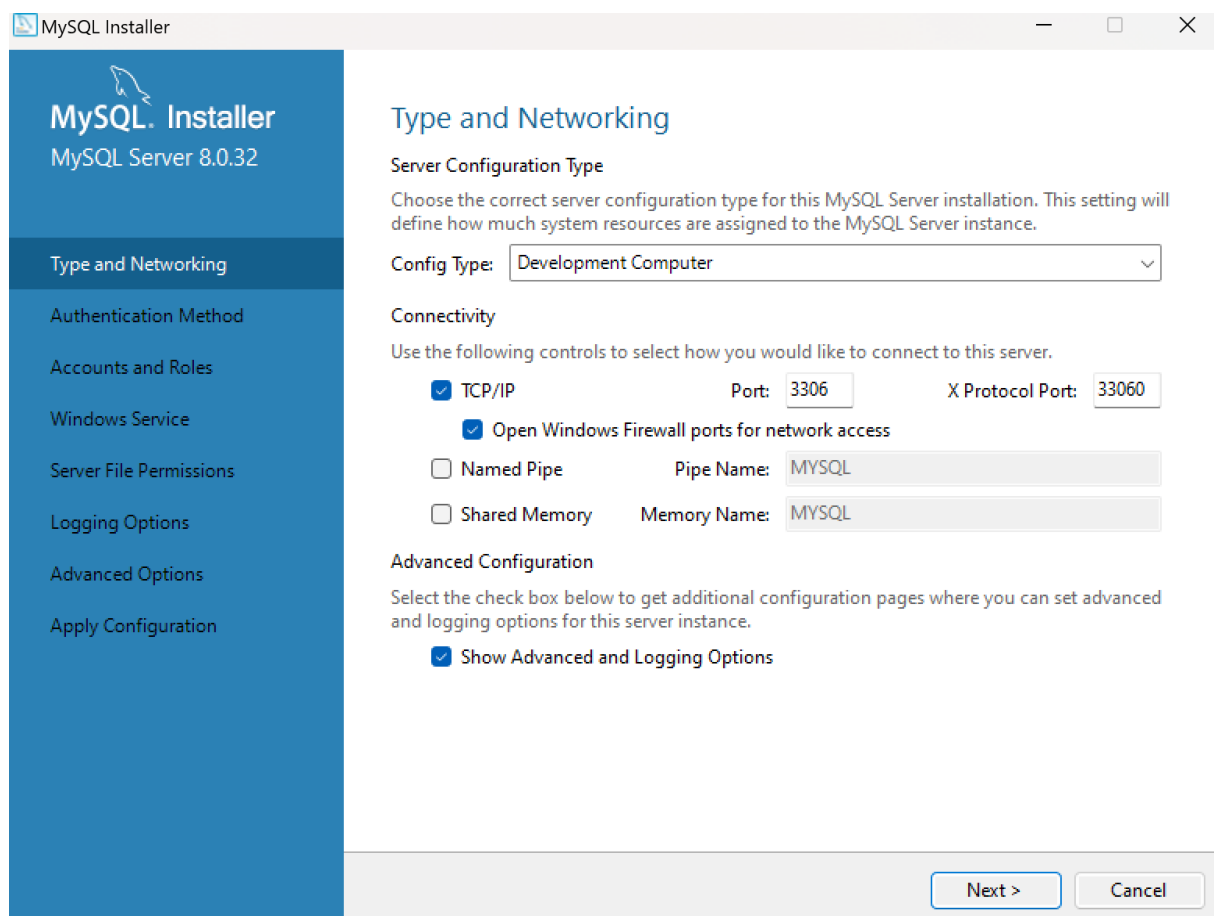
2. Hacemos clic en: “Habilitar las Select Features page”.



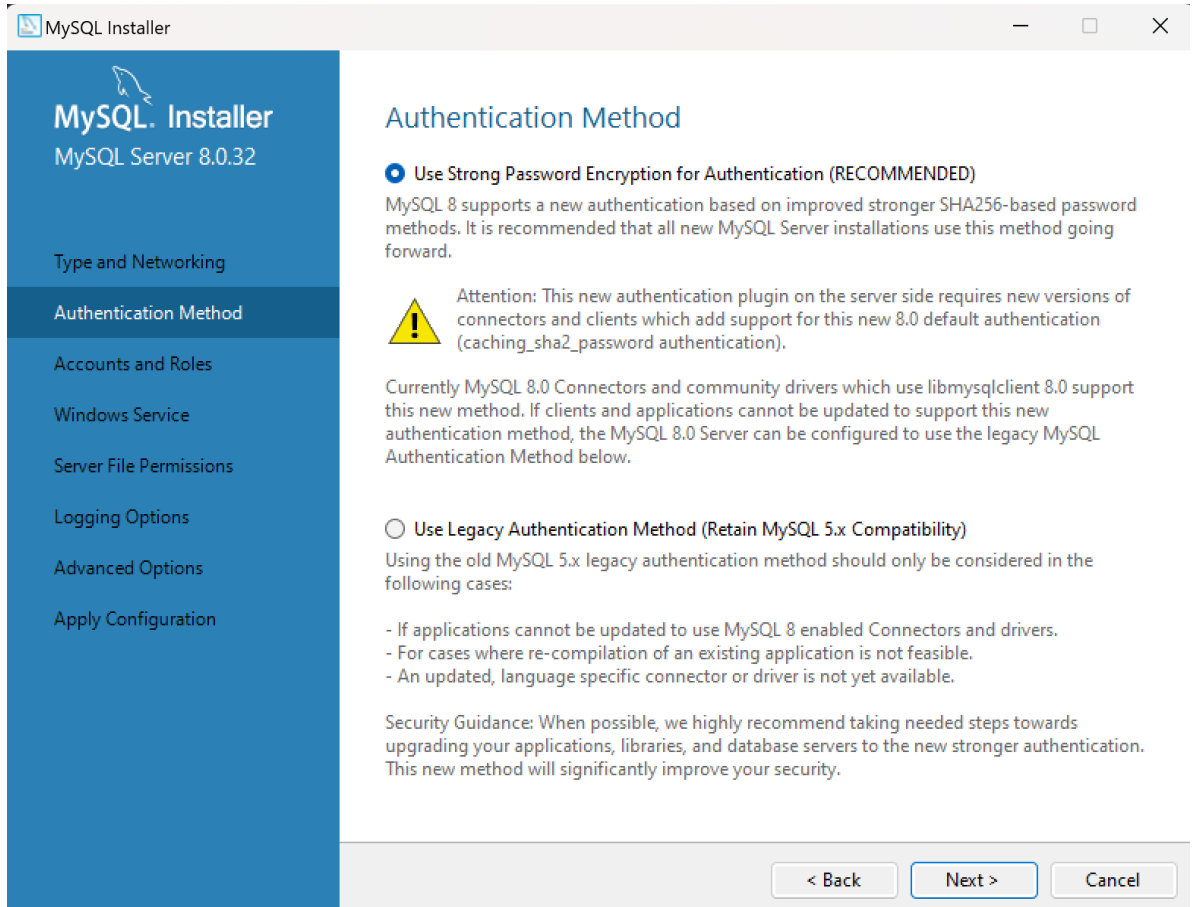
3. Posteriormente hacemos clic en “**Next**”, “**Execute**” y otra vez “**Next**” (una vez ejecutado todo) hasta llegar a la ventana de personalización. Hacemos “Next” ya que no hay nada que modificar en estos apartados.




4. Configuramos los parámetros:
- **config type:** Development computer  
(¿Que tipo de máquina estoy instalando el servidor?)
  - Hacer clic en “**Show advanced options**”
  - No es necesario cambiar el resto de configuraciones: puerto (puerto por defecto por el que se va a conectar)



## 5. Authentication Method: elegir el recomendado:



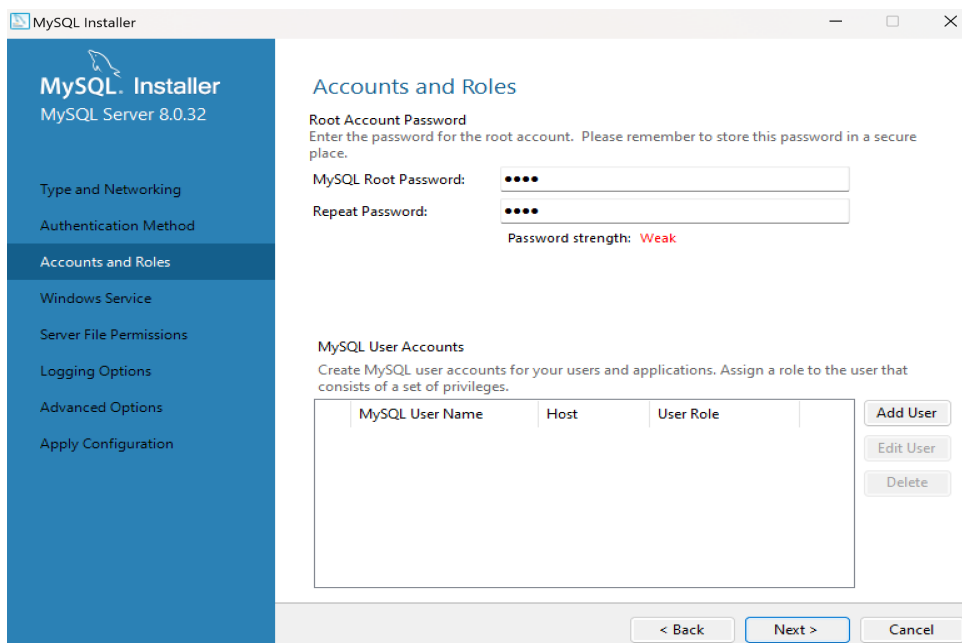
The screenshot shows the 'Authentication Method' screen of the MySQL Installer. The left sidebar lists the installation steps: Type and Networking, Authentication Method (selected), Accounts and Roles, Windows Service, Server File Permissions, Logging Options, Advanced Options, and Apply Configuration. The main area is titled 'Authentication Method' and presents two options:

- ☒ **Use Strong Password Encryption for Authentication (RECOMMENDED)**  
MySQL 8 supports a new authentication based on improved stronger SHA256-based password methods. It is recommended that all new MySQL Server installations use this method going forward.  
 **Attention:** This new authentication plugin on the server side requires new versions of connectors and clients which add support for this new 8.0 default authentication (caching\_sha2\_password authentication).  
Currently MySQL 8.0 Connectors and community drivers which use libmysqlclient 8.0 support this new method. If clients and applications cannot be updated to support this new authentication method, the MySQL 8.0 Server can be configured to use the legacy MySQL Authentication Method below.
- ☐ **Use Legacy Authentication Method (Retain MySQL 5.x Compatibility)**  
Using the old MySQL 5.x legacy authentication method should only be considered in the following cases:
  - If applications cannot be updated to use MySQL 8 enabled Connectors and drivers.
  - For cases where re-compilation of an existing application is not feasible.
  - An updated, language specific connector or driver is not yet available.

Security Guidance: When possible, we highly recommend taking needed steps towards upgrading your applications, libraries, and database servers to the new stronger authentication. This new method will significantly improve your security.

At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

## 6. Account and Roles: seleccionar un administrador (por defecto se llama root, nos pide crear una contraseña para el root)



The screenshot shows the 'Accounts and Roles' screen of the MySQL Installer. The left sidebar is the same as in the previous screen, with 'Accounts and Roles' now selected. The main area is titled 'Accounts and Roles' and contains two sections:

**Root Account Password**  
Enter the password for the root account. Please remember to store this password in a secure place.

MySQL Root Password:

Repeat Password:

Password strength: **Weak**

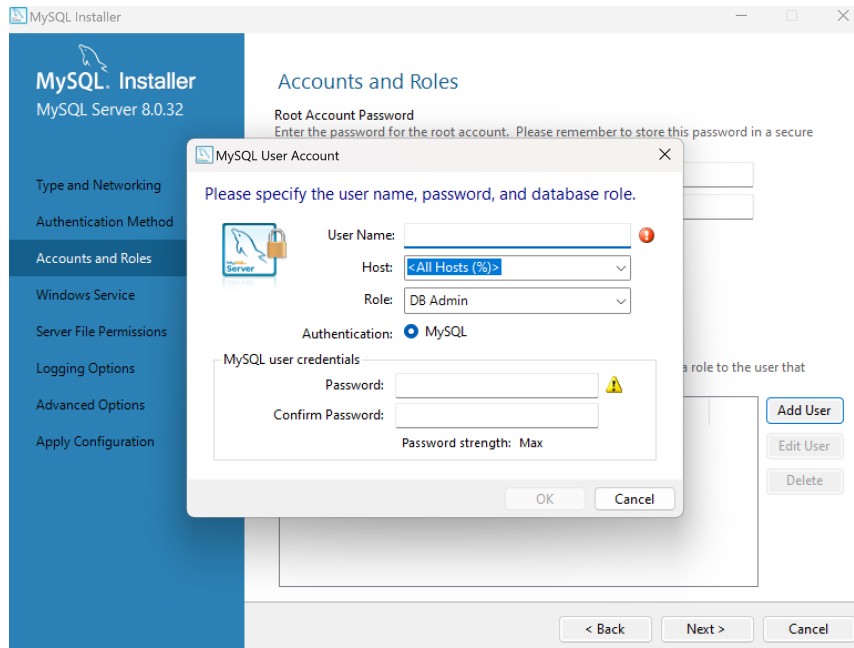
**MySQL User Accounts**  
Create MySQL user accounts for your users and applications. Assign a role to the user that consists of a set of privileges.

MySQL User Name	Host	User Role
-----------------	------	-----------

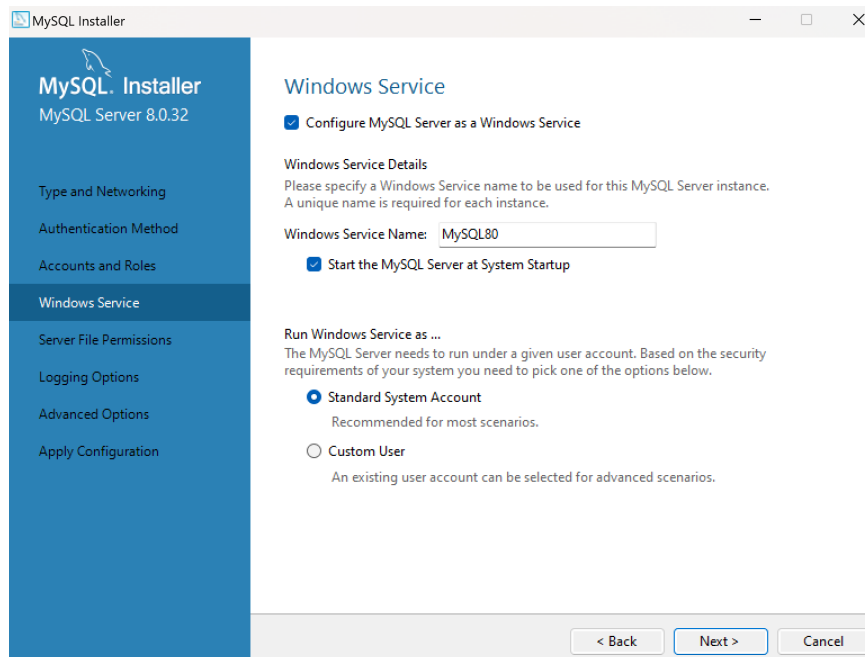
Buttons: Add User, Edit User, Delete

At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

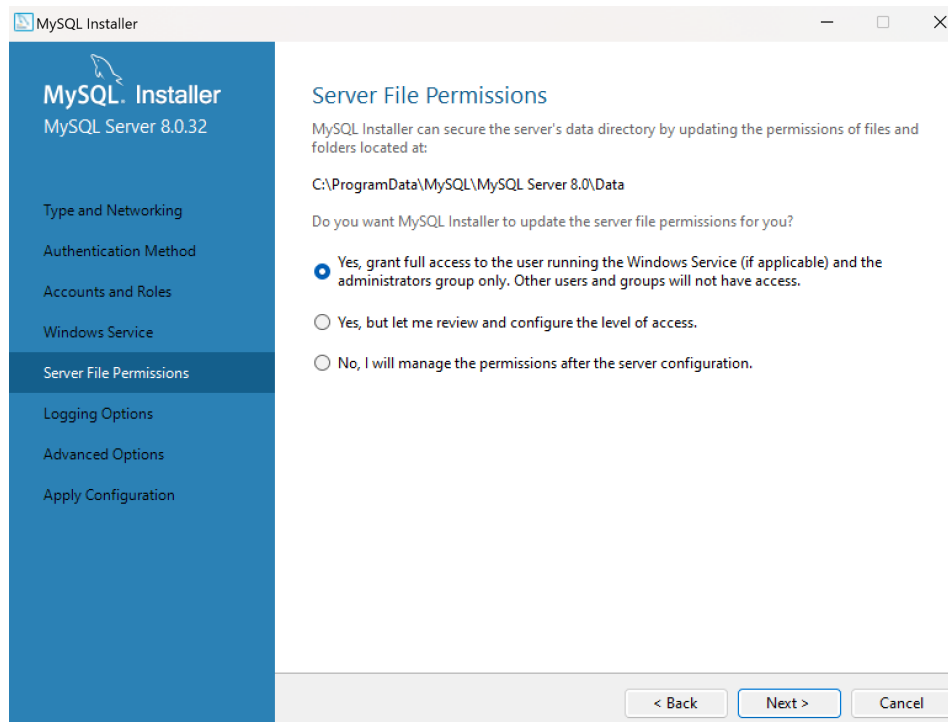
Además podríamos añadir más usuarios:



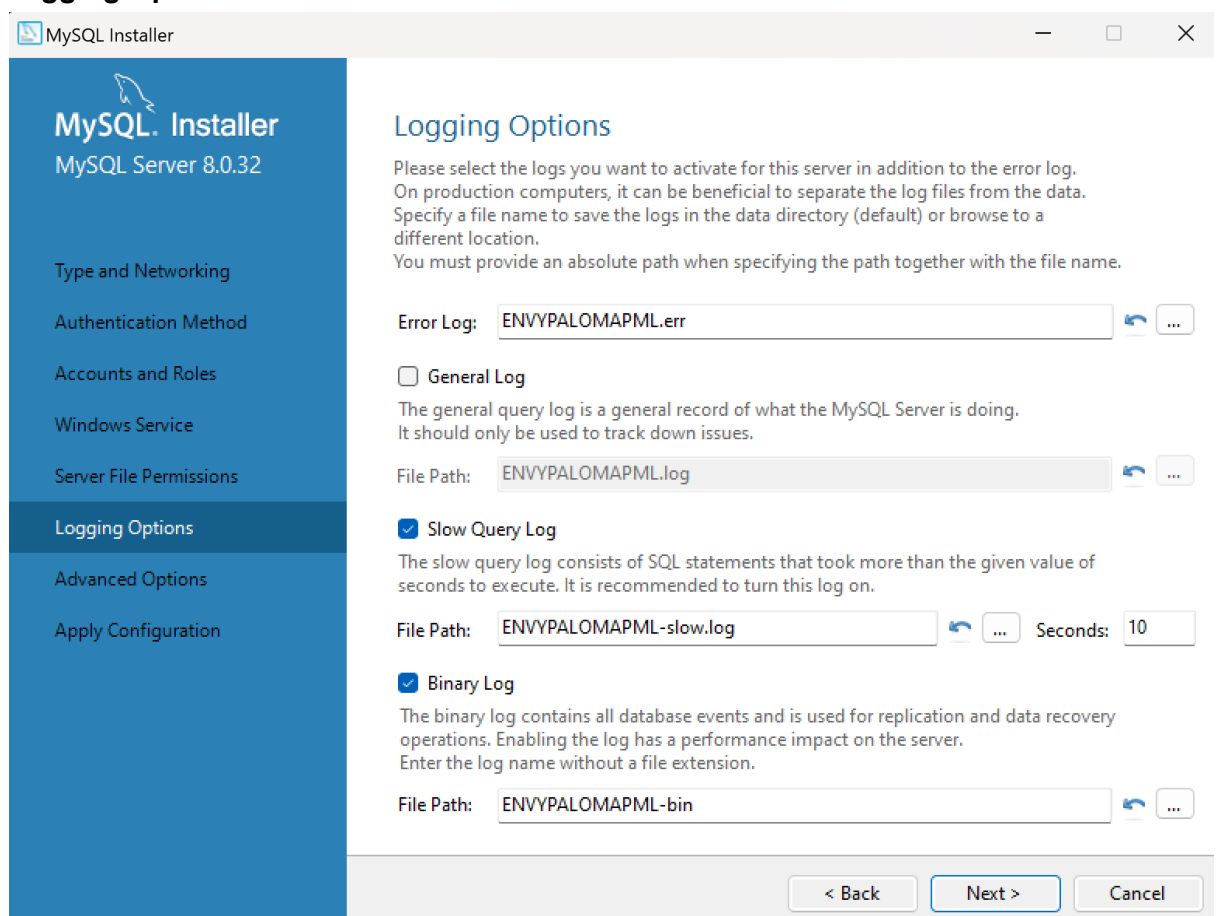
## 7. Windows Service: dejarlo por defecto (pulsar “next”)



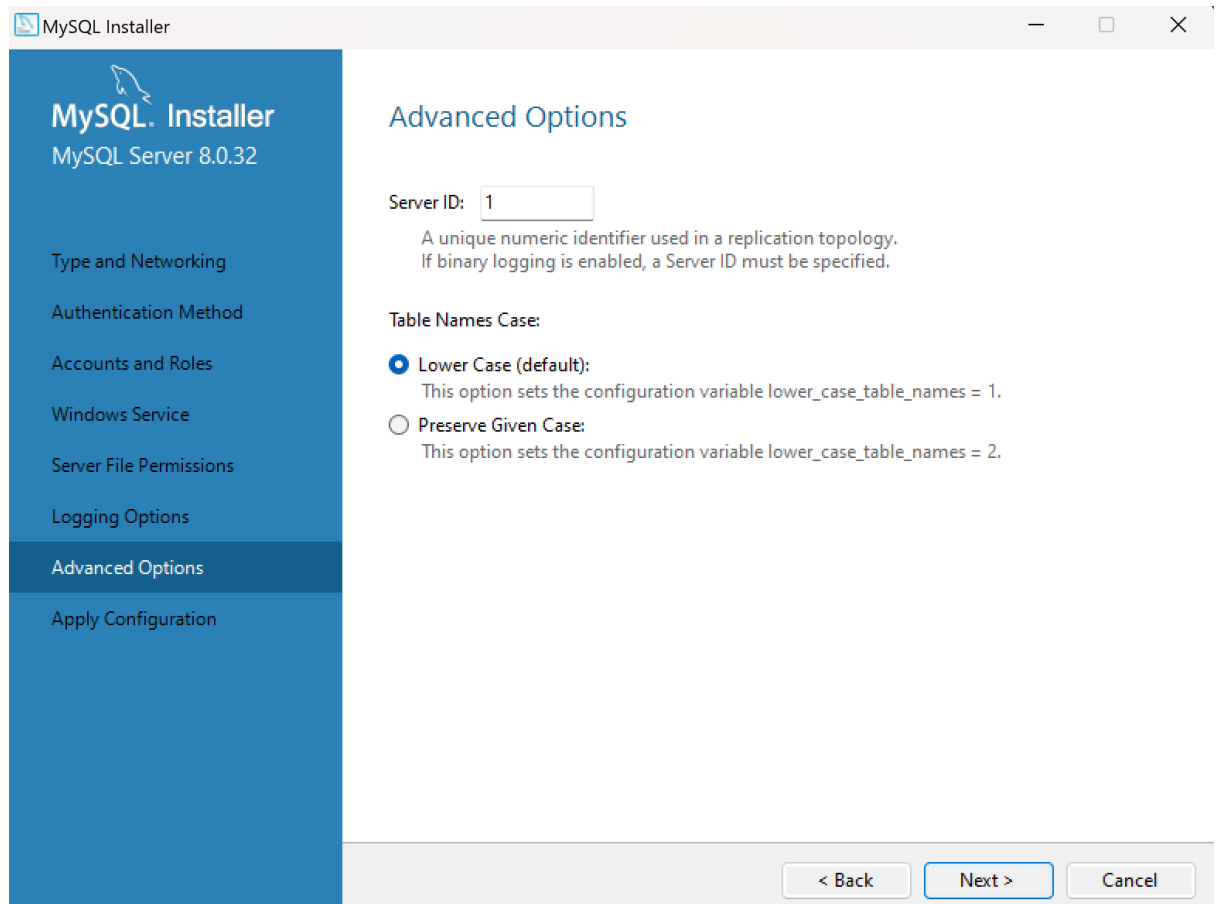
## 8. Server File permission: indica donde se guarda la información (pulamos “next”)



## 9. Logging Options: Pulsamos “Next”

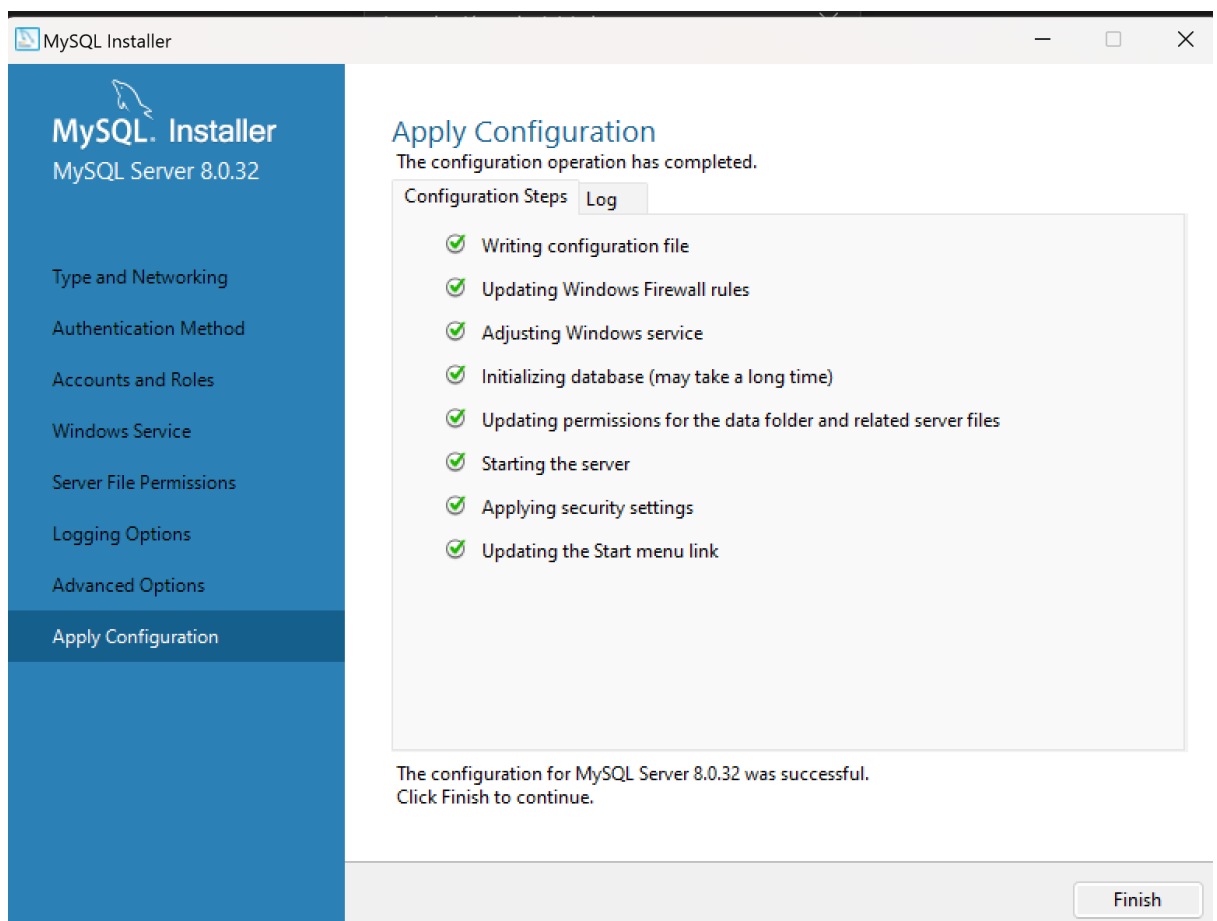


## 10. Advanced Options: Al igual que antes pulsamos: “Next”

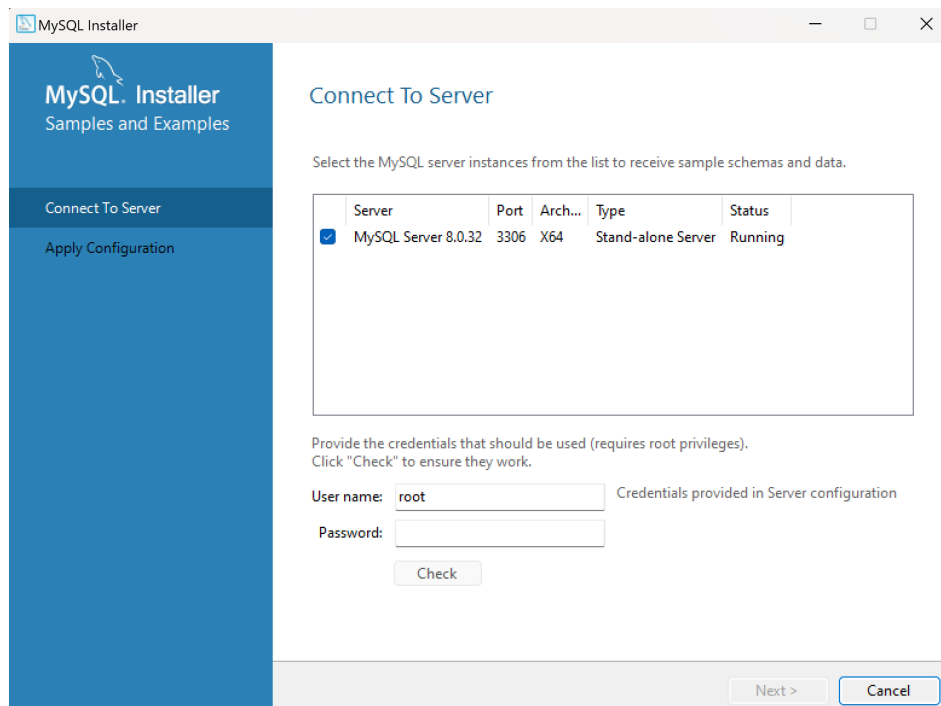
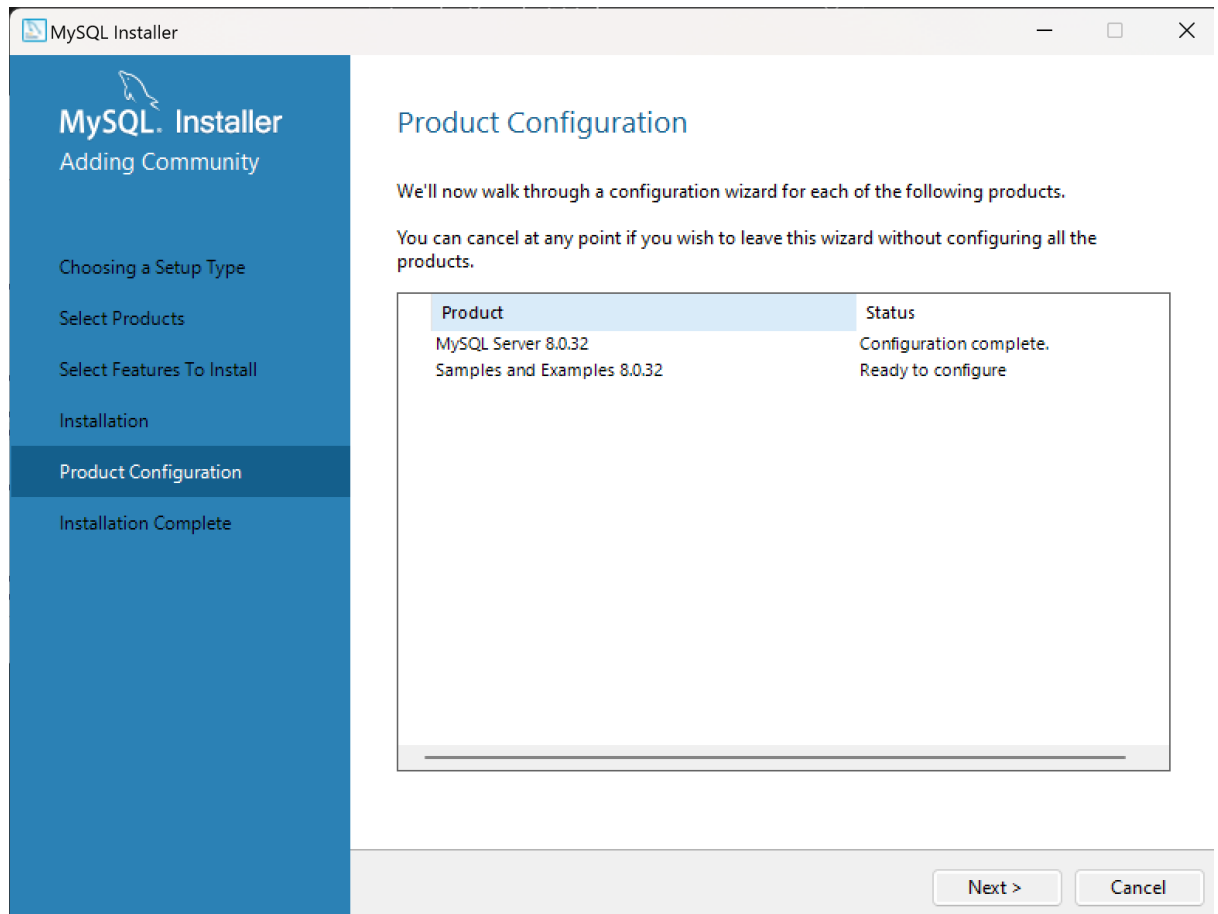


## 11. Apply Configuration:

Estamos en la configuración final por lo que clicamos en “Execute”, y “Finish”



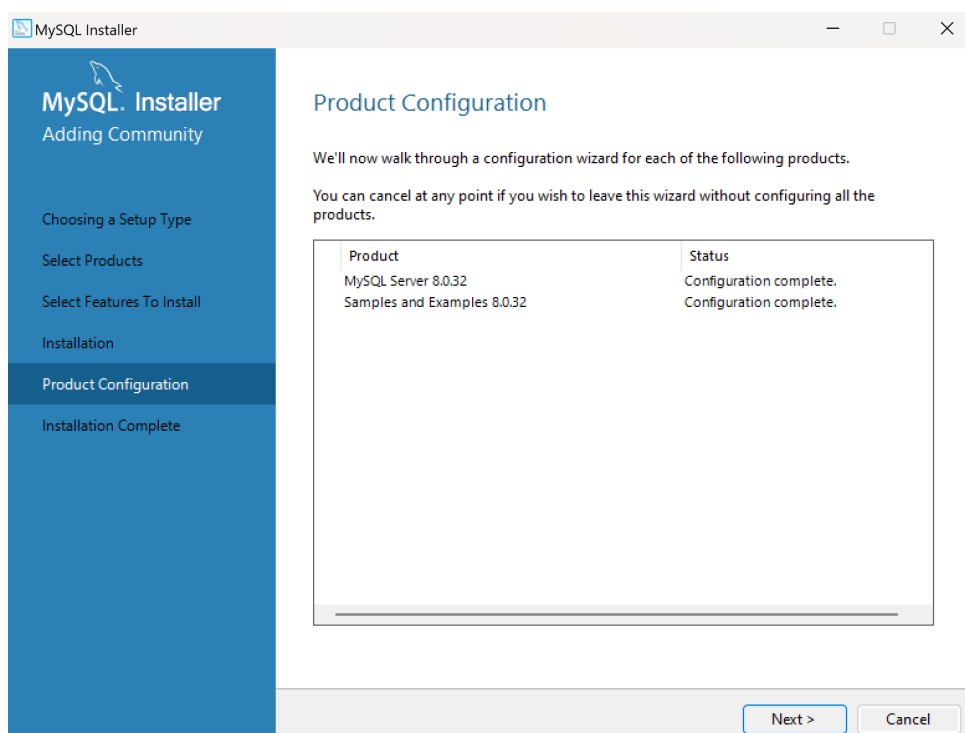
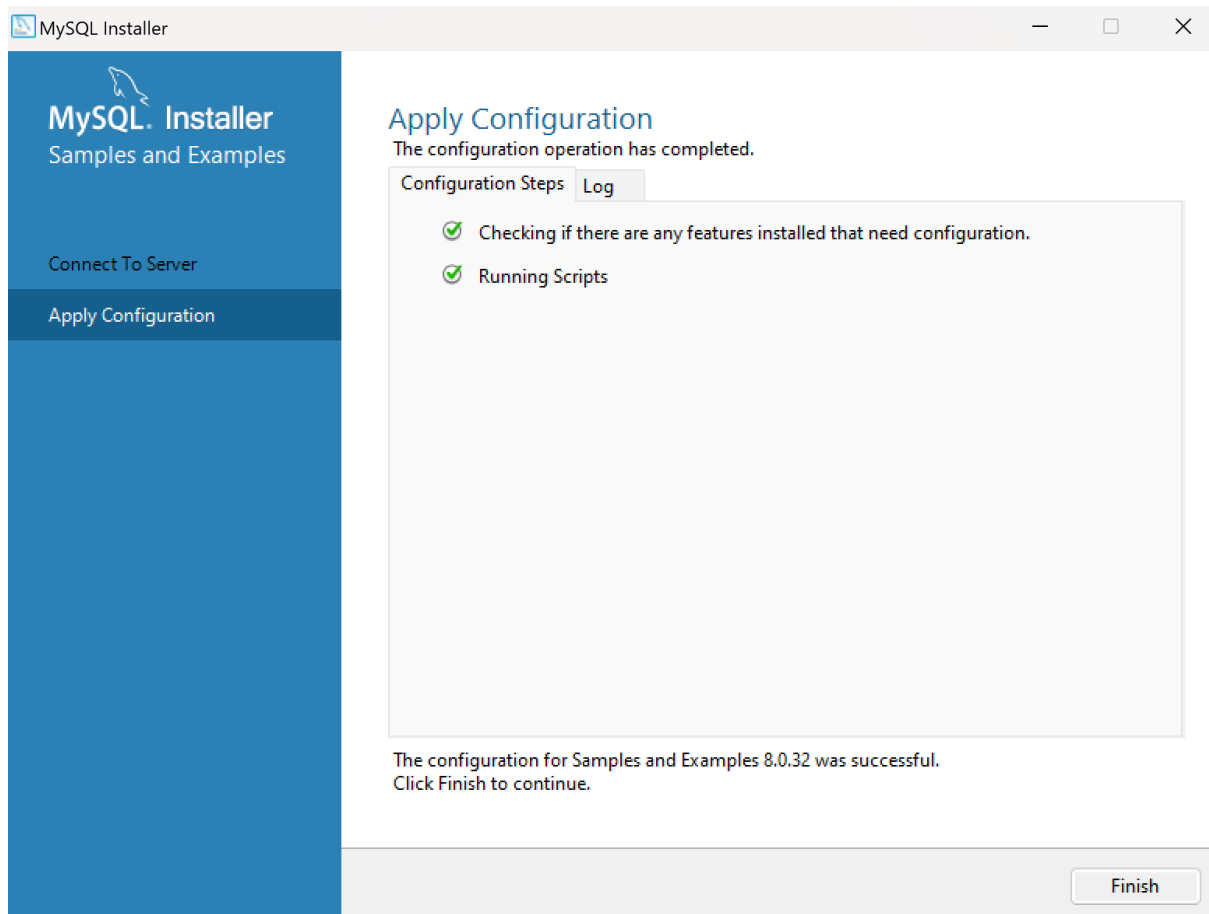
Luego clicamos “**Next**” dos veces ya que no hay nada que configurar.



Aquí ponemos la **contraseña**, clicamos “**Check**” y “**Next**”.



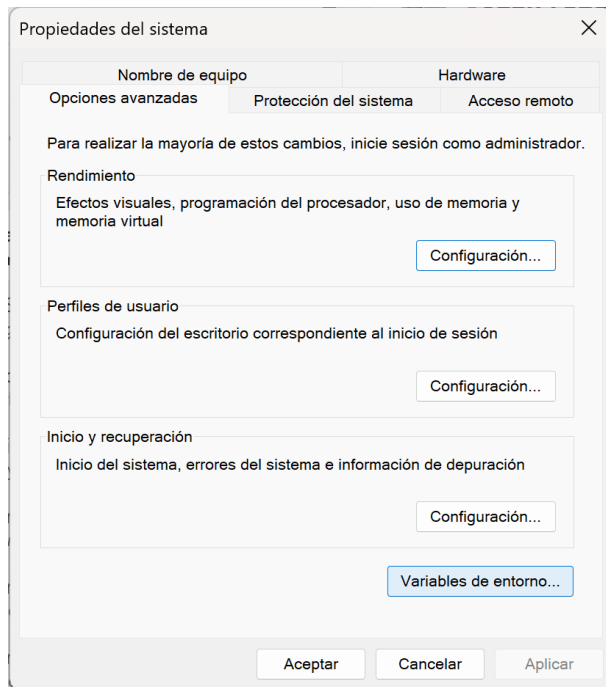
Finalmente como últimos pasos clicamos en orden: **“Execute”**, **“Finish ”** y **“Next”**.



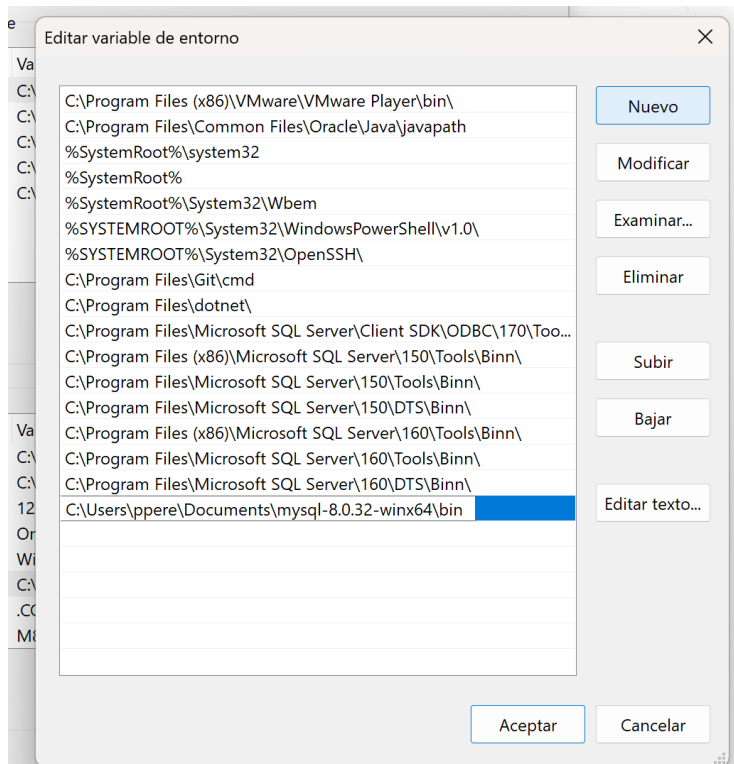
### C) Comprobación de la instalación realizada:

Primero se debe configurar MySQL en el ordenador (en nuestro caso windows)

Ir a Editar variables del entorno del sistema



Añadir ruta de la carpeta bin descargada anteriormente como “mysql-8.0.32-winx64”



Una vez añadida la ruta ya podemos usar la terminal (símbolo del sistema) para realizar las consultas. Debemos introducir los siguientes comandos:

```
Símbolo del sistema - mysql
Microsoft Windows [Versión 10.0.22621.1105]
(c) Microsoft Corporation. Todos los derechos reservados.

C:\Users\ppere>cd Documents\sqlmy
El sistema no puede encontrar la ruta especificada.

C:\Users\ppere>cd Documents\mysql-8.0.32-winx64\bin

C:\Users\ppere\Documents\mysql-8.0.32-winx64\bin>mysql -u root -p
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 62
Server version: 8.0.32 MySQL Community Server - GPL

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> |
```

## Bases de datos

### Sakila:

Comprobación de las bases de datos una vez iniciada la sesión (mysql -u root -p contraseña)

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sakila |
| sys |
| world |
+-----+
6 rows in set (0.00 sec)

mysql> SHOW DATABASES
-> ;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sakila |
| sys |
| world |
+-----+
6 rows in set (0.09 sec)
```

```
mysql> USE sakila
Database changed
mysql> SELECT DATABASE();
+-----+
| DATABASE() |
+-----+
| sakila |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SHOW TABLES;
+-----+
| Tables_in_sakila |
+-----+
| actor              |
| actor_info         |
| address            |
| category           |
| city               |
| country            |
| customer           |
| customer_list      |
| film               |
| film_actor         |
| film_category      |
| film_list          |
| film_text          |
| inventory          |
| language           |
| nicer_but_slower_film_list |
| payment            |
| rental             |
| sales_by_film_category |
| sales_by_store     |
| staff              |
| staff_list         |
| store              |
+-----+
23 rows in set (0.05 sec)
```

### World:

```
mysql> DESCRIBE city;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| ID         | int       | NO   | PRI | NULL    | auto_increment |
| Name       | char(35)  | NO   |     |          |                |
| CountryCode | char(3)   | NO   | MUL |          |                |
| District   | char(20)  | NO   |     |          |                |
| Population | int       | NO   |     | 0        |                |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.02 sec)

mysql> DESCRIBE country;
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra      |
+-----+-----+-----+-----+-----+-----+
| Code       | char(3)   | NO   | PRI |          |                |
| Name       | char(52)  | NO   |     |          |                |
| Continent  | enum('Asia','Europe','North America','Africa','Oceania','Antarctica','South America') | NO   |     | Asia    |                |
| Region     | char(26)  | NO   |     |          |                |
| SurfaceArea | decimal(10,2) | NO   |     | 0.00    |                |
| IndepYear  | smallint  | YES  |     | NULL    |                |
| Population | int       | NO   |     | 0        |                |
| LifeExpectancy | decimal(3,1) | YES  |     | NULL    |                |
| GNP        | decimal(10,2) | YES  |     | NULL    |                |
| GNPOld     | decimal(10,2) | YES  |     | NULL    |                |
| LocalName  | char(45)  | NO   |     |          |                |
| GovernmentForm | char(45)  | NO   |     |          |                |
| HeadOfState | char(60)  | YES  |     | NULL    |                |
| Capital    | int       | YES  |     | NULL    |                |
| Code2      | char(2)   | NO   |     |          |                |
+-----+-----+-----+-----+-----+-----+
15 rows in set (0.02 sec)
```

```
mysql> DESCRIBE countrylanguage;
```

Field	Type	Null	Key	Default	Extra
CountryCode	char(3)	NO	PRI		
Language	char(30)	NO	PRI		
IsOfficial	enum('T','F')	NO		F	
Percentage	decimal(4,1)	NO		0.0	

```
4 rows in set (0.00 sec)
```

Número de registros por tabla:

```
mysql> select count(*) from country;
```

count(*)
239

```
1 row in set (0.04 sec)
```

```
mysql> select count(*) from city;
```

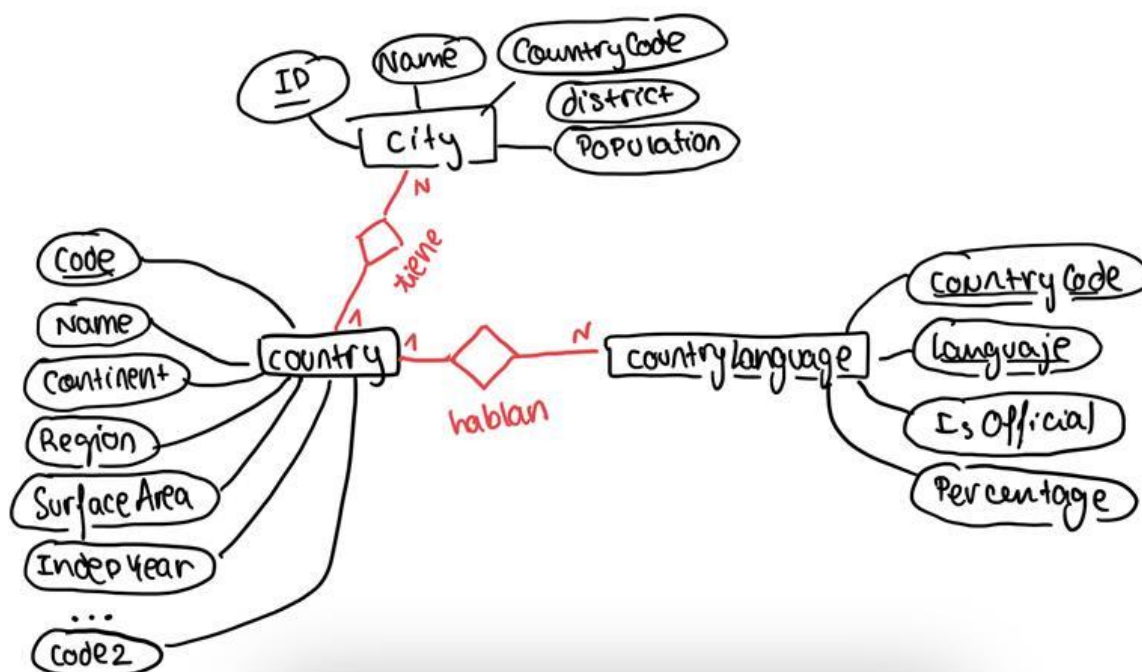
count(*)
4079

```
1 row in set (0.03 sec)
```

```
mysql> select count(*) from countrylanguage;
```

count(*)
984

```
1 row in set (0.01 sec)
```



Es una base de datos que relaciona diferentes países. Cada país tiene al menos una ciudad y habla al menos un idioma. La relación se basa en que las y el idioma del país tienen el atributo de "countrycode" que hace referencia a dicho país.