

Instituto Tecnológico de Costa Rica

Escuela de Ingeniería en Computación



**Tarea Programada #1 - Documentación en Inglés**

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IC4302 - Bases de datos II

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Abril del 2023

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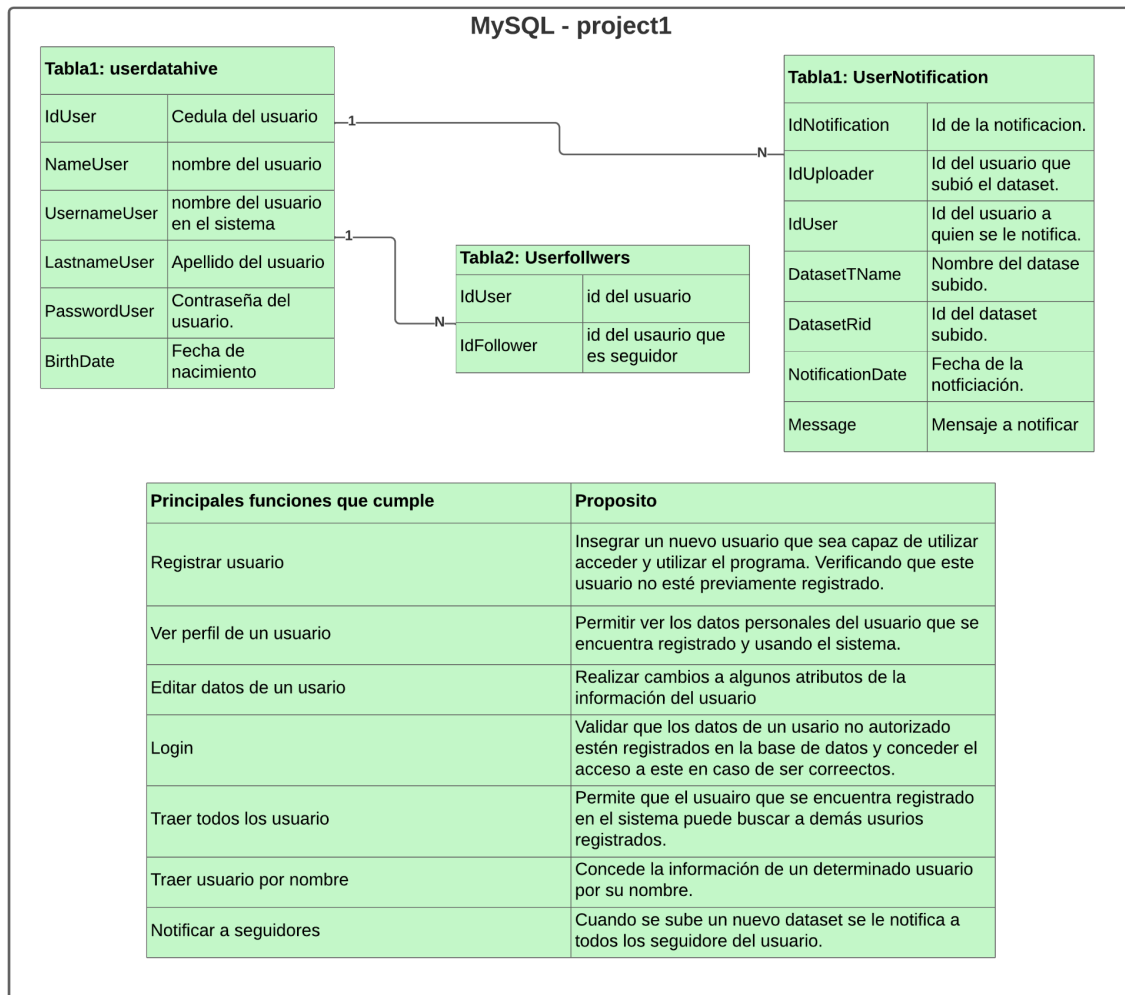
## Technical Justification

The following databases were chosen for the project:

- **MongoDB:** For the development of comments and messages due to its ease of use and implementation for JSON files. At the same time, Mongo Atlas allows a deployment in the cloud facilitating the process of uniformity in the system.
- **MySQL:** For user management, this is due to the solidity and robustness that this database provides to projects where it is required to store information consistently and securely due to the encryption algorithms provided by the database engine.
- **Neo4j:** To keep the traceability of the system, this is due to the graph system which allows a graphical and real-time control of the transactions made by the users. Due to this, it was implemented to keep the history and the functions that imply the interaction of the users with the system.
- **OrientDB:** Orient was implemented for the file storage system due to its ease of file management, using the database's tools for storing files in binary format. And at the same time, the ease of use with Node.js environments was chosen as part of the stack of the project.

## Database Modeling

### MySQL - project1



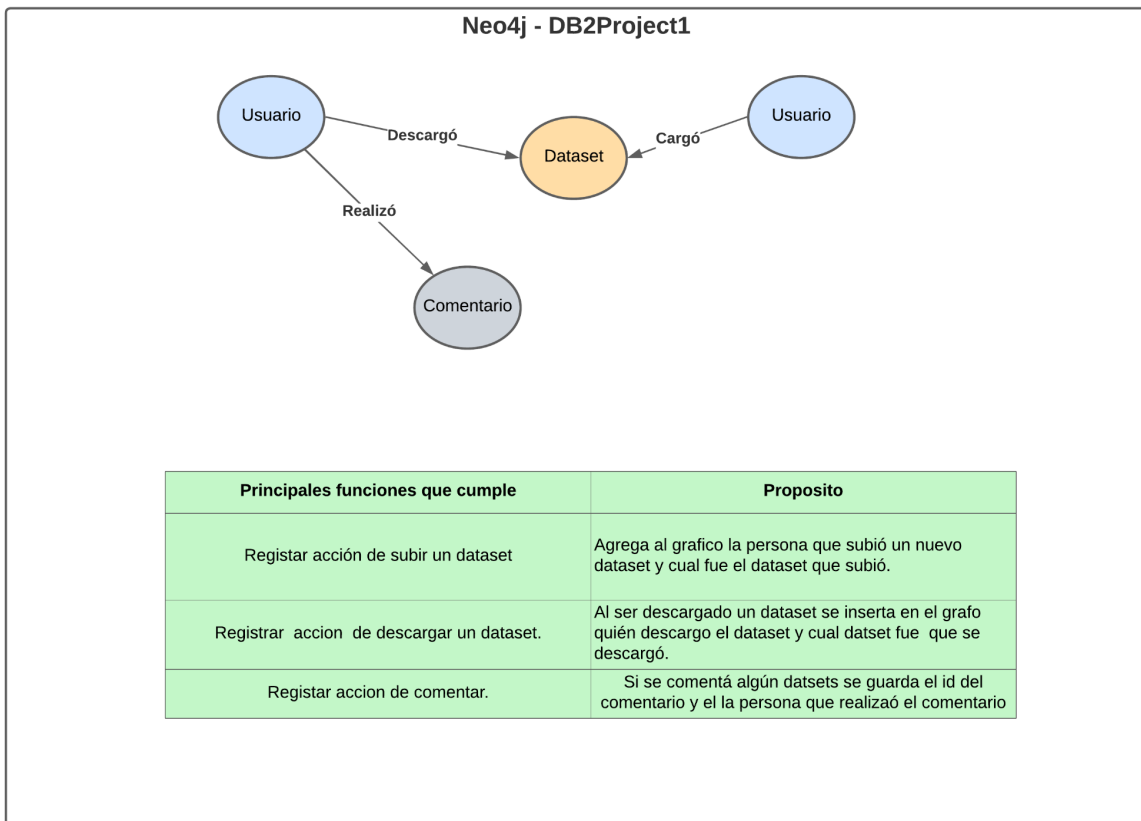
## MongoDB - Cluster0

### MongoDB - Cluster0

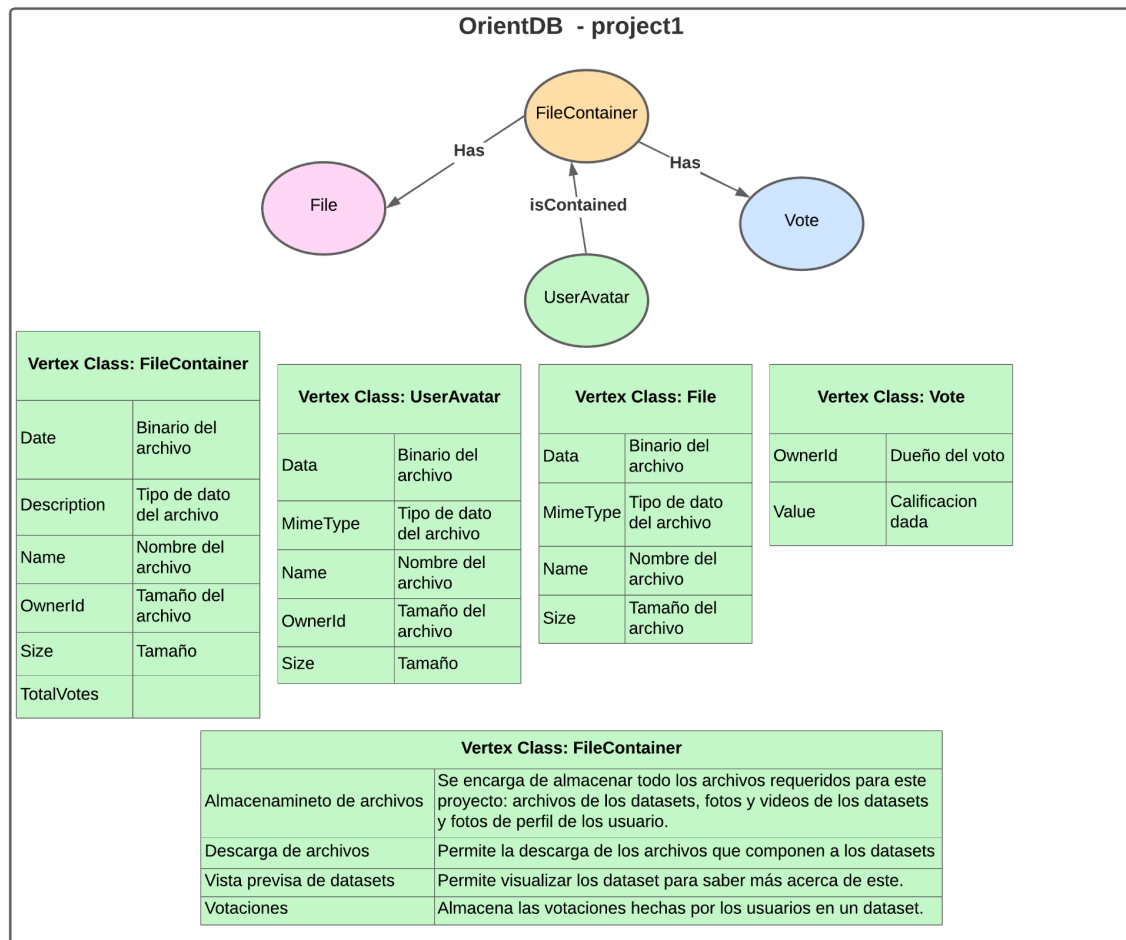
Documento: Comment - Principal	Documento: Comment - Secundario	Documento: Comment - Mensaje
commentId: ID del comentario	commentId: ID del comentario	commentId: Id del mensaje
UserId: Nombre del usuario que realiza el comentario.	UserId: Nombre del usuario que realiza el comentario.	UserId: Emisor del mensaje
content: contenido del comentario	content: contenido del comentario	DtaseId: Receptor del mensaje
media: archivos añadidos al comentario	media: archivos añadidos al comentario	content: Contenido del mensaje.
datasetID: Id dataset en el cual se comentó.	reponseTo	

Principales funciones que cumple	Proposito
Registrar comentario principal	Se permite realizar un comentario sobre un dataset
Registrar comentario de respuesta	Registra comentario como respuesta a otro comentario
Mostrar los comentario realizados en un dataset	Genera lista de comentario relacionado a un dataset.
Almacenar mensajes	Almacena los mensajes que se envian entre usuario.

## Neo4j



## OrientDB



## User Manual

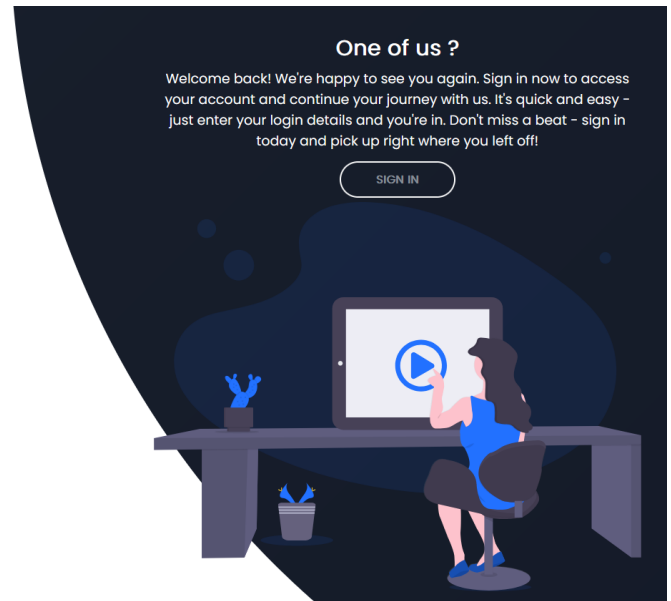
### Login

Welcome to our service to continue please follow the following steps to sign up:

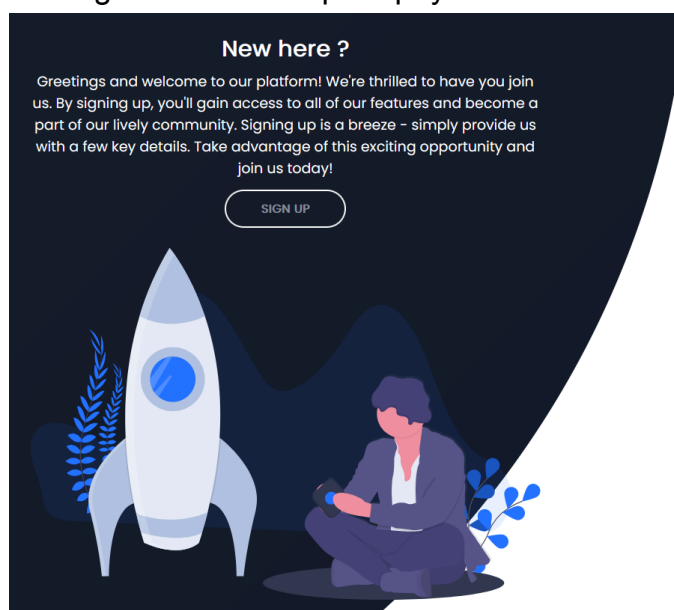
1. To log in to the file-sharing website, you must have a previously created account. If you do not already have an account, you can click on the "Sign up" link on the home page and follow the instructions to create a new account.

**Sign up**

**SIGN UP**



2. Once you have an account, you can access the login form on the home page. The login form should prompt you for a username or email and password.



**Sign in**

**LOGIN**



3. Enter your username or email in the appropriate field.
4. Enter your password in the appropriate field.
5. Click the "Login" button.
6. If the credentials are valid, you will be redirected to the homepage of your user account. If the credentials are incorrect, you will be notified that your credentials are incorrect and you will be prompted to try again.

## Home Page

Once logged in you will be taken to the home page where you will have multiple options and several informative panels which include different site statistics, including different notifications, messages, votes, etc.

On the left side, you will have an interactive panel that will allow you to scroll to other parts of the site.

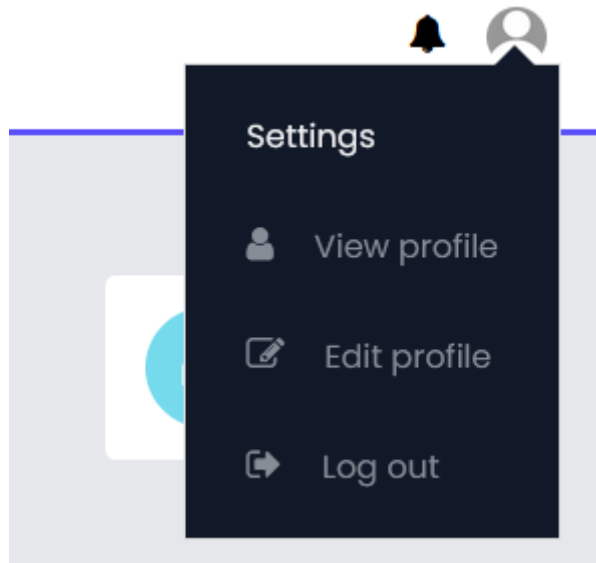
Each user has a personalized Dashboard with their account information.

The screenshot shows the DataHive user dashboard for a user named ArmandoArce. The dashboard includes a sidebar with navigation links: Dashboard, Upload Dataset, Search Datasets, Search Users, View Votes, and Message. The main content area features a 'Dashboard' section with four statistics: 1 Follower, 0 Following, 1 Datasets, and 8 points. Below this is a table titled 'All your datasets' with columns for OWNER, DATASET, and TOTAL VOTES. The table lists a dataset named 'Certificacion Scrum' by SFPC, which is 190264 bytes and has 8 total votes. The user's profile picture and name are visible in the top right corner.

The screenshot shows the DataHive user dashboard for a user named TestUser. The dashboard includes a sidebar with navigation links: Dashboard, Upload Dataset, Search Datasets, Search Users, View Votes, and Message. The main content area features a 'Dashboard' section with four statistics: 0 Followers, 1 Following, 1 Datasets, and 0 points. Below this is a table titled 'All your datasets' with columns for OWNER, DATASET, and TOTAL VOTES. The table lists a dataset named 'Dia de Paintball' by Dia de Paintball con los Compu SJ 19, which is 164851 bytes and has 0 total votes. The user's profile picture and name are visible in the top right corner.

## Modify profile information

To modify the profile information just scroll to the top right corner where the user's profile picture is displayed.

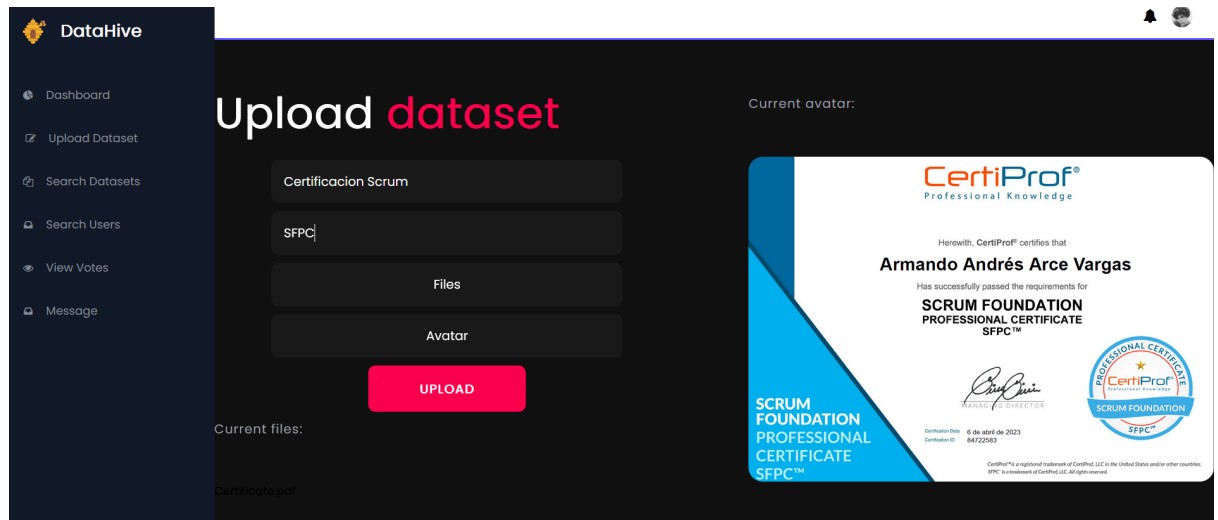


Once there, select the "Edit profile" option, which loads the following page where the user can modify the profile information

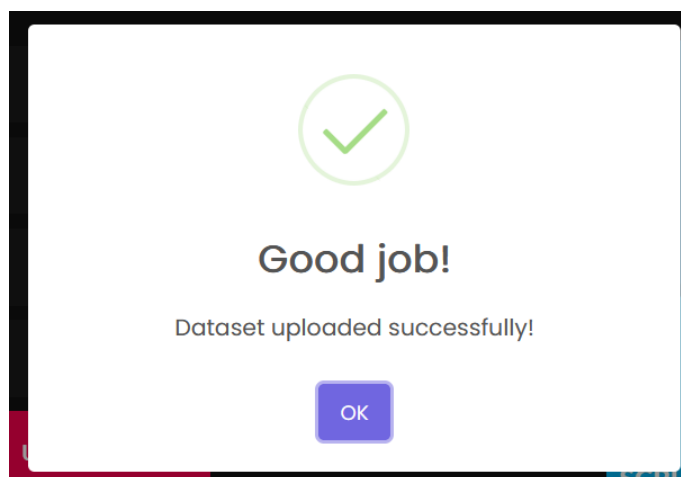
A screenshot of the "Edit your information" page in the DataHive application. The page has a dark blue sidebar on the left with the DataHive logo and a list of navigation items: Dashboard, Upload Dataset, Search Datasets, Search Users, View Votes, and Message. The main content area is white and features a large "Hello TestUser" greeting. Below the greeting, the text "Edit your information" is displayed. There are five input fields: "Username", "Name", "Last Name", "password", and a date field labeled "mm/dd/yyyy" with a calendar icon. Below these fields is an "Avatar" label and a red "EDIT" button.

## Creating a Dataset

To upload a file you only need to go to the Upload Dataset section in the left panel, once there you should proceed to fill in the file information providing a name and a brief description of the file. Once you have filled in the two pieces of information mentioned above you should proceed to select a file to be uploaded to the system and an image to identify the file.



Once the file has been uploaded the following message will appear



Multiple file formats can be uploaded, including video formats, the only consideration would be to upload files of moderate size to avoid high system response times.

## Search Users and view datasets by user

In this section, the users registered in the system will appear. In this section, the user can search, view the files uploaded by the user, and follow other users.

The screenshot shows the DataHive interface. On the left is a dark sidebar with the DataHive logo and navigation links: Dashboard, Upload Dataset, Search Datasets, Search Users, View Votes, and Message. The main content area is titled 'Searching users' and contains a 'Users' section. At the top of this section is a search bar with a magnifying glass icon and the text 'Search'. To the right of the search bar are two buttons: 'Get users' and 'All'. Below the search bar, a table lists users. The table has two columns: 'USER' and 'REAL NAME'. The first row shows a user profile picture, the name 'TestUser', the date '4/10/2023, 06:00:00 UTC', the name 'Test User', and two links: 'View Datasets' and 'Follow'.

USER	REAL NAME
TestUser 4/10/2023, 06:00:00 UTC	Test User <a href="#">View Datasets</a> <a href="#">Follow</a>


This screenshot shows the same 'Searching users' page as the previous one, but with a modal dialog box in the center. The modal has a green checkmark icon at the top, followed by the text 'Success!' and 'User Followed'. At the bottom of the modal is a blue button labeled 'OK'. The background content is dimmed, showing the 'Users' section with a user profile for 'ArmandoArce' and links for 'View Datasets' and 'Unfollow'.

The screenshot shows the 'Searching users' page with the title 'All the datasets of the user' and the username 'ArmandoArce' in orange. Below this is a table with three columns: 'OWNER', 'DATASET', and 'TOTAL VOTES'. The first row shows a user profile picture, the name 'ArmandoArce', a dataset icon, the name 'Certificacion Scrum SFPC', the size '190264 bytes', the date '4/9/2023, 10:00:35 UTC', the number '0' in a green circle, and two links: 'Get related Files' and 'Get Votes'.

OWNER	DATASET	TOTAL VOTES
ArmandoArce	Certificacion Scrum SFPC 190264 bytes 4/9/2023, 10:00:35 UTC	0 <a href="#">Get related Files</a> <a href="#">Get Votes</a>

### Search for datasets

In this section the datasets are uploaded into the system. In this section, the user can view, vote, comment, and download multiple datasets uploaded by the user and other users.

 **DataHive**

Dashboard

Upload Dataset

Search Datasets

Search Users

View Votes

Message





Search

Get Datasets



All

Searching datasets

All datasets

OWNER	DATASET	TOTAL VOTES
<div><div>ArmandoArce</div></div>	<div> <b>Certificacion Scrum</b> SFPC</div> <div>190264 bytes 4/9/2023, 10:00:35 UTC</div>	<div>8</div> <div><a href="#">Get related Files</a></div> <div><a href="#">Get Votes</a></div>
<div><div>TestUser</div></div>	<div> <b>Dia de Paintball</b> Dia de Paintball con los Compu SJ 19</div> <div>164851 bytes 4/10/2023, 02:38:39 UTC</div>	<div>0</div> <div><a href="#">Get related Files</a></div> <div><a href="#">Get Votes</a></div>

Current Dataset

OWNER	DATASET	TOTAL VOTES
<div><div>ArmandoArce</div></div>	<div> <b>Certificacion Scrum</b> SFPC</div> <div>190264 bytes 4/9/2023, 10:00:35 UTC</div>	<div>8</div> <div><a href="#">Download Dataset</a></div>

Vote


Dataset Files

NAME	SIZE	MIMETYPE
Certificate.pdf	190264 bytes	application/pdf

[Download File](#)



## File Download

To download files from the system, just search for the desired Dataset and proceed to the dataset page, then click on the "Download Dataset" option.

 **DataHive**

[Dashboard](#)  
[Upload Dataset](#)  
[Search Datasets](#)  
[Search Users](#)  
[View Votes](#)  
[Message](#)



Current Dataset

OWNER	DATASET	TOTAL VOTES
 ArmandoArce	 <b>Certificacion Scrum</b> SFPC	<b>190264 bytes</b> 4/9/2023, 10:00:35 UTC <div>0</div>











Dataset Votes

OWNER	VOTE VALUE
-------	------------

Current Dataset

OWNER	DATASET	TOTAL VOTES
 ArmandoArce	 <b>Certificacion Scrum</b> SFPC	<b>190264 bytes</b> 4/9/2023, 10:00:35 UTC <div>9</div> <a href="#">Download Dataset</a>

Vote






Dataset Files

NAME	SIZE	MIMETYPE
Certificate.pdf	<div>190264 bytes</div>	application/pdf <a href="#">Download File</a>

## Consult which users have downloaded a file

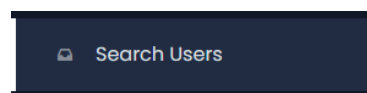
To see which users have downloaded a dataset, you only need to click on the "View downloads" option on the home page and the following page will be displayed

All your datasets				
OWNER	DATASET		TOTAL VOTES	
 ArmandoArce	 <b>Certificacion Scrum</b> SPMC	<b>190264 bytes</b> 4/9/2023, 10:00:35 UTC	<b>8</b>	<a href="#">Copy</a> <a href="#">View downloads</a>


Users		
USER	REAL NAME	
 TestUser 4/10/2023, 06:00:00 UTC	<b>Test</b> User	<a href="#">View Datasets</a>



## Dataset search by user

To view the datasets uploaded by a user, just go to the "Search Users" section.



Then search for the user you wish to consult and click on the option that says "View Datasets".

USER	REAL NAME		
 TestUser 4/10/2023, 06:00:00 UTC	<b>Test</b> User	<a href="#">View Datasets</a>	<a href="#">Follow</a>

All the datasets of the user TestUser				
OWNER	DATASET		TOTAL VOTES	
 TestUser	 <b>Dia de Paintball</b> Dia de Paintball con los Compu SJ 19	<b>164851 bytes</b> 4/10/2023, 02:38:39 UTC	<b>0</b>	<a href="#">Get related Files</a> <a href="#">Get Votes</a>

## Comments System

With the use of this function, users can leave comments on the datasets of other users and themselves.

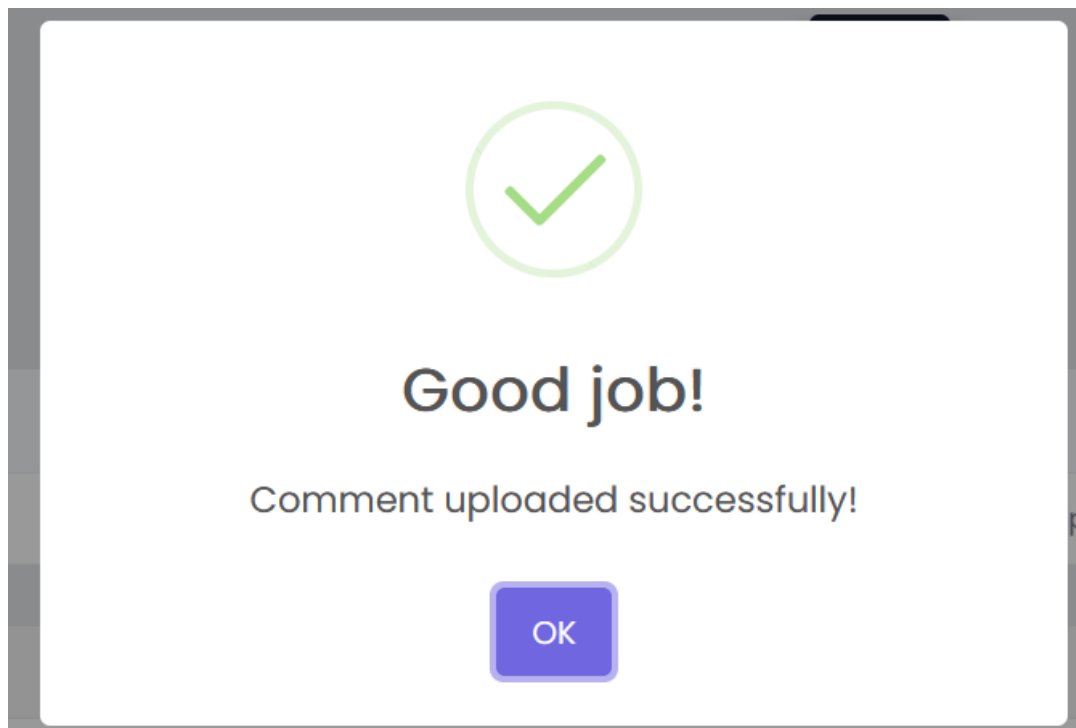
New comment:

Comment

ArmandoArce said:  
Excelente contenido.

Answer this comment:

Answer




















## Voting System

The system allows other users to interact with the published datasets allowing not only comments but also Votes, which allow users to leave feedback on the uploaded dataset. In this way, users can interact among themselves with the platform.

## View Votes

In this section, the user can see the votes left on the datasets of other users.

OWNER	DATASET		TOTAL VOTES	
 ArmandoArce	 <b>Certificacion Scrum</b> SFPC	<b>190264 bytes</b> 4/9/2023, 10:00:35 UTC	9	<a href="#">Download Dataset</a>
<div><div>Vote</div><div></div></div>				



# Vote processed!



Vote registered

OK

## Clone Dataset with another name

To clone a Dataset with another name just go to the home page and in the "All your datasets" section click on the option that says "Copy" which will display the following page

All your datasets

OWNER	DATASET	TOTAL VOTES
 AmmandoArce	 Certification Scrum SFPC 190264 bytes 4/9/2023, 10:00:35 UTC	8 <a href="#">Copy</a> <a href="#">View downloads</a>

Copying Certification Scrum

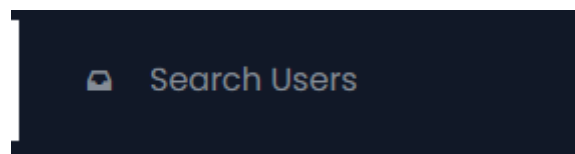
Enter the new name for the dataset

[COPY](#)

Once cloned, it will appear as a separate dataset from the original with the new name

## Follow other users


To follow other users all you need to do is go to the "Search users" section.



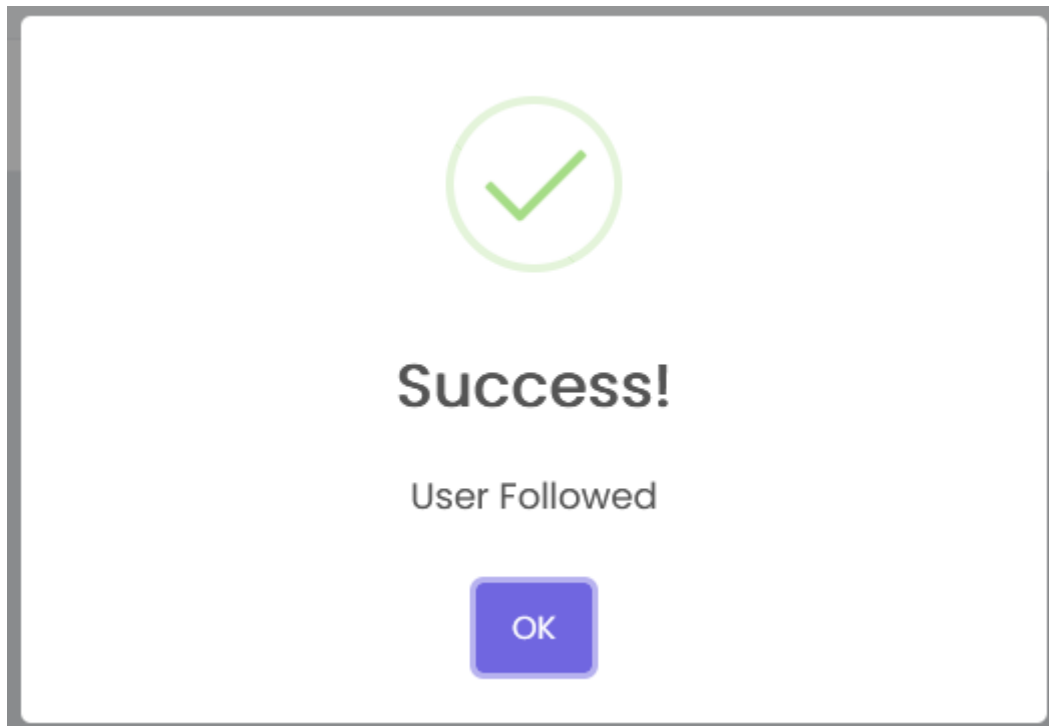
Which will display the following page:

Searching users

Users

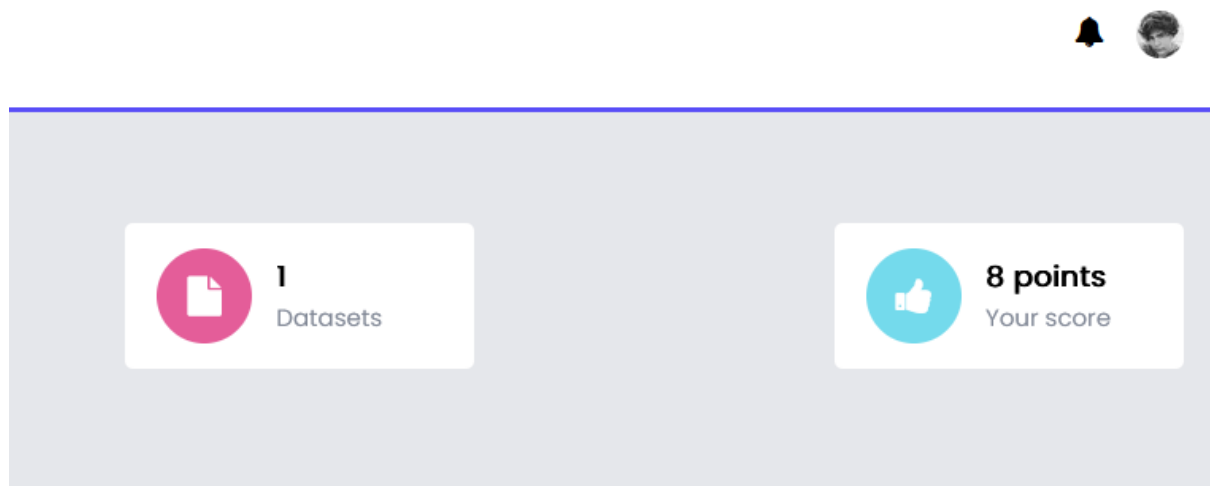
USER	REAL NAME
 TestUser 4/10/2023, 06:00:00 UTC	Test User <a href="#">View Datasets</a> <a href="#">Follow</a>

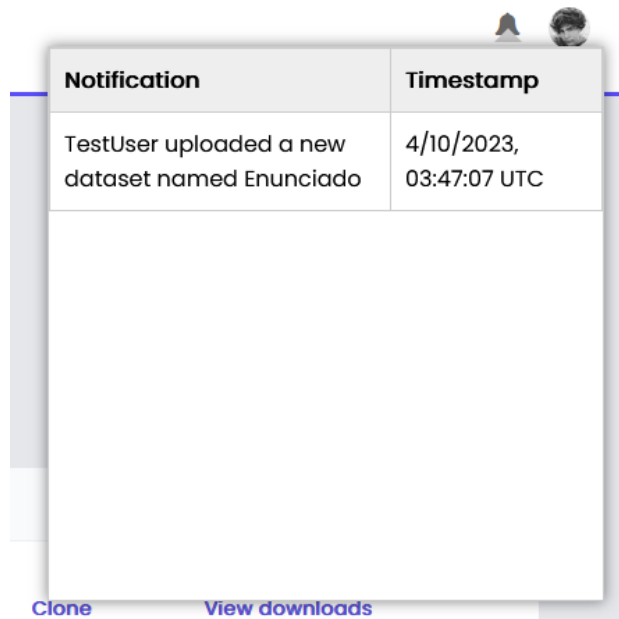
And to follow a user, you only need to click on the button that says "Follow".



### Notification system

For the notification system, there is the element of the bell in the upper right corner next to the user image, this system shows when a user uploads a file.





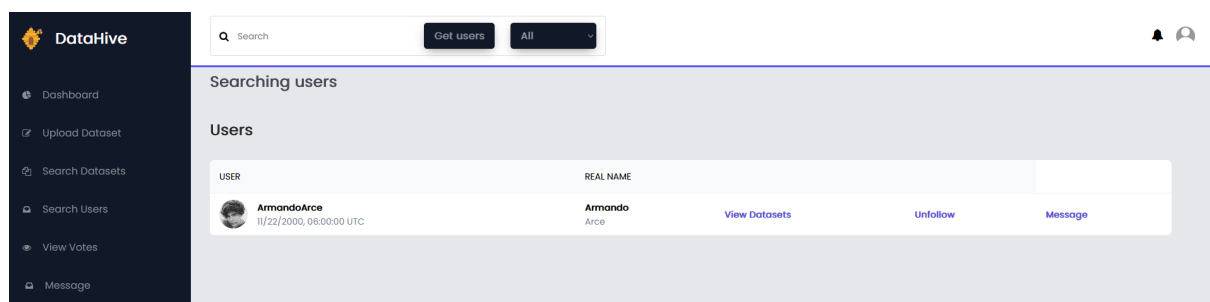
A notification modal window is displayed. It has a title bar with a bell icon and a user profile picture. The modal contains a table with two columns: 'Notification' and 'Timestamp'. The notification text is 'TestUser uploaded a new dataset named Enunciado' and the timestamp is '4/10/2023, 03:47:07 UTC'. Below the table, there are two buttons: 'Clone' and 'View downloads'.

Notification	Timestamp
TestUser uploaded a new dataset named Enunciado	4/10/2023, 03:47:07 UTC


Clone View downloads

## Messaging System

To send a message you only need to go to the "Message" section and the following page will be loaded, from which you should look for the user to whom you want to send a message and press the text that says "Message".



The screenshot shows the DataHive messaging interface. On the left is a dark sidebar with the DataHive logo and a list of navigation items: Dashboard, Upload Dataset, Search Datasets, Search Users, View Votes, and Message. The main area has a search bar with a magnifying glass icon and the text 'Search'. To the right of the search bar are two buttons: 'Get users' and 'All'. Below the search bar, the text 'Searching users' is displayed. Underneath, there is a section titled 'Users' containing a table of search results.

USER	REAL NAME	
 <b>AmandoArce</b> 11/22/2000, 08:00:00 UTC	<b>Amando</b> Arce	<a href="#">View Datasets</a> <a href="#">Unfollow</a> <a href="#">Message</a>

Then proceed to write the message you want to send and press the button that says "Send".

## Messages

New message:

Mensaje de Prueba

Send



**Good job!**

Text uploaded successfully!

OK