



USAC

TRICENTENARIA

Universidad de San Carlos de Guatemala

INGENIERIA

CUNOC

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Teoría de Sistemas 1

Proyecto Final: Manual de Usuario

Sección: A

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INTRODUCCIÓN

En nuestra página web de juegos de aprendizaje interactivo, donde combinamos eficacia y vanguardia tecnológica para brindar un servicio de calidad a nuestros usuarios. Nuestro objetivo principal es ofrecer una amplia variedad de juegos y constantes mejoras, todo ello de forma accesible.

A través de nuestra plataforma web, podrás disfrutar de juegos diseñados especialmente para potenciar el aprendizaje. No solo podrás participar en ellos, sino que también obtendrás resultados detallados de tu desempeño. Además, te brindamos la oportunidad de crear tus propios juegos y administrar tu perfil de usuario.

Con esta propuesta, buscamos mejorar la eficiencia de los métodos de evaluación en el aprendizaje. Nuestra página web agiliza el proceso de evaluación, ahorrando tiempo tanto para los usuarios como para los educadores. En nuestra plataforma, cada usuario tiene un rol específico que le permite cumplir con sus objetivos de manera efectiva.

Estamos comprometidos en proporcionar una experiencia única y en constante evolución. Nuestra pasión por la educación y la tecnología nos impulsa a estar a la vanguardia en cuanto a los avances tecnológicos y las metodologías de enseñanza. ¡Únete a nosotros y descubre una nueva forma de aprender jugando!

OBJETIVOS

Objetivo general:

- Facilitar el proceso educativo entre usuarios con una página de juegos educativos.

Objetivos específicos:

1. Utilizar mongoDB como base de datos.
2. Hacer uso del pensamiento sistémico para darle escalabilidad al proyecto.
3. Manejar los procesos educativos en juegos utilizando el lenguaje de JavaScript.

Requerimientos

→Windows

En casos de tener sistema operativo Windows necesita lo siguiente:

Windows 10 (8u51 y superiores)

Windows 8.x (escritorio)

Windows 7 SP1

Windows Vista SP2

Windows Server 2008 R2 SP1 (64 bits)

Windows Server 2012 y 2012 R2 (64 bits)

RAM: 128 MB

Espacio en disco: 124 MB para JRE; 2 MB para Java Update

Procesador: Mínimo Pentium 2 a 266 MHz

Exploradores: Internet Explorer 9 y superior, Firefox

→Mac OS X

En casos de tener sistema operativo Mac OS X necesita lo siguiente:

Mac con Intel que ejecuta Mac OS X 10.8.3+, 10.9+

Privilegios de administrador para la instalación

Explorador de 64 bits

Se requiere un explorador de 64 bits (Safari, por ejemplo) para ejecutar Oracle Java en Mac.

→Linux

En casos de tener sistema operativo Linux necesita lo siguiente:

Oracle Linux 5.5+1

Oracle Linux 6.x (32 bits), 6.x (64 bits)²

Oracle Linux 7.x (64 bits)² (8u20 y superiores)

Red Hat Enterprise Linux 5.5+1 6.x (32 bits), 6.x (64 bits)²

Red Hat Enterprise Linux 7.x (64 bits)² (8u20 y superiores)

Suse Linux Enterprise Server 10 SP2+, 11.x

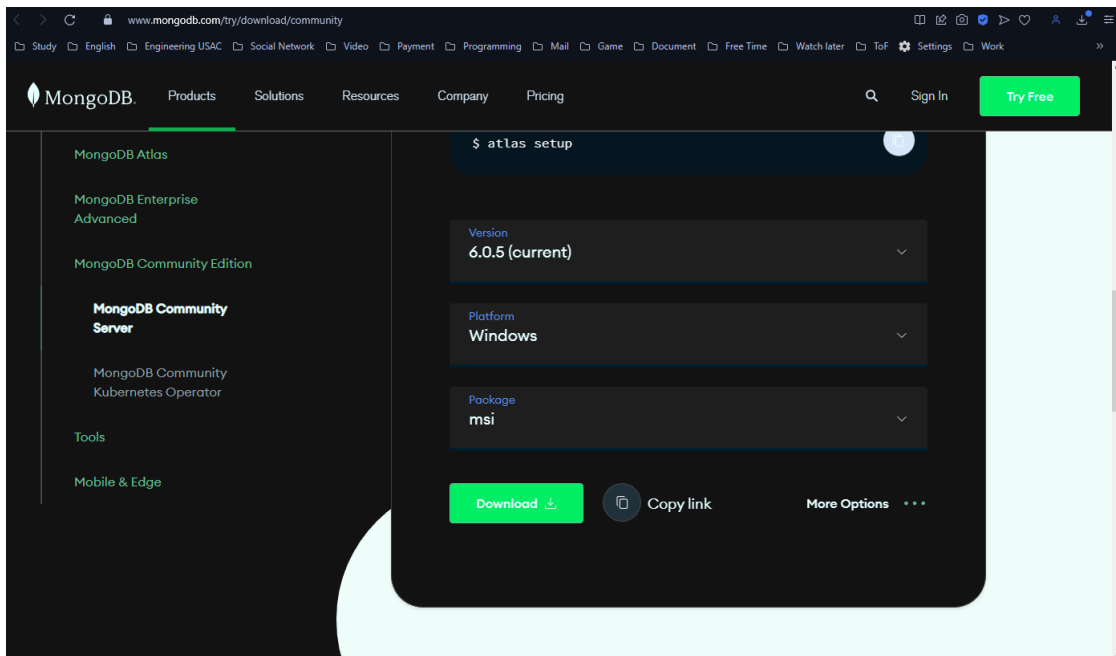
Suse Linux Enterprise Server 12.x (64 bits)² (8u31 y superiores)

Guía de uso

Antes de ejecutar el sistema

MONGODB

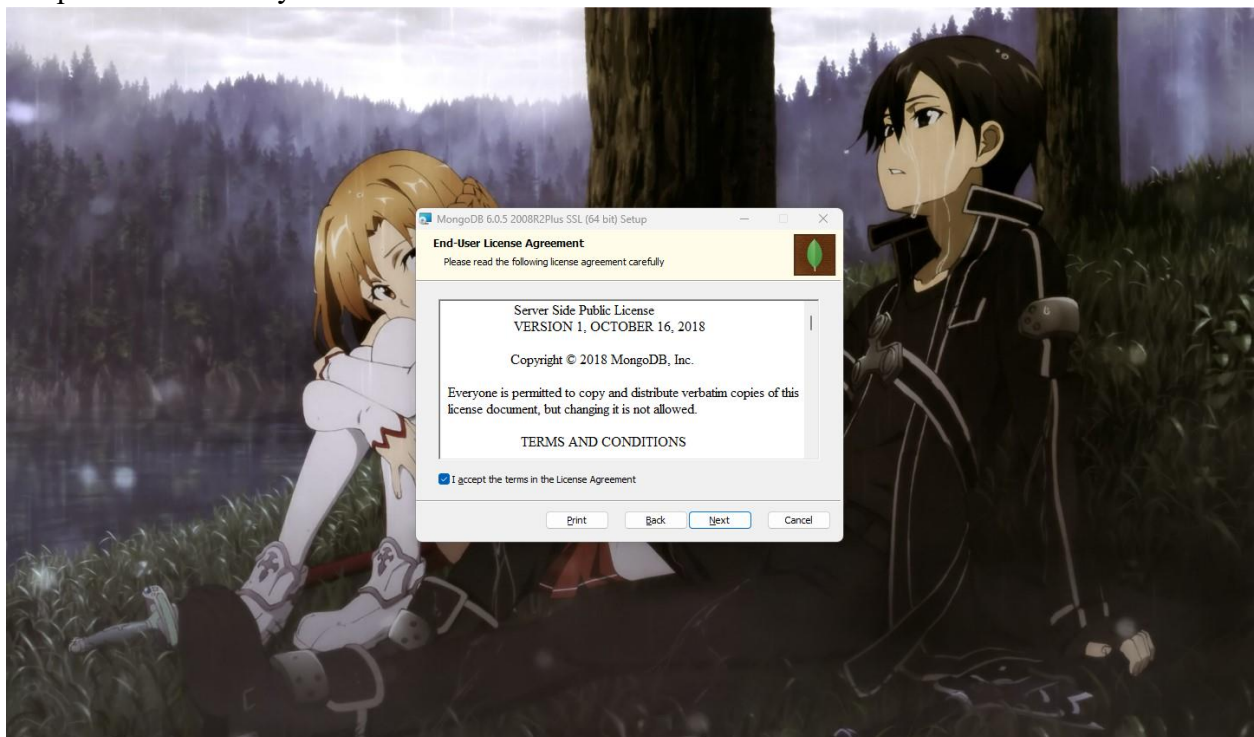
Se ingresa a la página <https://www.mongodb.com/try/download/community> y se le da descargar según el sistema operativo, si es Windows el msi



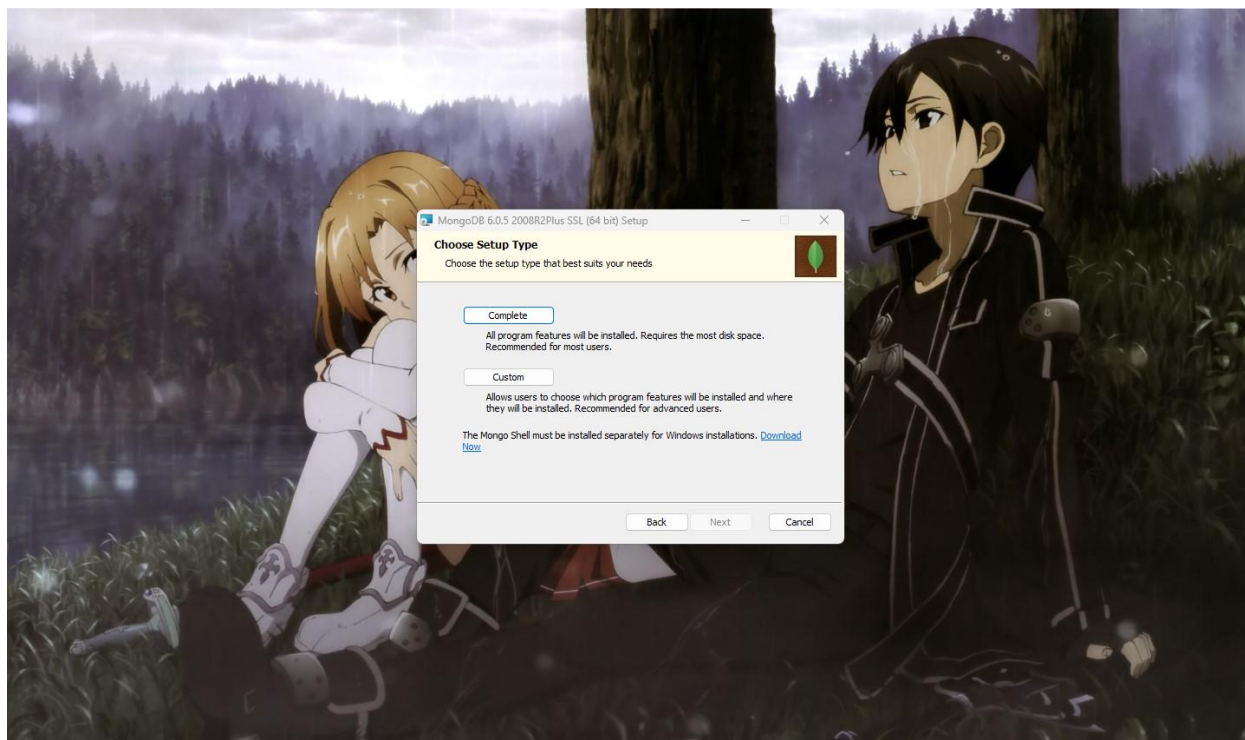
Se abre el archivo y se le da siguiente a lo que sale



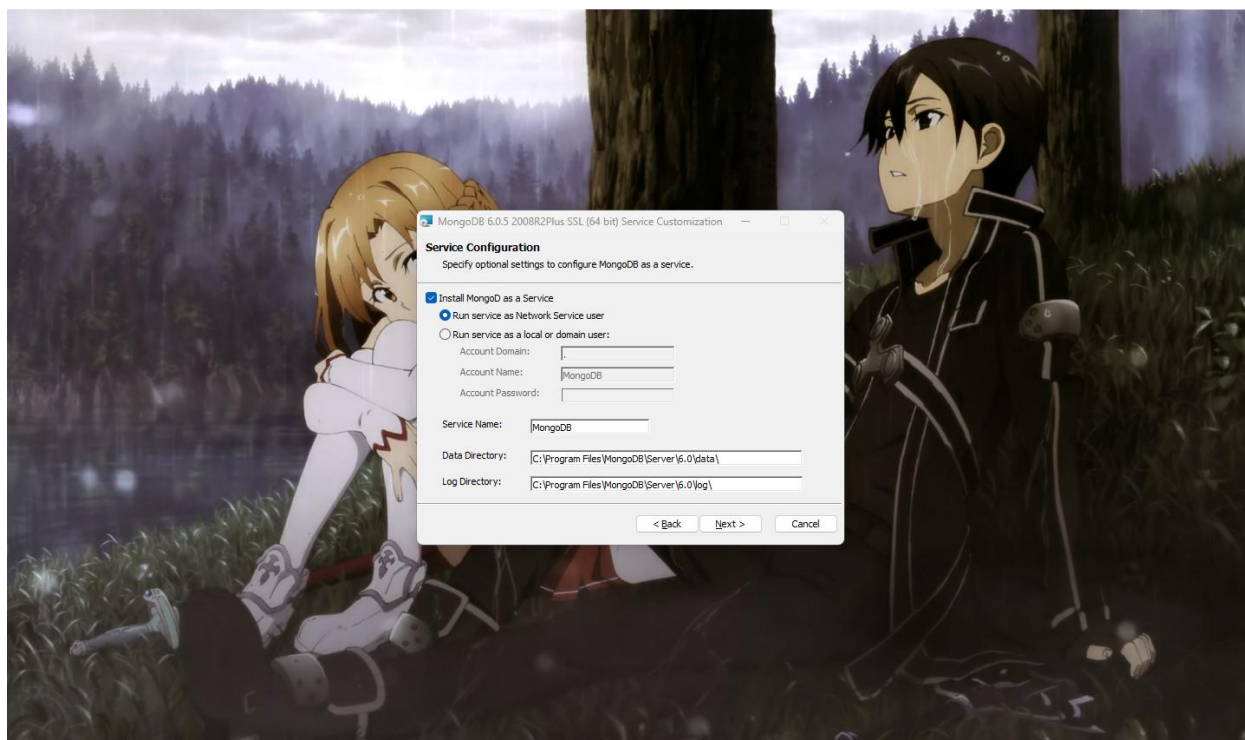
Aceptamos términos y condiciones



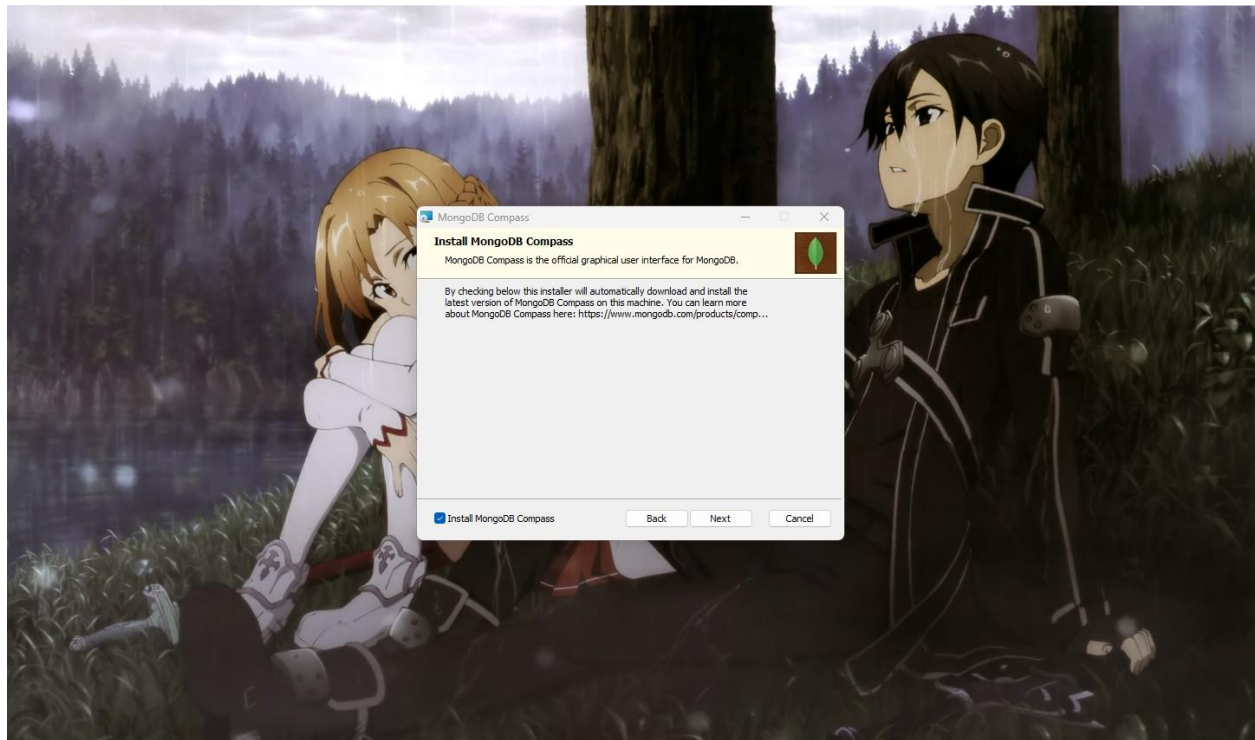
Le damos en complete



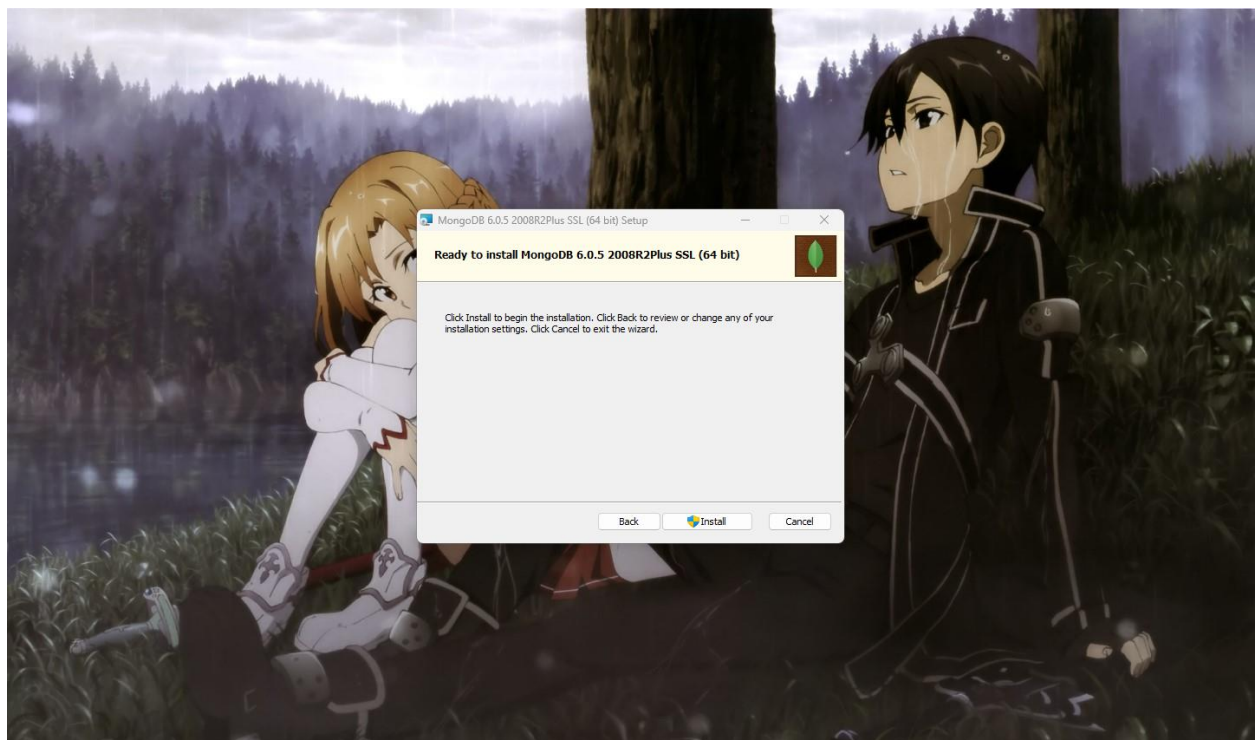
Si queremos modificar ruta de instalación lo hacemos, en mi caso no



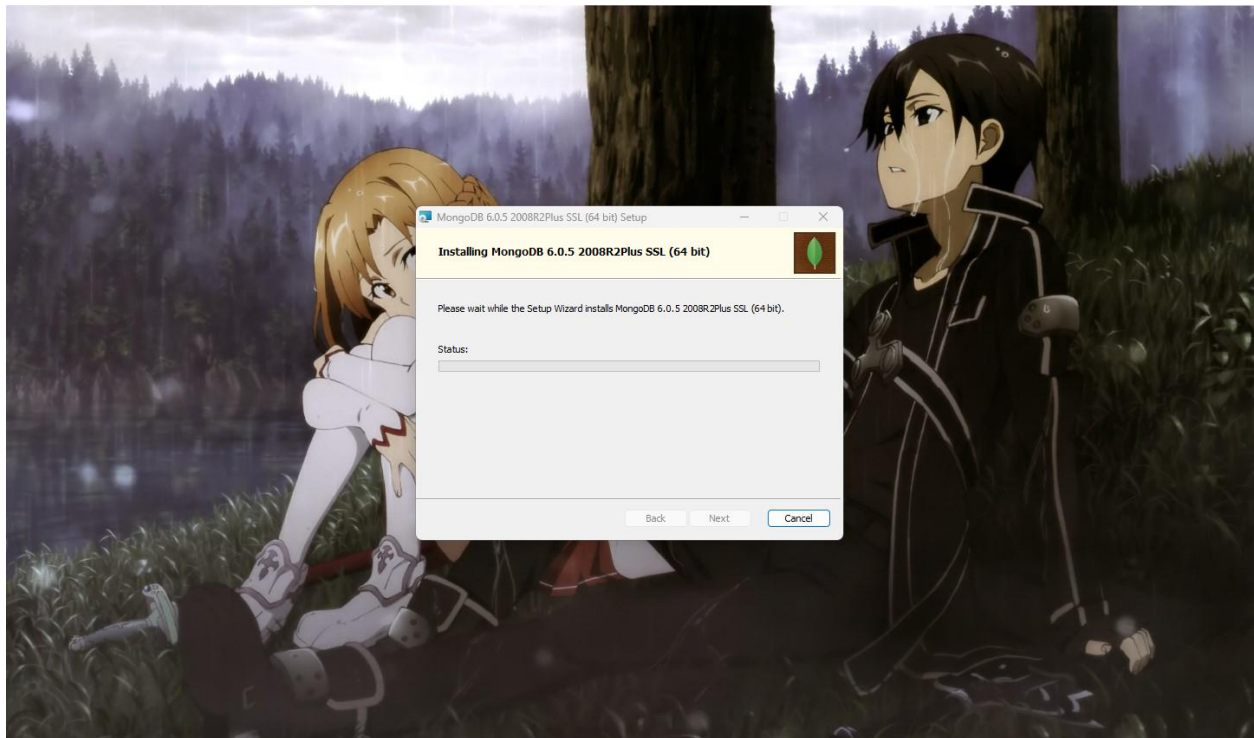
Damos en siguiente



Le damos en instalar



Esperamos a que termine y aceptamos ventanas emergentes que salgan

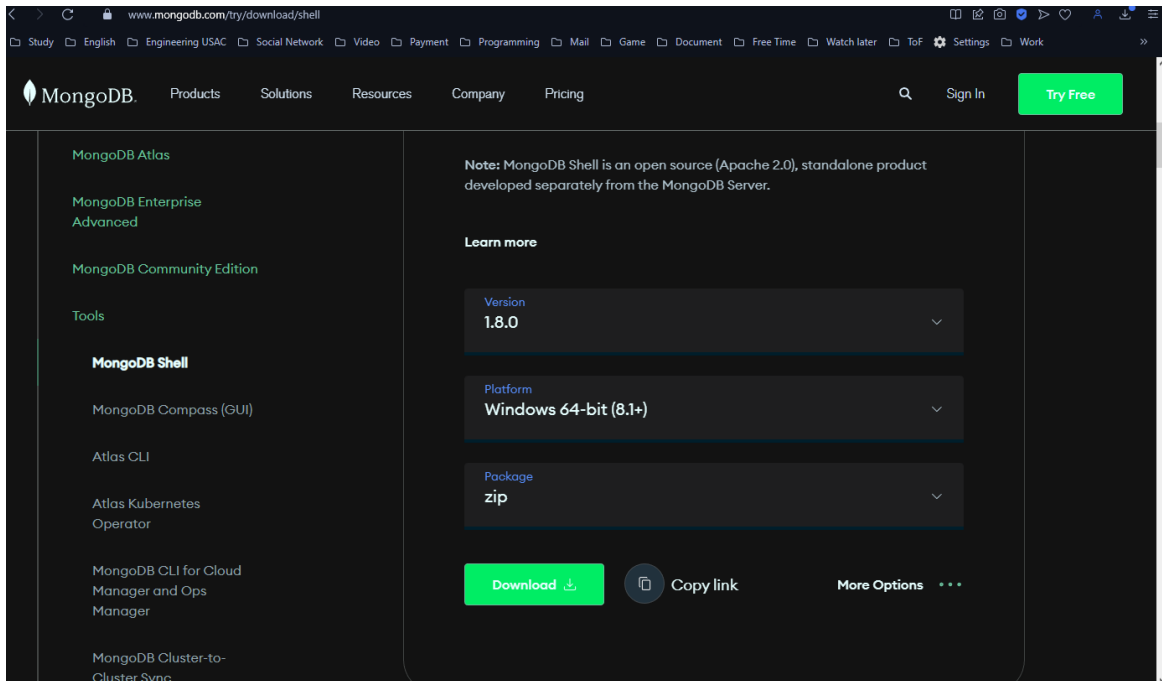


Finalizamos instalación de mongoDB

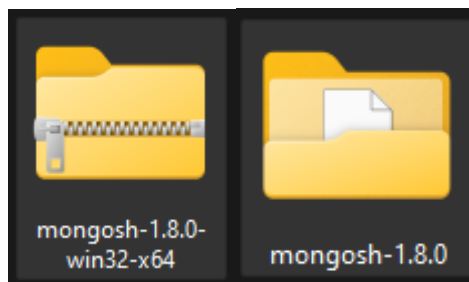


MONGODB SHELL

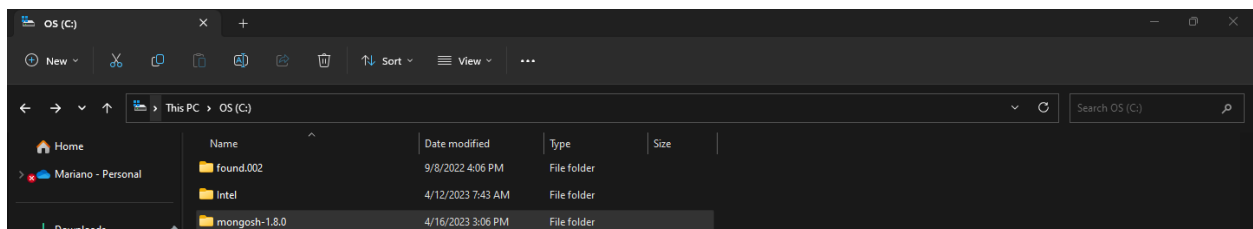
Se ingresa a la página <https://www.mongodb.com/try/download/shell> y se le da descargar según el sistema operativo



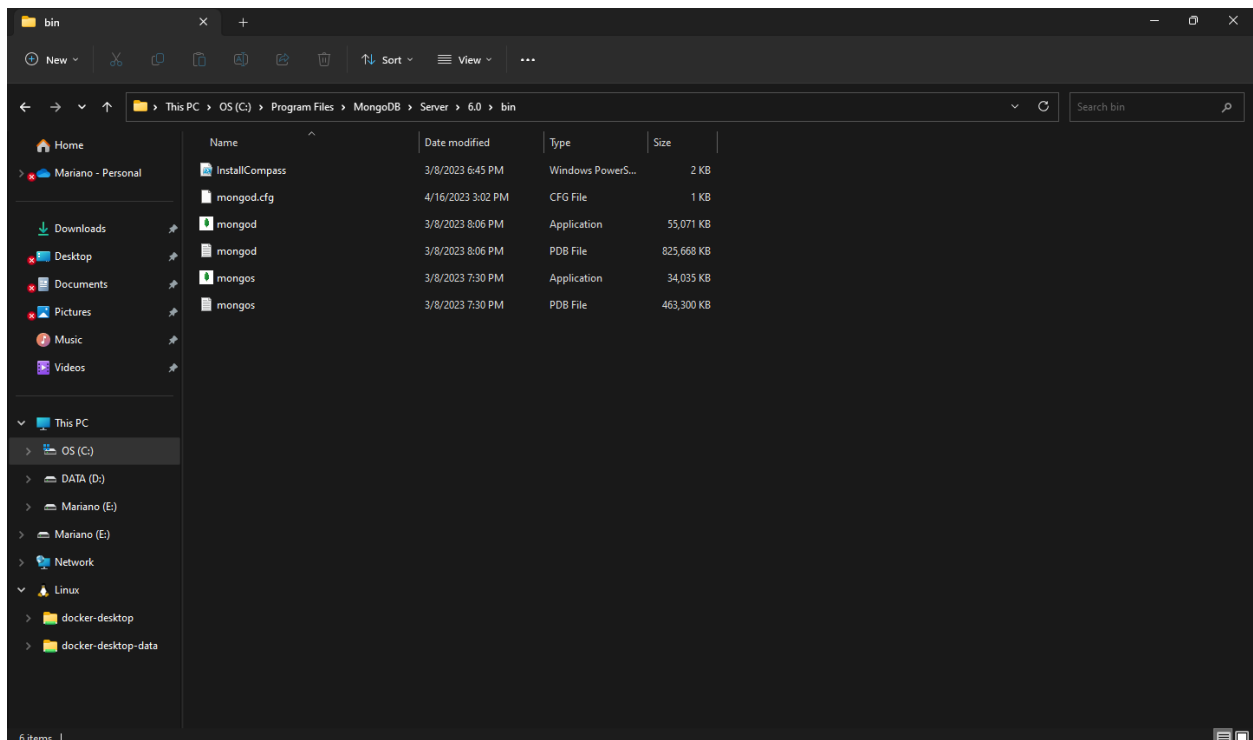
Descomprimos el archivo y acortamos el nombre



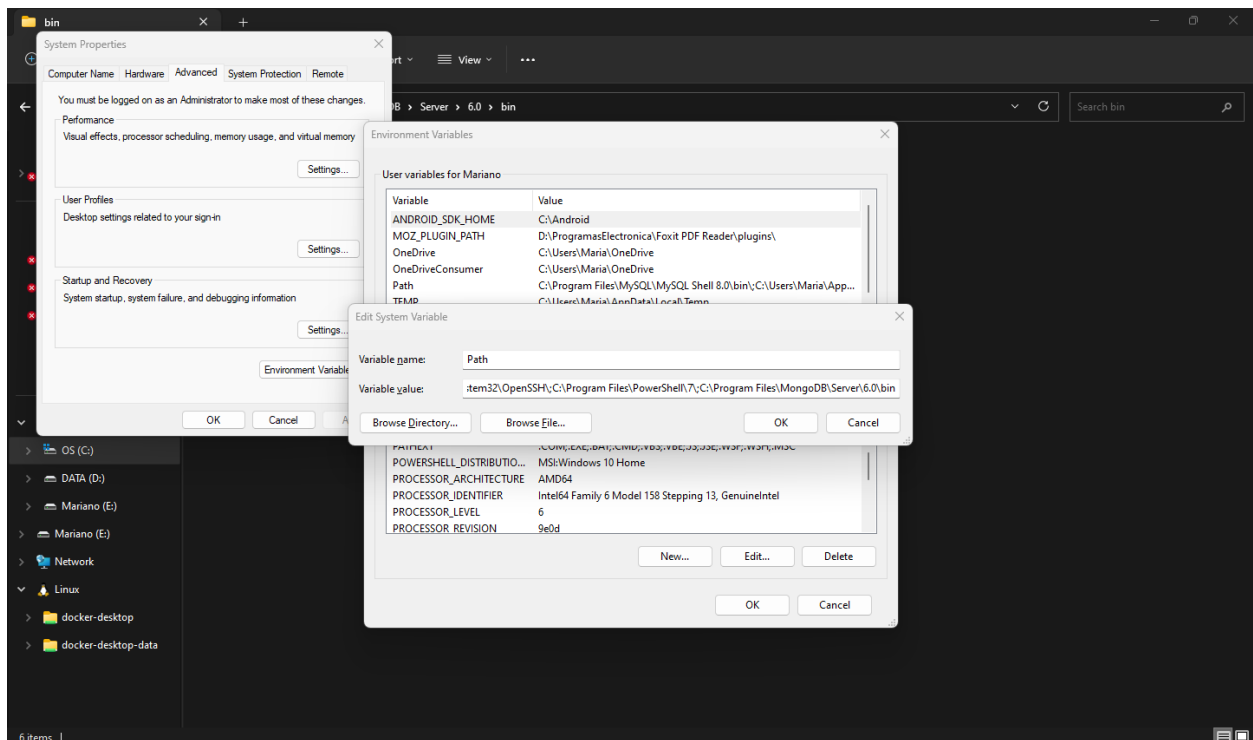
Y pegamos la carpeta en disco local C



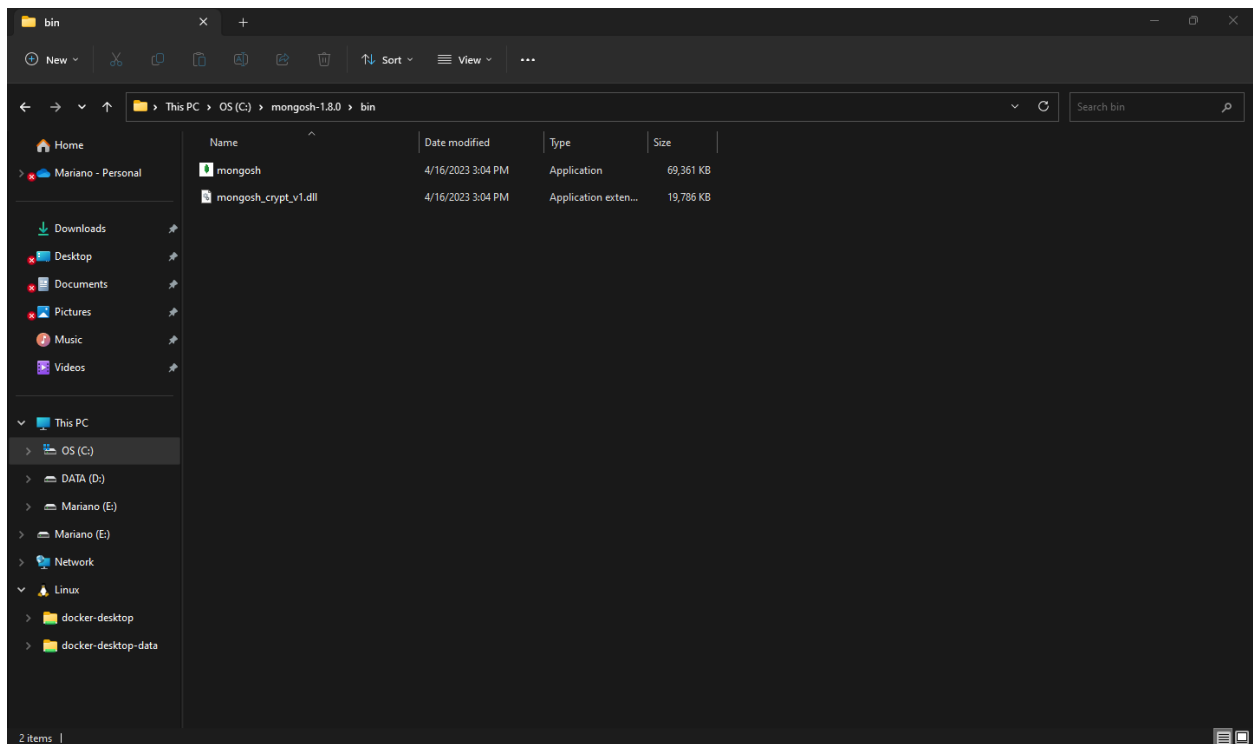
Vamos a donde se instaló mongoDB en la carpeta bin y copiamos la ruta



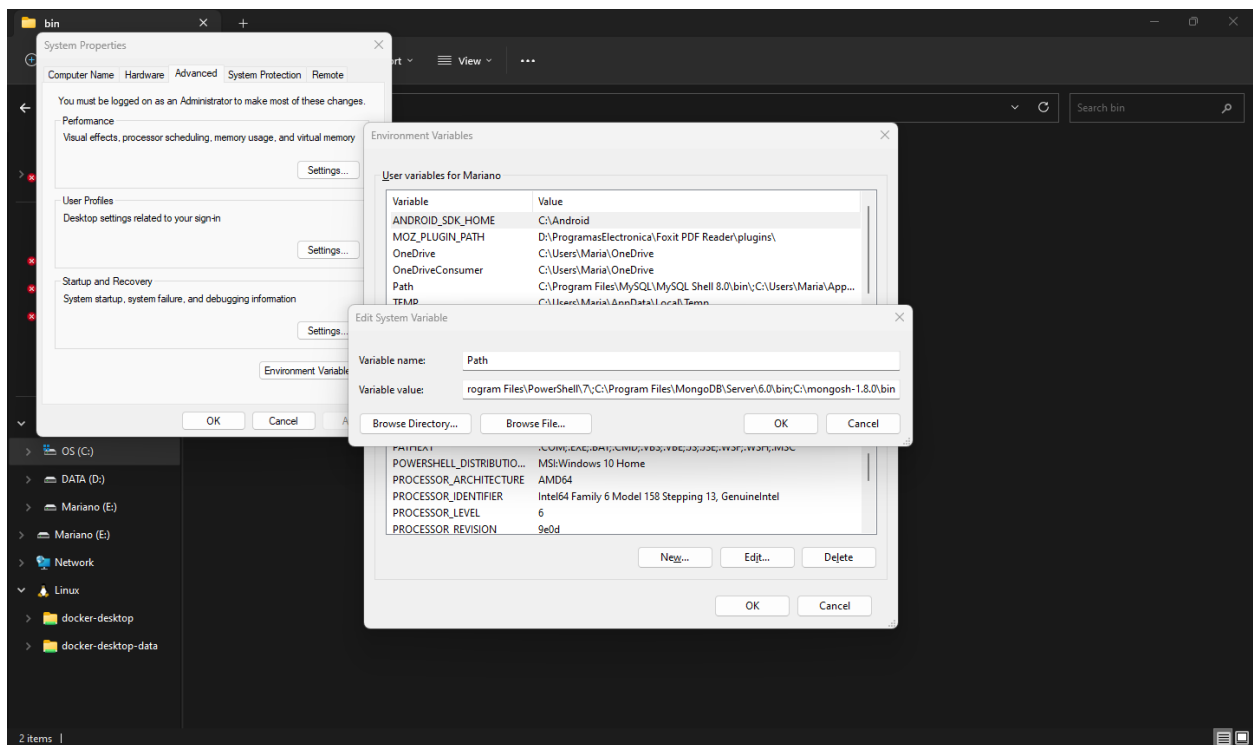
Y lo agregamos a path en variables del sistema



Hacemos lo mismo ahora con el de mongodb Shell, copiamos ruta

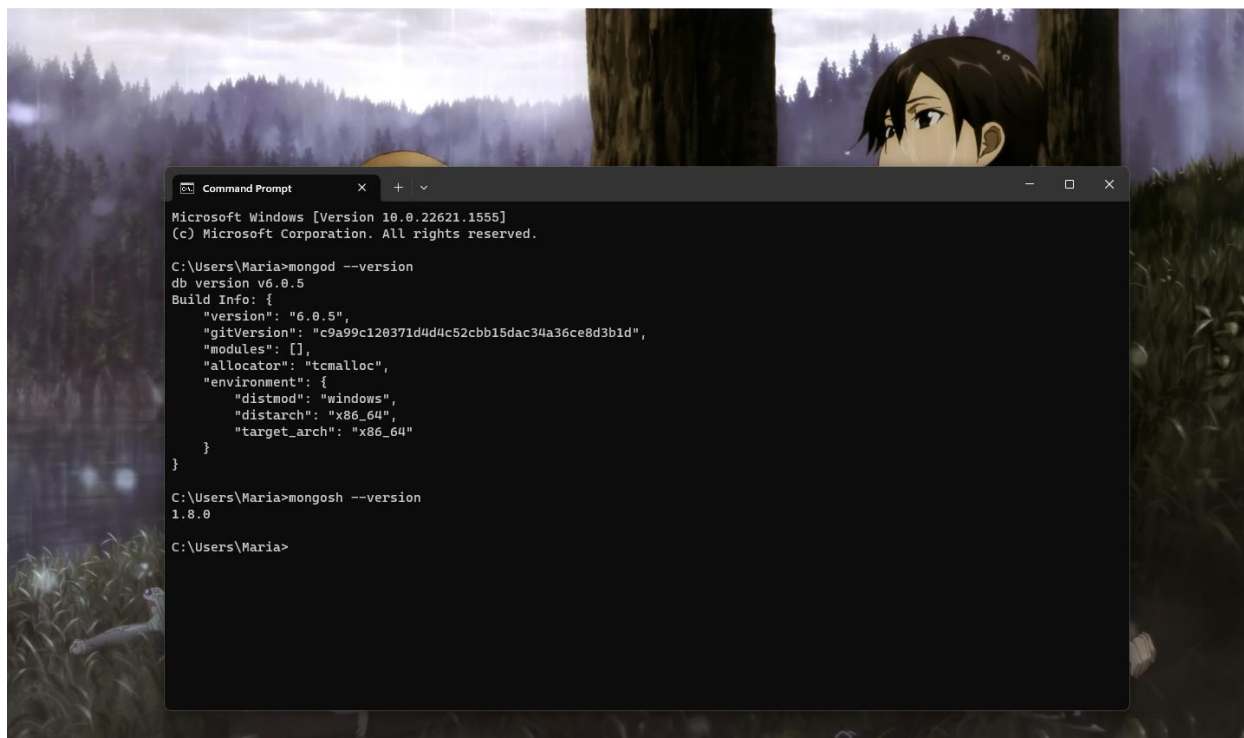


Agregamos a path en variables de sistema



Verificamos funcionalidad

Abrimos el cmd y escribimos mongod --version y debería arrojar la información de mongoBD y mongosh --version y debería arrojar la información de mongoBD Shell



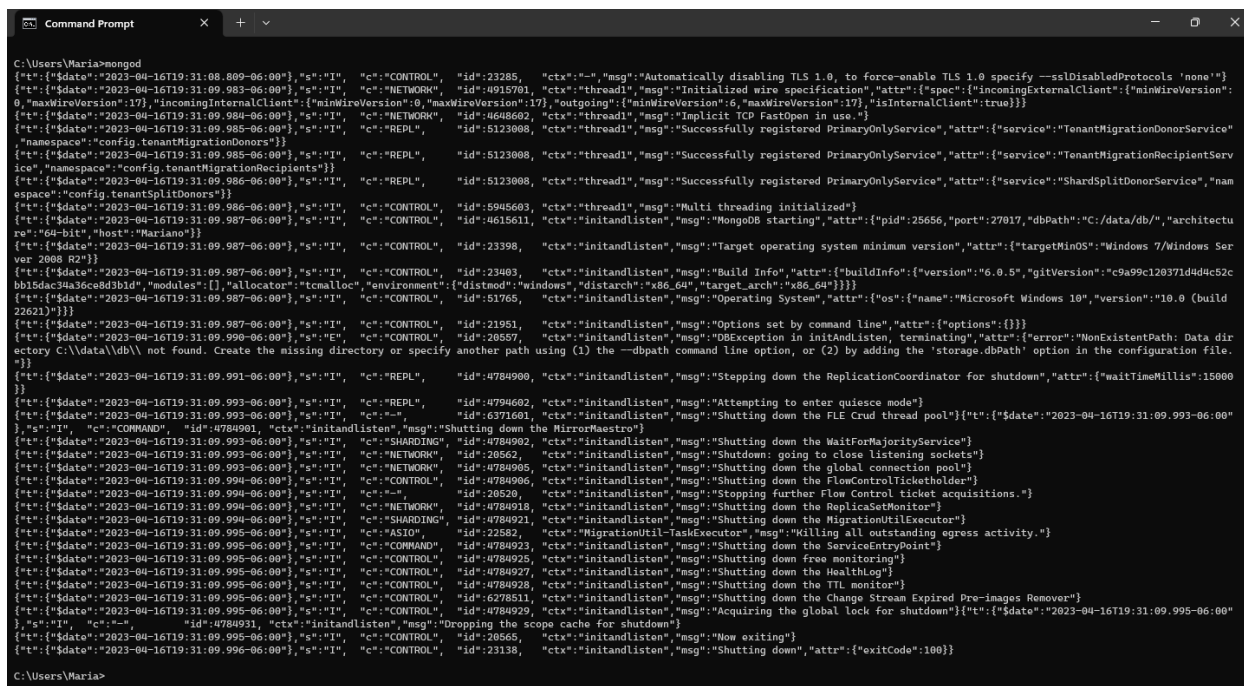
```
Microsoft Windows [Version 10.0.22621.1555]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Maria>mongod --version
db version v6.0.5
Build Info: {
  "version": "6.0.5",
  "gitVersion": "c9a99c120371d4d4c52cbb15dac34a36ce8d3b1d",
  "modules": [],
  "allocator": "tcmalloc",
  "environment": {
    "distmod": "windows",
    "distarch": "x86_64",
    "target_arch": "x86_64"
  }
}

C:\Users\Maria>mongosh --version
1.8.0

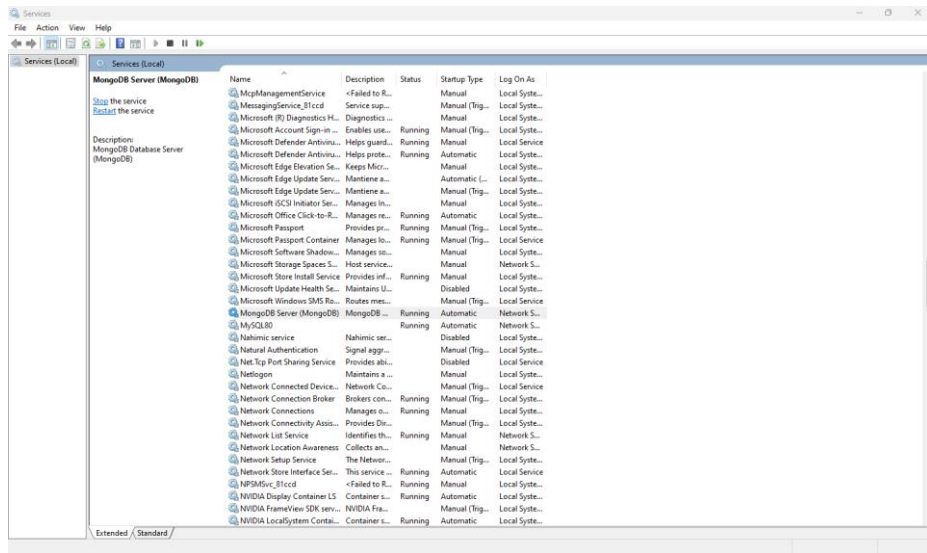
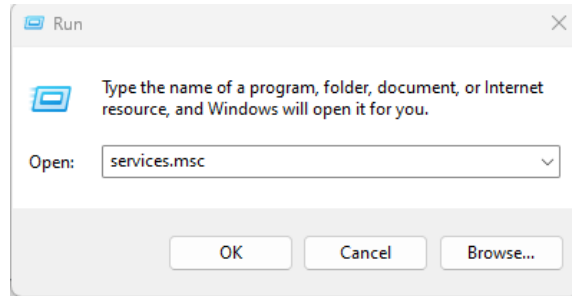
C:\Users\Maria>
```

Luego escribimos mongod para ver si hay problemas



```
C:\Users\Maria>mongod
{"t":{"$date":"2023-04-16T19:31:08.809-06:00"},"s":"I",  "c":"CONTROL",  "id":23285,   "ctx":"","msg":"Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}
{"t":{"$date":"2023-04-16T19:31:09.983-06:00"},"s":"I",  "c":"NETWORK",  "id":4915701, "ctx":"thread1","msg":"Initialized wire specification","attr":{"spec":{"incomingExternalClient":{"minWireVersion":
0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":17},"isInternalClient":true}}}
{"t":{"$date":"2023-04-16T19:31:09.984-06:00"},"s":"I",  "c":"NETWORK",  "id":4648602,   "ctx":"thread1","msg":"Implicit TCP FastOpen in use."}
{"t":{"$date":"2023-04-16T19:31:09.985-06:00"},"s":"I",  "c":"REPL",       "id":5123008,   "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationDonorService",
"namespace":"config.tenantMigrationDonors"}}
{"t":{"$date":"2023-04-16T19:31:09.985-06:00"},"s":"I",  "c":"REPL",       "id":5123008,   "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationRecipientServ
ice","namespace":"config.tenantMigrationRecipients"}}
{"t":{"$date":"2023-04-16T19:31:09.986-06:00"},"s":"I",  "c":"REPL",       "id":5123008,   "ctx":"thread1","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"ShardSplitDonorService","nam
espace":"config.tenantSplitDonors"}}
{"t":{"$date":"2023-04-16T19:31:09.986-06:00"},"s":"I",  "c":"CONTROL",  "id":5945603,   "ctx":"thread1","msg":"Multi threading initialized"}
{"t":{"$date":"2023-04-16T19:31:09.987-06:00"},"s":"I",  "c":"CONTROL",  "id":4615611,   "ctx":"initandlisten","msg":"MongoDB starting","attr":{"pid":25656,"port":27017,"dbPath":"C:/data/db/","architectu
re":"64-bit","host":"Mariano"}}
{"t":{"$date":"2023-04-16T19:31:09.987-06:00"},"s":"I",  "c":"CONTROL",  "id":23398,     "ctx":"initandlisten","msg":"Target operating system minimum version","attr":{"targetMinOS":"Windows 7/Windows Ser
ver 2008 R2"}}
{"t":{"$date":"2023-04-16T19:31:09.987-06:00"},"s":"I",  "c":"CONTROL",  "id":23303,     "ctx":"initandlisten","msg":"Build Info","attr":{"buildInfo":{"version":"6.0.5","gitVersion":"c9a99c120371d4d4c52c
bb15dac34a36ce8d3b1d","modules":[],"allocator":"tcmalloc","environment":{"distmod":"windows","distarch":"x86_64","target_arch":"x86_64"}}}}
{"t":{"$date":"2023-04-16T19:31:09.987-06:00"},"s":"I",  "c":"CONTROL",  "id":51765,     "ctx":"initandlisten","msg":"Operating System","attr":{"os":{"name":"Microsoft Windows 10","version":"10.0 (build
22621)"}}}}
{"t":{"$date":"2023-04-16T19:31:09.987-06:00"},"s":"I",  "c":"CONTROL",  "id":21951,     "ctx":"initandlisten","msg":"Options set by command line","attr":{"options":{}}}
{"t":{"$date":"2023-04-16T19:31:09.990-06:00"},"s":"E",  "c":"CONTROL",  "id":20857,     "ctx":"initandlisten","msg":"DBException in initandlisten, terminating","attr":{"error":"FileNotFoundException: Data dir
ectory C:\\data\\db\\ not found. Create the missing directory or specify another path using (1) the --dbpath command line option, or (2) by adding the 'storage.dbPath' option in the configuration file."}}
{"t":{"$date":"2023-04-16T19:31:09.991-06:00"},"s":"I",  "c":"REPL",       "id":4784900,   "ctx":"initandlisten","msg":"Stepping down the ReplicationCoordinator for shutdown","attr":{"waitTimeMillis":15000
}}
{"t":{"$date":"2023-04-16T19:31:09.993-06:00"},"s":"I",  "c":"REPL",       "id":4784902,   "ctx":"initandlisten","msg":"Attempting to enter quiesce mode"}
{"t":{"$date":"2023-04-16T19:31:09.993-06:00"},"s":"I",  "c":"REPL",       "id":6371601,   "ctx":"initandlisten","msg":"Shutting down the File Crud thread pool"}
{"t":{"$date":"2023-04-16T19:31:09.993-06:00"},"s":"I",  "c":"COMMAND", "id":4784901,   "ctx":"initandlisten","msg":"Shutting down the MirrorMaestro"}
{"t":{"$date":"2023-04-16T19:31:09.993-06:00"},"s":"I",  "c":"SHARDING", "id":4784902,   "ctx":"initandlisten","msg":"Shutting down the WaitForMajorityService"}
{"t":{"$date":"2023-04-16T19:31:09.993-06:00"},"s":"I",  "c":"SHARDING", "id":20562,     "ctx":"initandlisten","msg":"Shutdown: going to close listening sockets"}
{"t":{"$date":"2023-04-16T19:31:09.993-06:00"},"s":"I",  "c":"NETWORK",  "id":4784905,   "ctx":"initandlisten","msg":"Shutting down the global connection pool"}
{"t":{"$date":"2023-04-16T19:31:09.994-06:00"},"s":"I",  "c":"CONTROL",  "id":4784906,   "ctx":"initandlisten","msg":"Shutting down the FlowControlTicketHolder"}
{"t":{"$date":"2023-04-16T19:31:09.994-06:00"},"s":"I",  "c":"CONTROL",  "id":20520,     "ctx":"initandlisten","msg":"Stopping further Flow Control ticket acquisitions."}
{"t":{"$date":"2023-04-16T19:31:09.994-06:00"},"s":"I",  "c":"NETWORK",  "id":4784918,   "ctx":"initandlisten","msg":"Shutting down the ReplicaSetMonitor"}
{"t":{"$date":"2023-04-16T19:31:09.994-06:00"},"s":"I",  "c":"SHARDING", "id":4784921,   "ctx":"initandlisten","msg":"Shutting down the MigrationUtilExecutor"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"ASIO",      "id":22582,     "ctx":"MigrationUtil-TaskExecutor","msg":"Killing all outstanding egress activity."}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"COMMAND", "id":4784923,   "ctx":"initandlisten","msg":"Shutting down the ServiceEntryPoint"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":4784925,   "ctx":"initandlisten","msg":"Shutting down free monitoring"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":4784927,   "ctx":"initandlisten","msg":"Shutting down the HealthLog"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":4784928,   "ctx":"initandlisten","msg":"Shutting down the TTL monitor"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":6278511,   "ctx":"initandlisten","msg":"Shutting down the Change Stream Expired Pre-images Remover"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":4784929,   "ctx":"initandlisten","msg":"Acquiring the global lock for shutdown"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":4784929,   "ctx":"initandlisten","msg":"Dropping the scope cache for shutdown"}
{"t":{"$date":"2023-04-16T19:31:09.995-06:00"},"s":"I",  "c":"CONTROL",  "id":20865,     "ctx":"initandlisten","msg":"Now exiting"}
{"t":{"$date":"2023-04-16T19:31:09.996-06:00"},"s":"I",  "c":"CONTROL",  "id":23138,     "ctx":"initandlisten","msg":"Shutting down","attr":{"exitCode":100}}
```

Encontramos que no existe data c:\data\db, entonces lo creamos, volvemos a correr mongod y ahora no debería tirar error



Escribimos mongosh y no debería haber ningún problema, con esto concluimos con la instalación de mongoDB y mongoDB Shell.

```
mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+1.8.0

C:\Users\Maria>mongosh
Current Mongosh Log ID: 643ca30f7349311df4114ef5
Connecting to:
Using MongoDB: 6.0.5
Using Mongosh: 1.8.0

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

-----
The server generated these startup warnings when booting
2023-04-16T19:09:31.703-06:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

Enable MongoDB's free cloud-based monitoring service, which will then receive and display
metrics about your deployment (disk utilization, CPU, operation statistics, etc).

The monitoring data will be available on a MongoDB website with a unique URL accessible to you
and anyone you share the URL with. MongoDB may use this information to make product
improvements and to suggest MongoDB products and deployment options to you.

To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
-----

test>
```

Y para el entorno:

Instalar nodejs

<https://www.youtube.com/watch?v=ipmhBYqIP44>

Y configurar javascript:

<https://www.youtube.com/watch?v=ejhGRtJoNIs>

Ya para correr la página web:

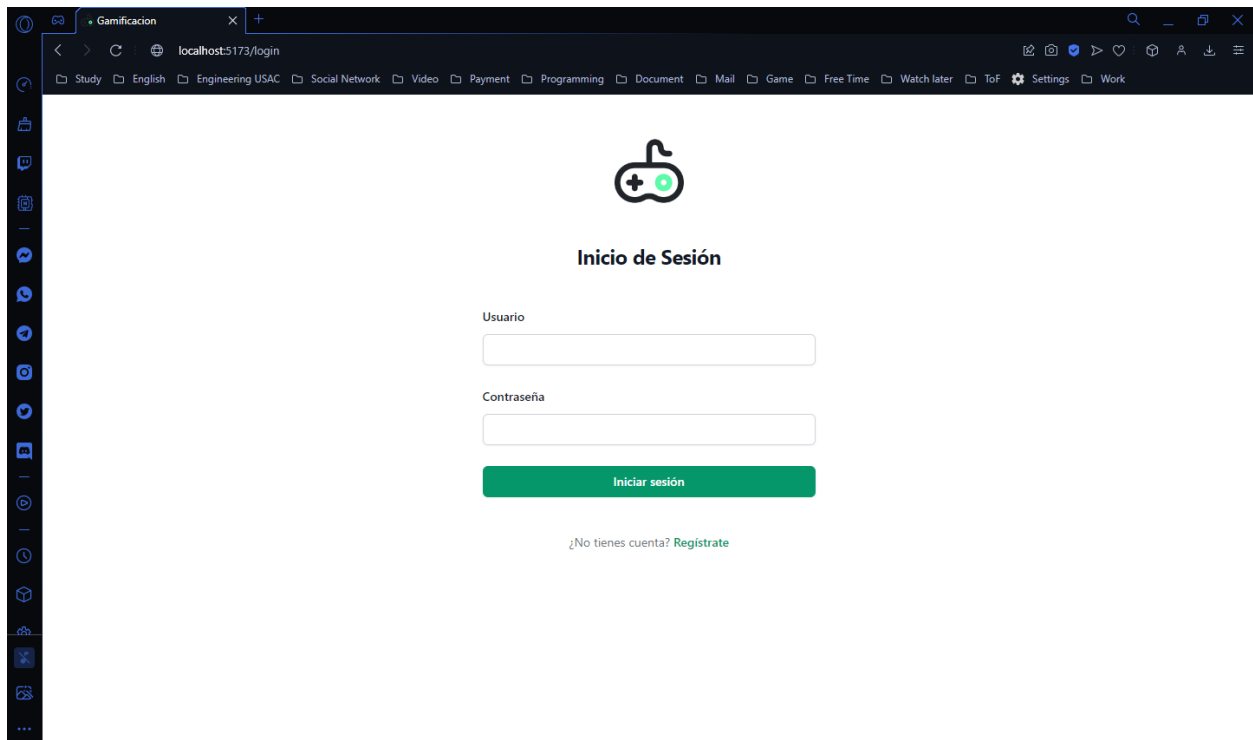
```
PROBLEMAS  SALIDA  CONSOLA DE DEPURACIÓN  TERMINAL

VITE v4.3.7 ready in 3708 ms
→ Local: http://localhost:5173/
→ Network: use --host to expose
→ press h to show help

> nodemon app.js

[nodemon] 2.0.22
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,json
[nodemon] starting node app.js
Puerto: 5010 socket habilitado
Puerto: 5000 habilitado
Conectado al socket
Conectado al socket
```

Ejecutamos `npm run dev/ npm start` tanto para el backend como el frontend y ya estaría corriendo nuestra página para hacer uso de el



Base de datos:

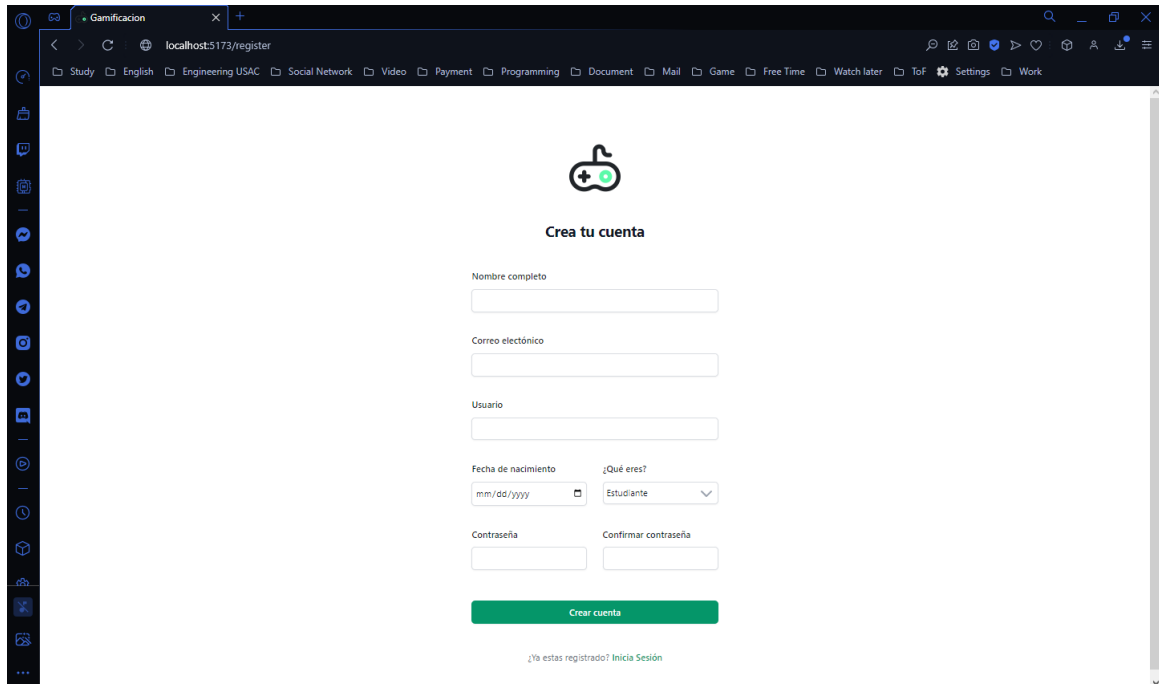
Entramos en el apartado base de datos en backend donde está `db_game_app_gt.js` y lo ejecutamos en `mongosh` para que nos cargue nuestra base de datos, usa `show collections` para ver si está todo bien:

```
test> use game_app_gt
switched to db game_app_gt
game_app_gt> show collections
comments
details
games
gametypes
medals
results
users
game_app_gt>
```

Ahora ya podemos ingresar sencillamente con los usuarios

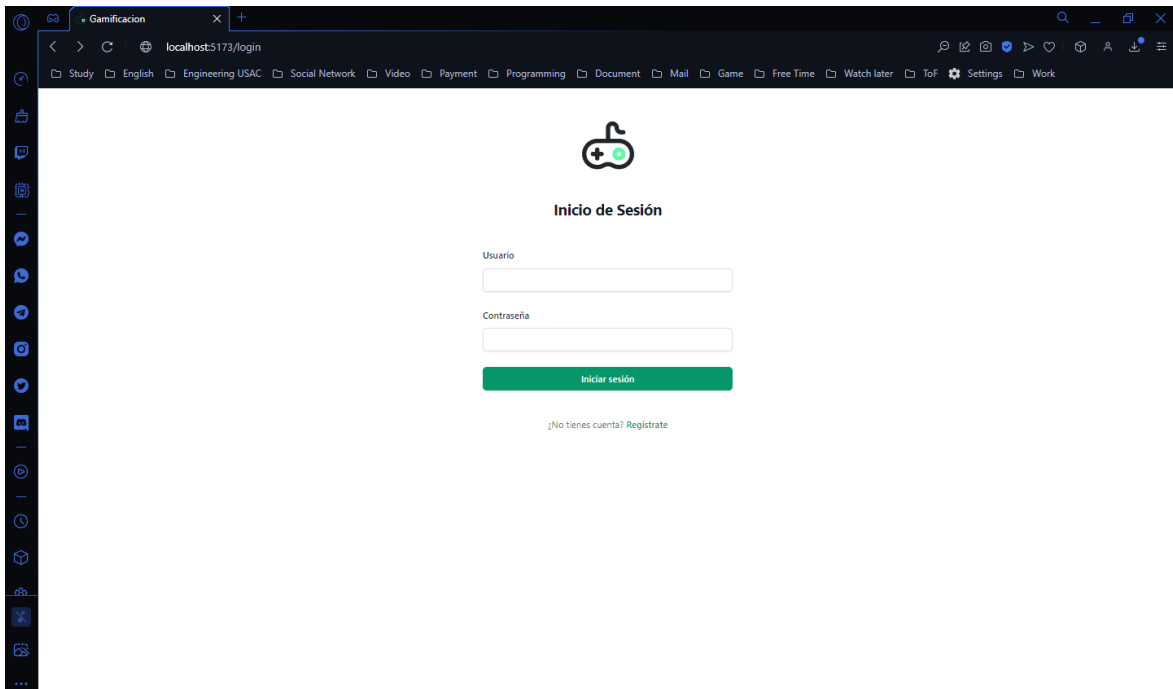
Usuario Invitado:

Puede registrarse y crear una su cuenta:



The screenshot shows a web browser window with the address bar displaying 'localhost:5173/register'. The page features a logo at the top center, consisting of a green circle with a white plus sign and a small green character. Below the logo, the heading 'Crea tu cuenta' is displayed. The form includes several input fields: 'Nombre completo', 'Correo electrónico', 'Usuario', 'Fecha de nacimiento' (with a date picker), and '¿Qué eres?' (a dropdown menu currently showing 'Estudiante'). There are also fields for 'Contraseña' and 'Confirmar contraseña'. A green button labeled 'Crear cuenta' is positioned below the form. At the bottom, a link reads '¿Ya estas registrado? Inicia Sesión'.

Iniciar sesión si creó alguna cuenta



The screenshot shows a web browser window with the address bar displaying 'localhost:5173/login'. The page features the same logo as the registration page. Below the logo, the heading 'Inicio de Sesión' is displayed. The form includes input fields for 'Usuario' and 'Contraseña'. A green button labeled 'Iniciar sesión' is positioned below the form. At the bottom, a link reads '¿No tienes cuenta? Registrate'.

Entrar a sala con un código

The screenshot shows a web browser window with the URL `localhost:5173/enter-room`. The page has a green header with the logo 'Gamificacion' and navigation links 'Entrar a sala' and 'Comentarios'. A user icon is in the top right. The main content area features a green icon of three people, the title 'Unirme a una sala', and a form with two input fields: 'Usuario' and 'Código'. Below the fields is a green 'Unirme' button. At the bottom, there is a link: '¿No tienes cuenta? [Regístrate](#)'.

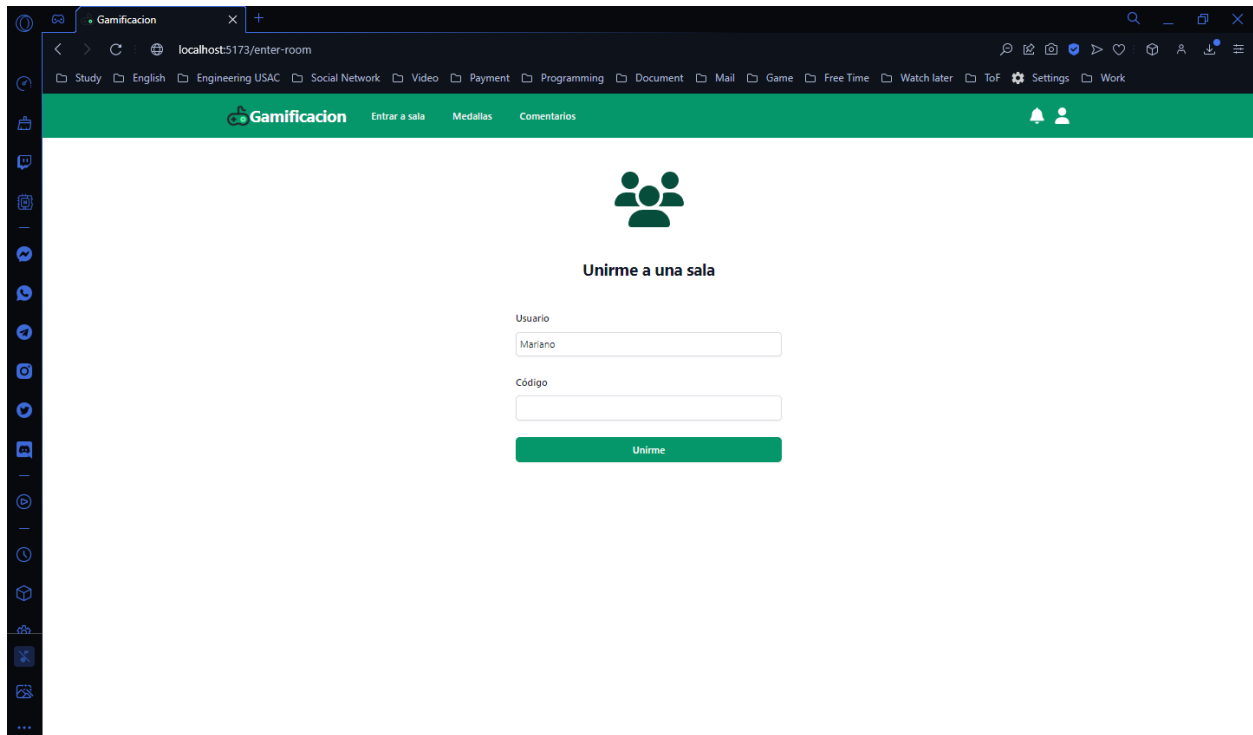
Visualizar comentarios de usuarios

The screenshot shows a web browser window with the URL `localhost:5173/commentsUsers`. The page has a green header with the logo 'Gamificacion' and navigation links 'Entrar a sala' and 'Comentarios'. A user icon is in the top right. The main content area has a light gray background with the title 'COMENTARIOS DE USUARIOS'. Below the title, there are three comment cards:

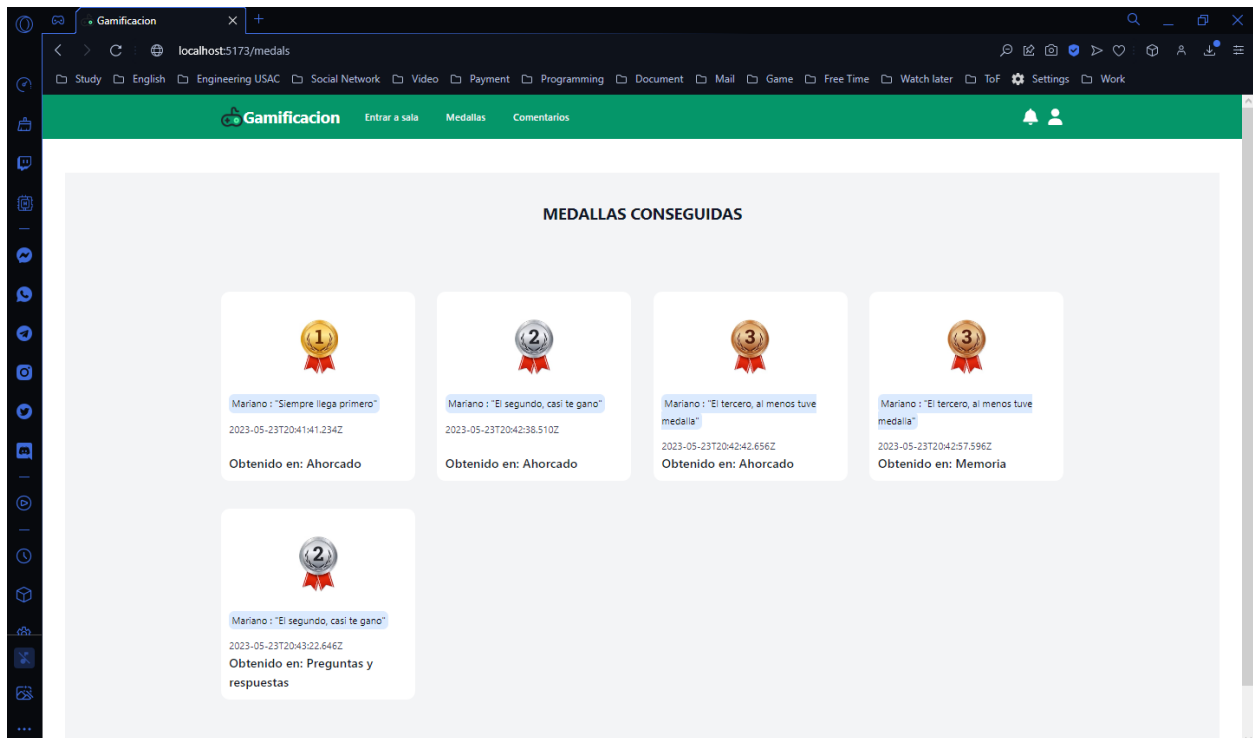
Usuario	Fecha	Comentario
Teacher	2023-05-23T19:47:12.632Z	La vida es un juego en el que voy valiendo.
Marianito	2023-05-23T21:55:06.818Z	Hola
Teacher	2023-05-24T10:59:02.416Z	Muy buena app

Student:

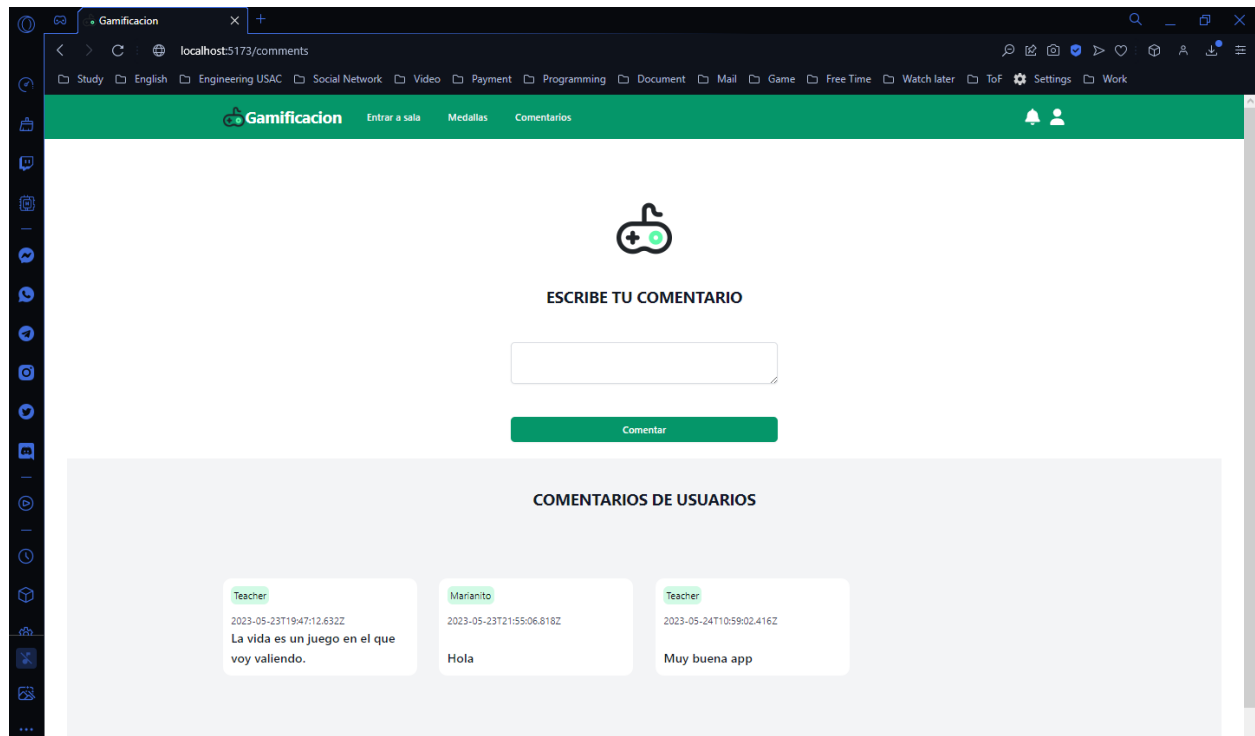
Entrar a sala de juego con código



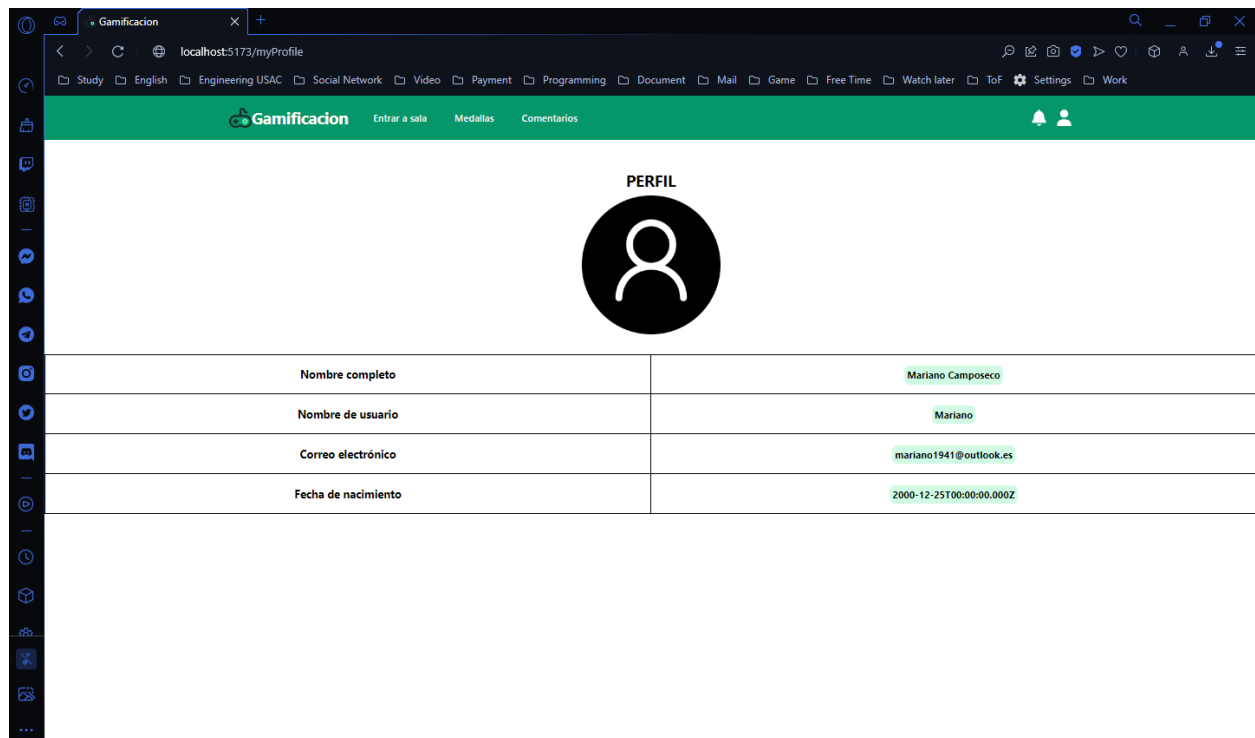
Ver sus medallas ganadas



Ver y realizar comentarios



Visualizar sus datos de perfil



Teacher:

Crear un nuevo juego y poder seleccionar entre los 4 juegos base

The screenshot shows a web browser window with the URL `localhost:5173/new-game`. The page has a green header with the logo 'Gamificacion' and navigation links: 'Crear juego', 'Mis Juegos', and 'Comentarios'. A notification bar at the top asks if the user wants to save the password for 'localhost:5173?'. The main content area is titled 'Nuevo juego' and features a game icon. Below the title are three input fields: 'Titulo del juego', 'Descripción', and 'Tipo de juego' (a dropdown menu with 'Selecciona' selected). A green 'Siguiente' button is at the bottom.

Crear juego de memoria requiere mínimo 5 parejas

The screenshot shows the 'Detalle de Juego: Memoria' page. It has a green header with the same navigation links as the previous page. A green bar at the top left indicates 'Parejas'. The main content area is titled 'Detalle de Juego: Memoria' and contains two input fields: 'Palabra' and 'Descripcion de la Palabra Ingresada'. Below these are two buttons: 'Agregar Pareja' and a green 'Finalizar' button.

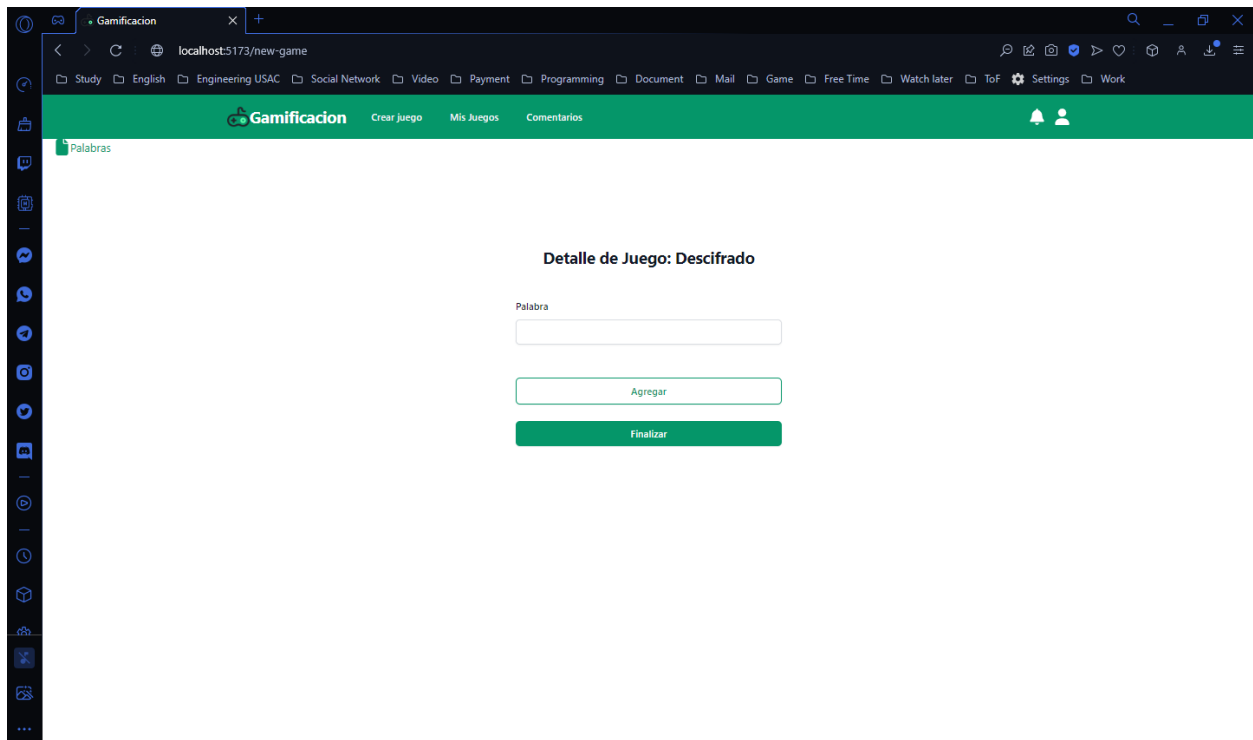
Crear juego de ahorcado, requiere mínimo 7 preguntas

The screenshot shows a web browser window with the URL `localhost:5173/new-game`. The page has a green header with the logo 'Gamificacion' and navigation links: 'Crear juego', 'Mis Juegos', and 'Comentarios'. A sidebar on the left contains various icons. The main content area is titled 'Detalle de Juego: Ahorcado'. It contains two input fields: 'Pregunta' with placeholder text 'Ingresa la pregunta a realizar' and 'Palabra' with placeholder text 'Ingresa la palabra que concida con la pregunta ingresada'. Below these fields are two buttons: 'Agregar pregunta' and 'Finalizar'.

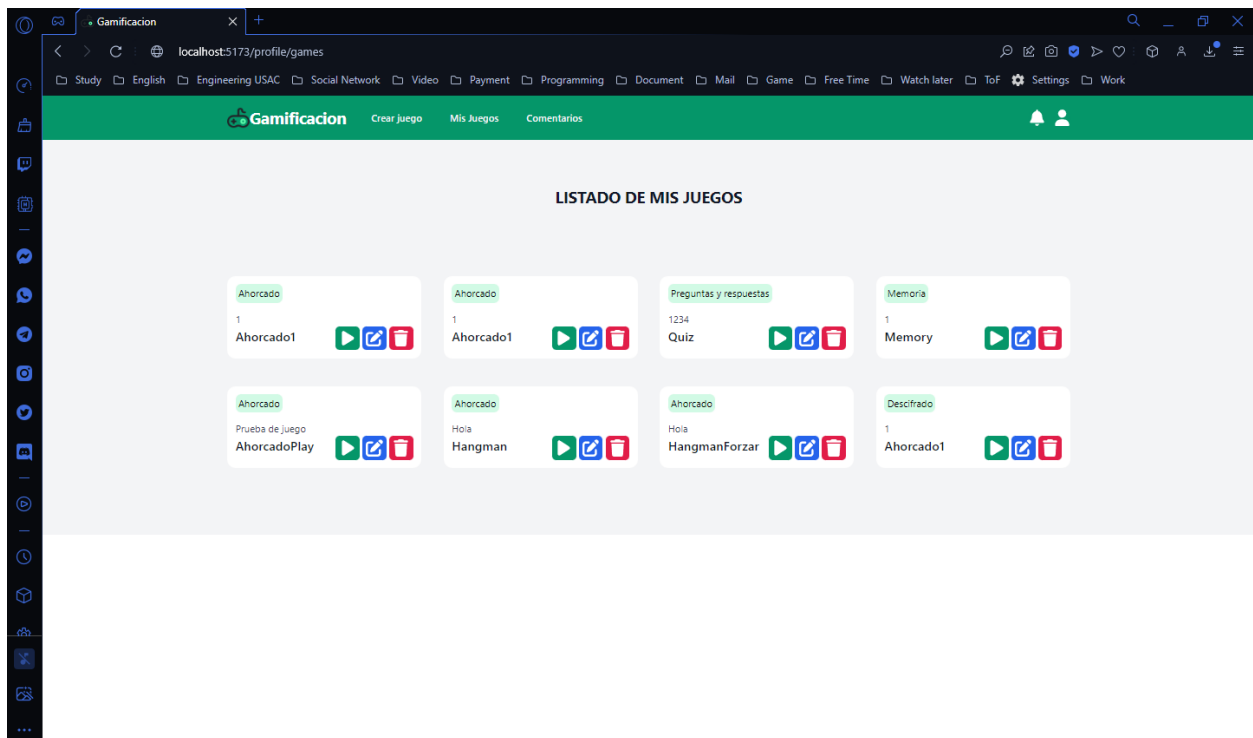
Crear juego de quiz, requiere un mínimo de 5 preguntas

The screenshot shows the same web browser window as above, but the page is titled 'Detalle de Quiz'. It contains one input field for 'Pregunta'. Below it are two radio buttons, each followed by an input field for 'Respuesta'. At the bottom are three buttons: 'Agregar pregunta', 'Añadir respuestas', and 'Finalizar'.

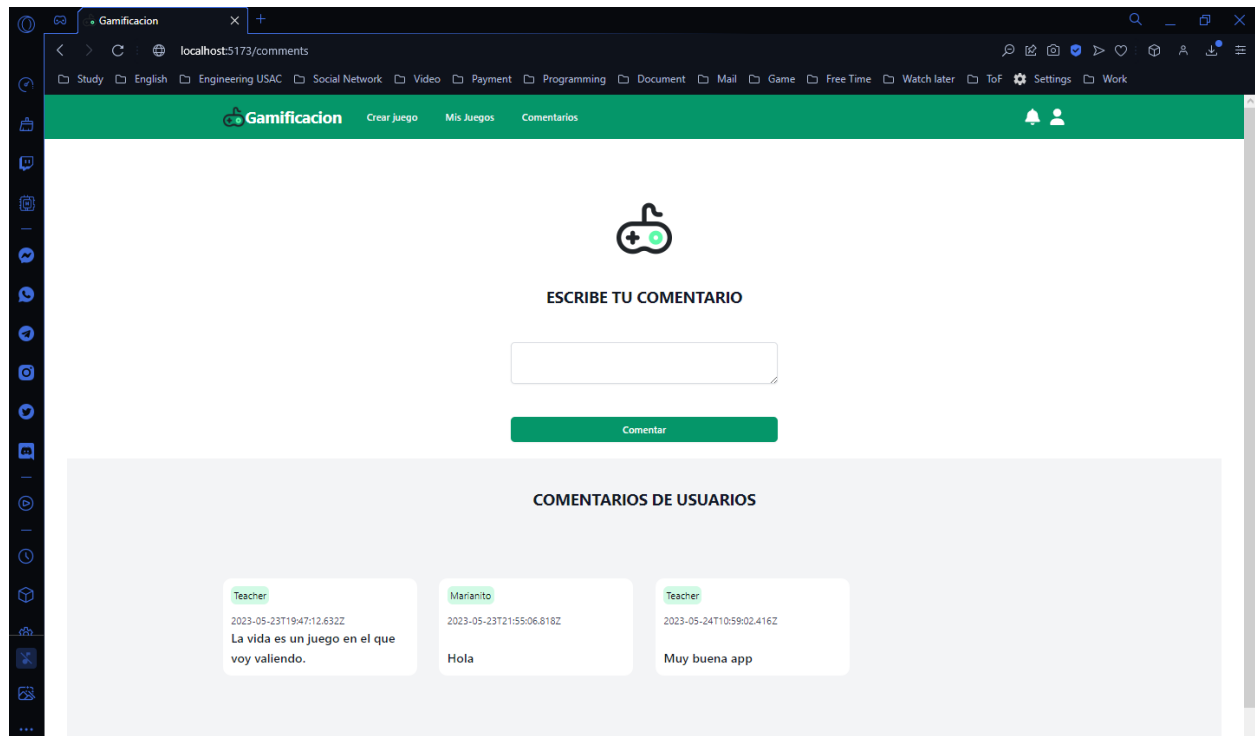
Crear juego de descifrado, requiere un mínimo de 1 palabra



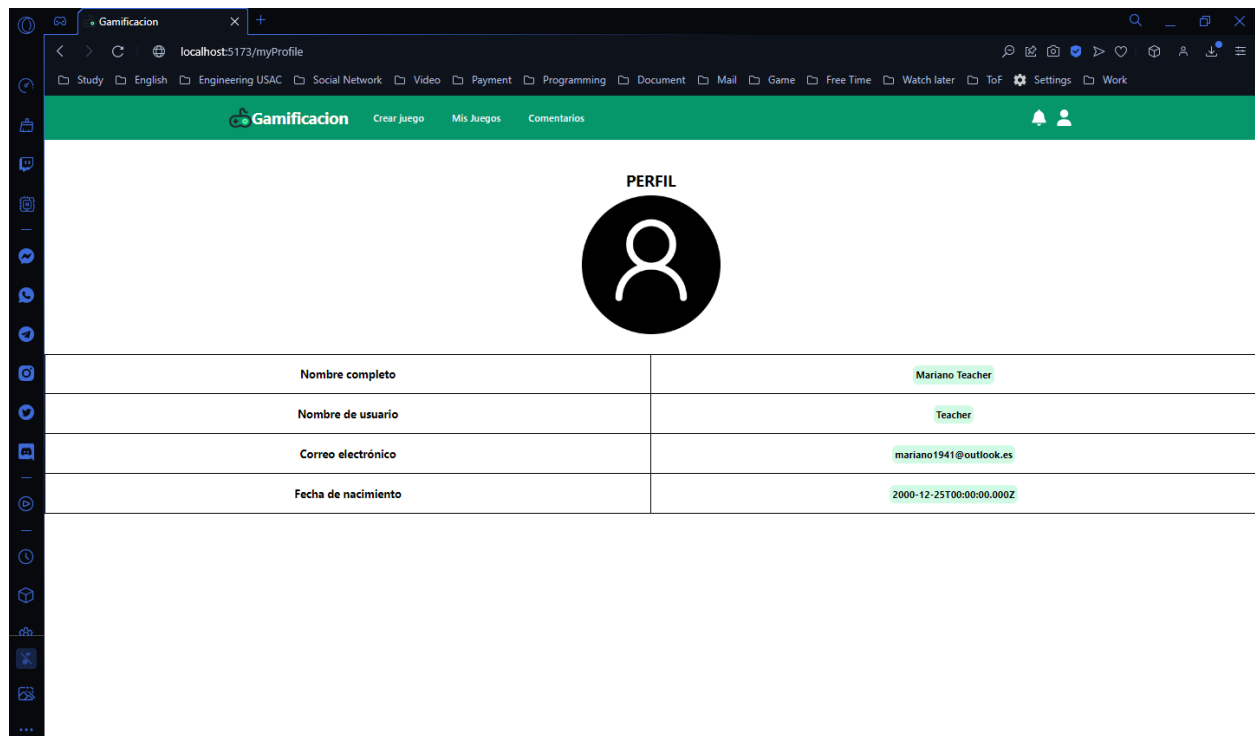
Administrar y jugar los juegos creados



Realizar comentarios y visualizarlos



Ver el perfil propio



Administración:

Crear una cuenta para usuario

The screenshot shows a web browser window with the URL `localhost:5173/new-employee`. The page has a green header with the logo 'Gamificación' and navigation links 'Crear Usuario' and 'Usuarios'. The main content area is titled 'Nueva cuenta de empleado' and features a form with the following fields:

- Nombre completo:
- Correo electrónico:
- Usuario:
- Fecha de nacimiento: (with a calendar icon)
- Rol: (with a dropdown arrow)
- Contraseña:
- Confirmar contraseña:

A green button labeled 'Crear cuenta' is located at the bottom of the form.

Gestionar usuarios

The screenshot shows a web browser window with the URL `localhost:5173/users`. The page has a green header with the logo 'Gamificación' and navigation links 'Crear Usuario' and 'Usuarios'. The main content area displays a list of users, each represented by a card with the following information:

- Admin
- @Admin
- Mariano Camposeco
- Icons for edit and delete

Two such cards are visible, representing different admin users.

Editar usuario

The screenshot shows a web browser window with the URL `localhost:5173/users`. The page has a green header with the logo 'Gamificación' and navigation links 'Crear Usuario' and 'Usuarios'. A sidebar on the left contains various icons. The main content area is titled 'Editar cuenta de empleado' and features a form with the following fields:

- Nombre completo:
- Correo electrónico:
- Usuario:
- Fecha de nacimiento:
- Rol:
- Contraseña:
- Confirmar contraseña:

At the bottom of the form is a green button labeled 'Crear cuenta'.

Ver el perfil propio

The screenshot shows a web browser window with the URL `localhost:5173/myProfile`. The page has a green header with the logo 'Gamificación' and navigation links 'Crear Usuario' and 'Usuarios'. A sidebar on the left contains various icons. The main content area is titled 'PERFIL' and features a large circular profile picture placeholder. Below the profile picture is a table displaying the user's profile information:

Nombre completo	Mariano Camposeco
Nombre de usuario	Admin
Correo electrónico	mariano1941@outlook.es
Fecha de nacimiento	2000-12-23T00:00:00.000Z