

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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M0486: Accés a dades

UF3. Persistència en BD natives XML

Activitat 1

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA	CURS 2025 - 2026
	2n DAM M0486 - UF3	Data: 14-01-2025
		Nom: Gisela Ruiz Ferrer

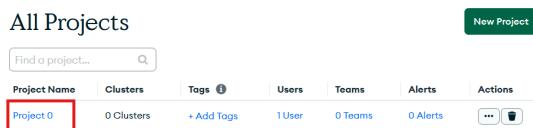
1. Registra't a [Atlas](#).



The screenshot shows the MongoDB Atlas interface. On the left, there's a sidebar with 'IDENTITY & ACCESS' and 'All Projects'. The main area is titled 'All Projects' and shows 'Gisela's Org - 2025-12-20'. There's a 'New Project' button at the top right.

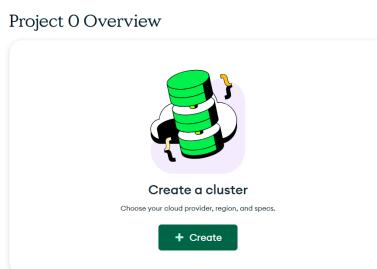
2. Crear una Base de Dades NoSql amb MongoDB anomenada **Tasques**.

Entrem al projecte



The screenshot shows the 'All Projects' page with a single project named 'Project 0'. A red box highlights the 'Project 0' button. Other columns include Clusters (0), Tags (+ Add Tags), Users (1 User), Teams (0 Teams), and Alerts (0 Alerts). A 'New Project' button is at the top right.

Cliquem a Create per crear el cluster.



The screenshot shows the 'Create a cluster' page for 'Project 0'. It features a green cylinder icon and a 'Create' button. Below it, there's a note: 'Choose your cloud provider, region, and specs.' and a 'Create' button.

Configuració cluster i cliquem Create Deployment.

Deploy your cluster

Use a template below or set up advanced configuration options. You can also edit these configuration options once the cluster is created.



The screenshot shows the 'Create Deployment' configuration page. It lists three cluster options: M10 (\$0.09/hour), Flex (From \$0.01/hour), and Free. The 'Free' option is selected. Below the options, a note says: 'Free forever! Your free cluster is ideal for experimenting in a limited sandbox. You can upgrade to a production cluster anytime.' A green box highlights the 'Free' option.

Configurations

Name: Cluster0
You cannot change the name once the cluster is created.

Provider: aws Google Cloud Azure

Region: Paris (eu-west-3) Recommended Low carbon emissions

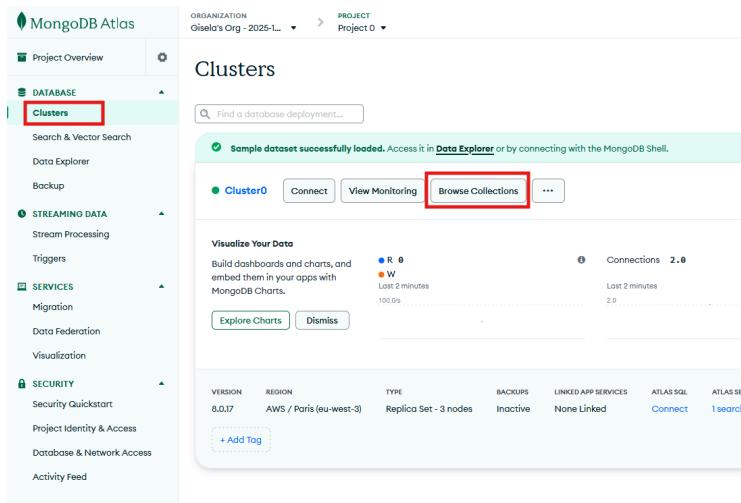
Quick setup

Automate security setup
 Preload sample dataset

[Go to Advanced Configuration](#) [Create Deployment](#)

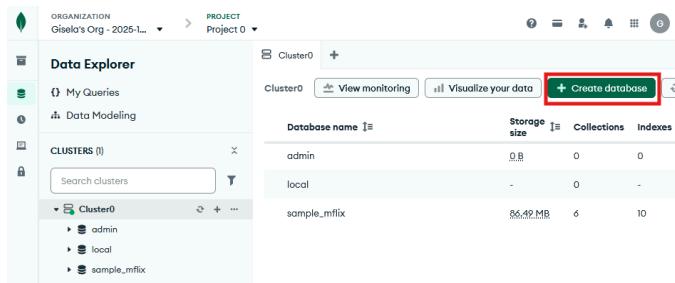
 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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Anem a Clusters al menú lateral y després Browse Collections



The screenshot shows the MongoDB Atlas interface. On the left, there's a sidebar with sections like Project Overview, DATABASE (with Clusters selected), STREAMING DATA, SERVICES, and SECURITY. The main area is titled 'Clusters' and shows a sample dataset successfully loaded. It includes a 'Visualize Your Data' section with R/W metrics and a 'Browse Collections' button, which is highlighted with a red box.

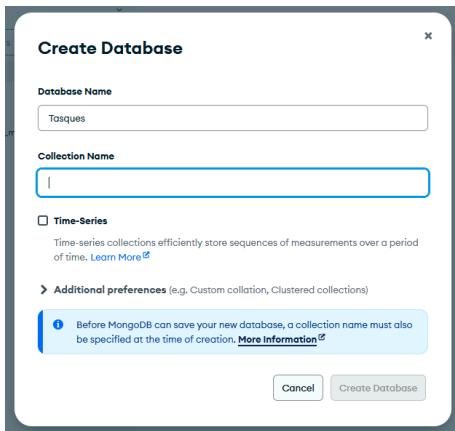
Create database



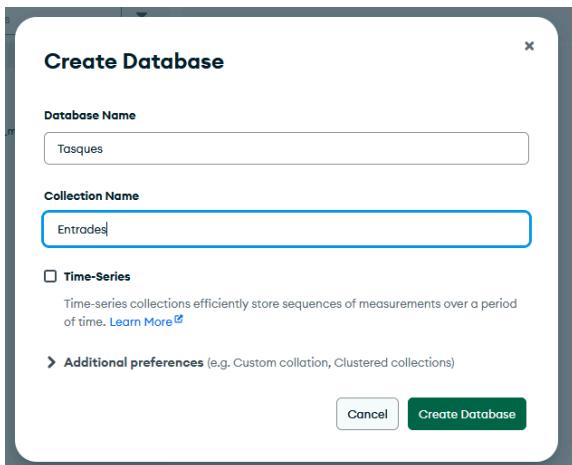
The screenshot shows the MongoDB Atlas Data Explorer. In the top right, there's a '+ Create database' button, which is highlighted with a red box. The main area lists databases: admin (0.0B storage, 0 collections, 0 indexes), local (0 storage, 0 collections, 0 indexes), and sample_mflix (86.49 MB storage, 6 collections, 10 indexes).

Nom de la bbdd “Tasques”

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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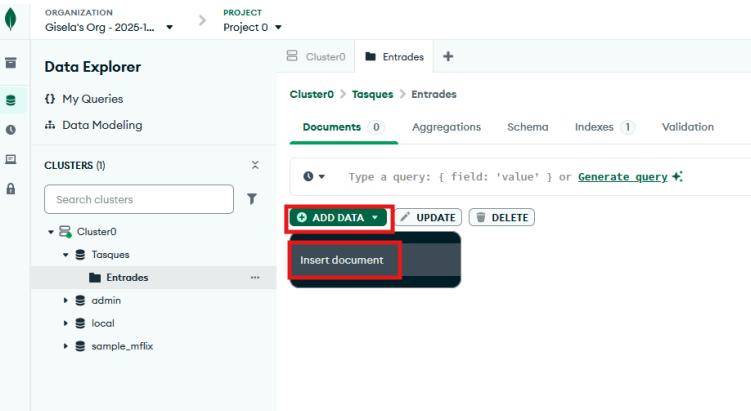
3. Crear una col·lecció anomenada Entrades.



4. Introduir 5 registres de tasques (insert .json) amb els camps:

- nom alumne/a
- cognom 1
- cognom 2
- data d'entrada de la tasca
- completa sí o no
- observacions

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
---	--	--



The screenshot shows the Data Explorer interface. The left sidebar displays 'Data Explorer', 'My Queries', 'Data Modeling', and a 'CLUSTERS' section with 'Cluster0' expanded, showing 'Tasques' and 'Entrades'. The main area shows 'Cluster0 > Tasques > Entrades'. It has tabs for 'Documents' (0), 'Aggregations', 'Schema', 'Indexes' (1), and 'Validation'. Below the tabs is a search bar with placeholder text 'Type a query: { field: 'value' } or [Generate query](#)'. At the bottom of the main area are three buttons: 'ADD DATA' (highlighted with a red box), 'UPDATE', and 'DELETE'. A dark blue button labeled 'Insert document' is also visible.

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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Cluster0 > Tasques > Entrades

Documents 6 Aggregations Schema Indexes 1 Validation

Type a query: { field: 'value' } or [Generate query](#) 

[ADD DATA](#)  [UPDATE](#)  [DELETE](#)

```
_id: ObjectId('6946714831296d96e92bf932')
nom_alumne: "Laura"
cognom1: "Garcia"
cognom2: "Martinez"
data_entrada: "2025-12-10"
completa: false
observacions: "Tasca pendent"
```

```
_id: ObjectId('6946715731296d96e92bf934')
nom_alumne: "Marc"
cognom1: "Perez"
cognom2: "Lopez"
data_entrada: "2025-12-11"
completa: true
observacions: "Tasca completada correctament"
```

```
_id: ObjectId('6946716631296d96e92bf936')
nom_alumne: "Anna"
cognom1: "Sanchez"
cognom2: "Ruiz"
data_entrada: "2025-12-12"
completa: false
observacions: "Falten arxius"
```

```
_id: ObjectId('6946717831296d96e92bf938')
nom_alumne: "Jordi"
cognom1: "Marti"
cognom2: "Vila"
data_entrada: "2025-12-13"
completa: true
observacions: "Lliurada fora de termini"
```

```
_id: ObjectId('6946718931296d96e92bf93a')
nom_alumne: "Clara"
cognom1: "Navarro"
cognom2: "Pons"
data_entrada: "2025-12-14"
completa: true
observacions: "Correcta"
```

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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5. Realitzar cerques bàsiques i amb filters (Podeu trobar informació sobre com fer cerques amb MongoDB en aquest [enllaç](#).) (**NO CAL DOCUMENTAR-HO**)

6. Documenta com feries les següents cerques. Si és necessari, afegeix algun registre més de tasques.

1. Llistar totes les tasques.



```

+: 0
• { }

{ }

ADD DATA UPDATE DELETE

_id: ObjectId('6946714831296d96e92bf932')
nom_alumne : "Laura"
cognom1 : "Garcia"
cognom2 : "Martinez"
data_entrada : "2025-12-10"
completa : false
observacions : "Tasca pendent"

_id: ObjectId('6946715731296d96e92bf934')
nom_alumne : "Marc"
cognom1 : "Perez"
cognom2 : "Lopez"
data_entrada : "2025-12-11"
completa : true
observacions : "Tasca completada correctament"

_id: ObjectId('6946716631296d96e92bf936')
nom_alumne : "Anna"
cognom1 : "Sanchez"
cognom2 : "Ruiz"
data_entrada : "2025-12-12"
completa : false
observacions : "Falten arxius"

_id: ObjectId('6946717831296d96e92bf938')
nom_alumne : "Jordi"
cognom1 : "Marti"
cognom2 : "Vila"
data_entrada : "2025-12-13"
completa : true
observacions : "Lliurada fora de termini"

_id: ObjectId('6946718931296d96e92bf93a')
nom_alumne : "Clara"
cognom1 : "Navarro"
cognom2 : "Pons"
data_entrada : "2025-12-14"
completa : true
observacions : "Correcta"

```

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA	CURS 2025 - 2026
	2n DAM	Data: 14-01-2025
	M0486 - UF3	Nom: Gisela Ruiz Ferrer

2. Llistar les tasques completades.

```
① [ {"completa": true} ]
```

② -

```
_id: ObjectId('6946715731296d96e92bf934')
nom_alumne : "Marc"
cognom1 : "Perez"
cognom2 : "Lopez"
data_entrada : "2025-12-11"
completa : true
observacions : "Tasca completada correctament"
```

```
_id: ObjectId('6946717831296d96e92bf938')
nom_alumne : "Jordi"
cognom1 : "Martí"
cognom2 : "Vila"
data_entrada : "2025-12-13"
completa : true
observacions : "Lliurada fora de termini"
```

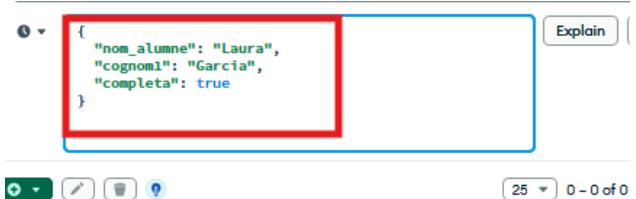
```
_id: ObjectId('6946718931296d96e92bf93a')
nom_alumne : "Clara"
cognom1 : "Navarro"
cognom2 : "Pons"
data_entrada : "2025-12-14"
completa : true
observacions : "Correcta"
```

3. Llistar les tasques d'un alumne específic.

```
{  
  "nom_alumne": "Laura",  
  "cognom1": "Garcia"  
}
```

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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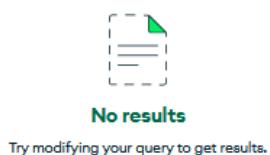
4. Cerca les tasques de determinat alumne i completades.



```

{
  "nom_alumne": "Laura",
  "cognom1": "Garcia",
  "completa": true
}

```



5. Llista les tasques completades i amb observacions.

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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Query results:

```

{
  "completa": true,
  "observacions": { "$exists": true, "$ne": "" }
}

```

Operations:    

```

_id: ObjectId('6946715731296d96e92bf934')
nom_alumne : "Marc"
cognom1 : "Perez"
cognom2 : "Lopez"
data_entrada : "2025-12-11"
completa : true
observacions : "Tasca completada correctament"

```

```

_id: ObjectId('6946717831296d96e92bf938')
nom_alumne : "Jordi"
cognom1 : "Marti"
cognom2 : "Vila"
data_entrada : "2025-12-13"
completa : true
observacions : "Lliurada fora de termini"

```

```

_id: ObjectId('6946718931296d96e92bf93a')
nom_alumne : "Clara"
cognom1 : "Navarro"
cognom2 : "Pons"
data_entrada : "2025-12-14"
completa : true
observacions : "Correcta"

```

6. Llista les tasques completades després d'una certa data.

Query results:

```

{
  "completa": true,
  "data_entrada": { "$gt": "2025-12-12" }
}

```

Operations:     2

```

_id: ObjectId('6946717831296d96e92bf938')
nom_alumne : "Jordi"
cognom1 : "Marti"
cognom2 : "Vila"
data_entrada : "2025-12-13"
completa : true
observacions : "Lliurada fora de termini"

```

```

_id: ObjectId('6946718931296d96e92bf93a')
nom_alumne : "Clara"
cognom1 : "Navarro"
cognom2 : "Pons"
data_entrada : "2025-12-14"
completa : true
observacions : "Correcta"

```

7. Llista les tasques amb observacions que continguin una paraula específica.

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA	CURS 2025 - 2026
	2n DAM	Data: 14-01-2025
	M0486 - UF3	Nom: Gisela Ruiz Ferrer

	<pre>{ "observacions": { "\$regex": "pendent", "\$options": "i" } }</pre>
 ADD DATA	 UPDATE
	 DELETE
	<pre>_id: ObjectId('6946714831296d96e92bf932') nom_alumne : "Laura" cognom1 : "Garcia" cognom2 : "Martinez" data_entrada : "2025-12-10" completa : false observacions : "Tasca pendent"</pre>

8. Llista les tasques no completades ordenades alfabèticament.

The screenshot shows the MongoDB Compass interface with the following details:

- Query:** { "completa": false }
- Project:** { field: 0 }
- Sort:** { "nom_alumne": 1 } (highlighted with a blue border)
- Max Time MS:** 60000
- Collation:** { locale: 'simple' }, Skip 0, Limit 0
- Index Hint:** { field: -1 }

Below the search bar, there are several icons: a magnifying glass, a pencil, a trash can, and a question mark.

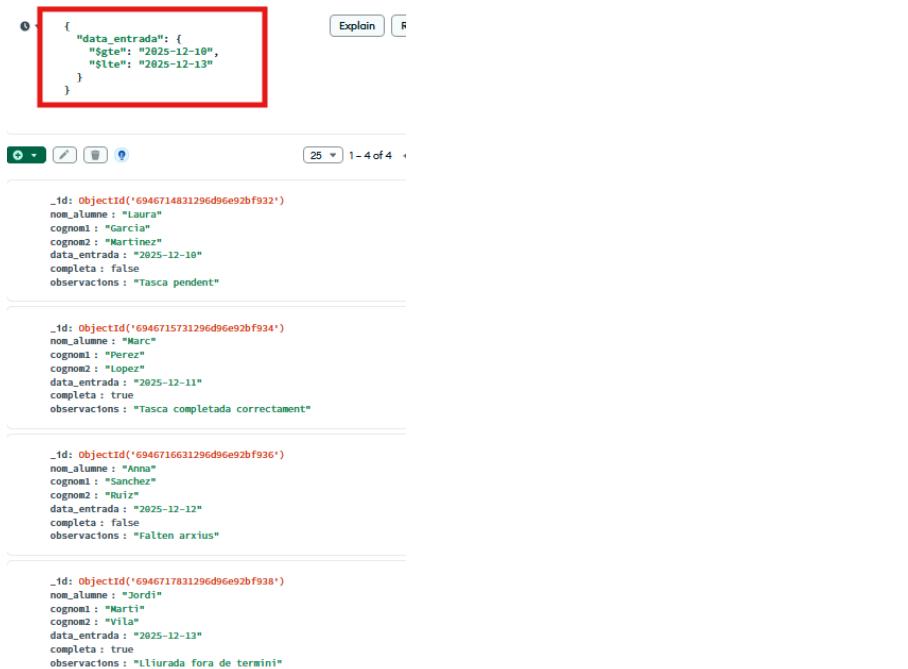
The results pane displays two documents:

```
_id: ObjectId('6946716631296d96e92bf936')
nom_alumne : "Anna"
cognom1 : "Sanchez"
cognom2 : "Ruiz"
data_entrada : "2025-12-12"
completa : false
observacions : "Falten arxius"

_id: ObjectId('6946714831296d96e92bf932')
nom_alumne : "Laura"
cognom1 : "Garcia"
cognom2 : "Martinez"
data_entrada : "2025-12-10"
completa : false
observacions : "Tasca pendent"
```

 INS CASTELLET	DEPARTAMENT D' INFORMÀTICA 2n DAM M0486 - UF3	CURS 2025 - 2026 Data: 14-01-2025 Nom: Gisela Ruiz Ferrer
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9. Llista les tasques entre dues dates específiques.



```

{
  "data_entrada": {
    "$gte": "2025-12-10",
    "$lte": "2025-12-13"
  }
}

Explain R

25 1 - 4 of 4

_1d: ObjectId('6946714831296d96e92bf932')
nom_apellido : "Laura"
cognom1 : "Garcia"
cognom2 : "Martinez"
data_entrada : "2025-12-10"
completa : false
observaciones : "Tasca pendent"

_1d: ObjectId('6946715731296d96e92bf934')
nom_apellido : "Marc"
cognom1 : "Perez"
cognom2 : "Lopez"
data_entrada : "2025-12-11"
completa : true
observaciones : "Tasca completada correctament"

_1d: ObjectId('6946716631296d96e92bf936')
nom_apellido : "Anna"
cognom1 : "Sanchez"
cognom2 : "Ruiz"
data_entrada : "2025-12-12"
completa : false
observaciones : "Falten arxius"

_1d: ObjectId('6946717831296d96e92bf938')
nom_apellido : "Jordi"
cognom1 : "Marti"
cognom2 : "Vila"
data_entrada : "2025-12-13"
completa : true
observaciones : "Lliurada fora de termini"

```

10. Llista les tasques amb observacions que comencin amb una determinada paraula ordenades per data més nova a més antiga.

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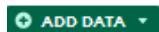
```
① {  
    "observacions": { "$regex": "^Tasca", "$options": "i" }  
}
```

Project { field: 0 }

Sort [{ "data_entrada": -1 }]

Collation { locale: 'simple' }

Index Hint { field: -1 }

 ADD DATA  UPDATE  ?

```
_id: ObjectId('6946715731296d96e92bf934')  
nom_alumne : "Marc"  
cognom1 : "Perez"  
cognom2 : "Lopez"  
data_entrada : "2025-12-11"  
completa : true  
observacions : "Tasca completada correctament"
```

```
_id: ObjectId('6946714831296d96e92bf932')  
nom_alumne : "Laura"  
cognom1 : "Garcia"  
cognom2 : "Martinez"  
data_entrada : "2025-12-10"  
completa : false  
observacions : "Tasca pendent"
```