

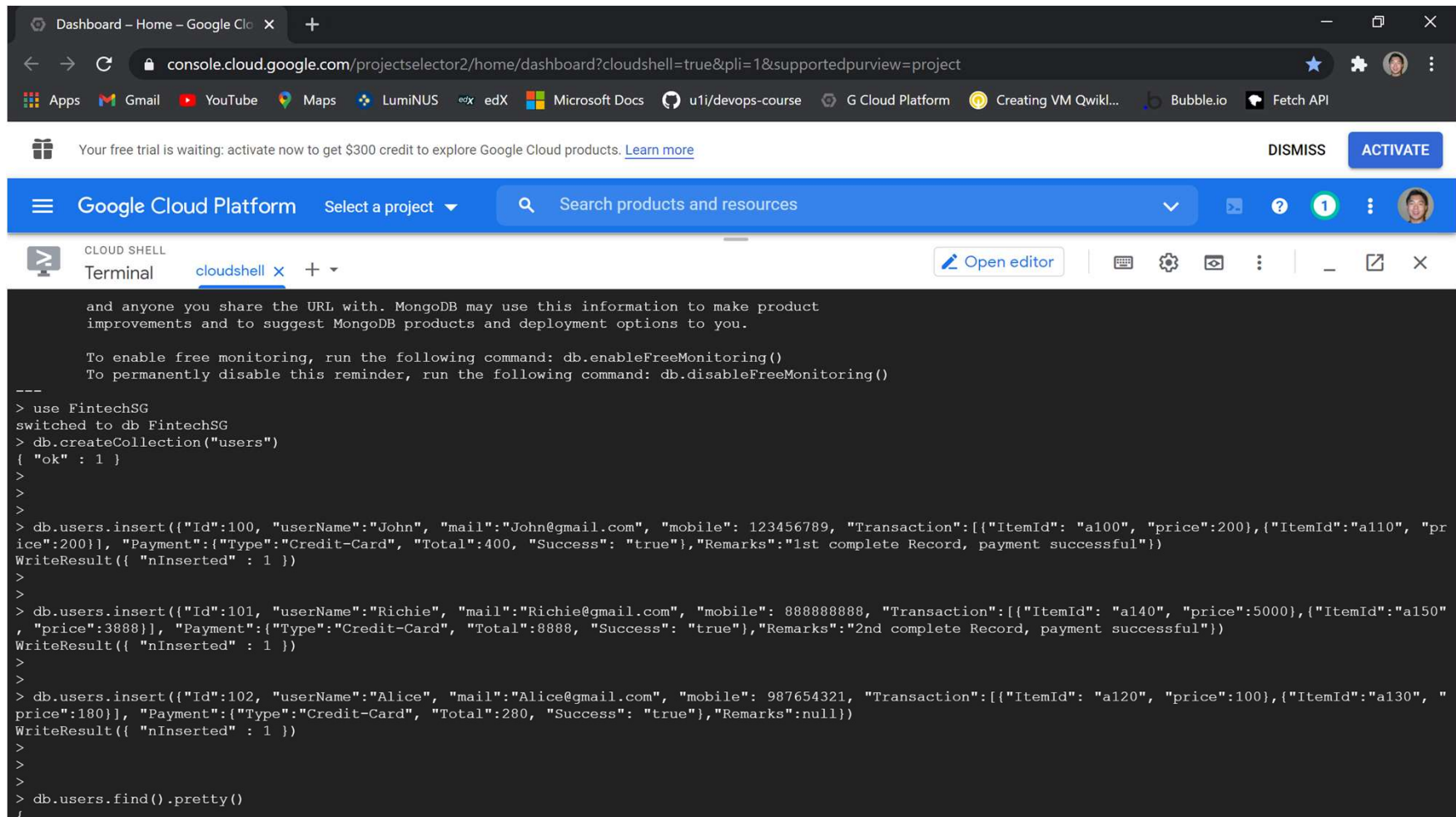
A blue geometric logo consisting of overlapping shapes, including a large right-pointing arrow and a smaller diamond-like shape.

MongoDB Homework

Pang Tze Yeong



1. Create a collection (users) to store information about the users
2. Populate the collection with random data



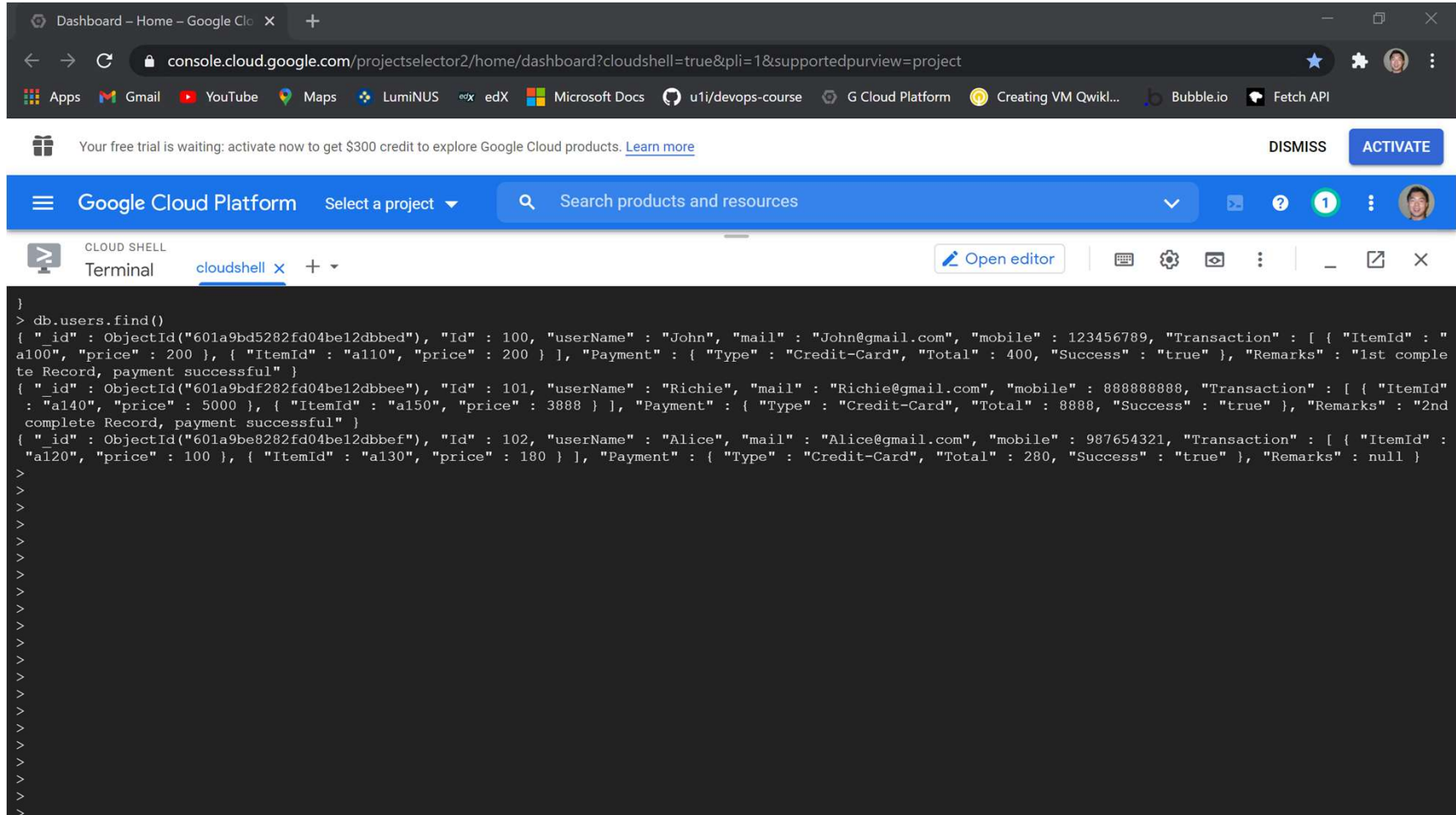
The screenshot shows the Google Cloud Platform console interface. At the top, there's a navigation bar with the Google Cloud Platform logo, a search bar, and a user profile icon. Below the navigation bar, there's a banner for a free trial. The main content area shows a Cloud Shell terminal window. The terminal output displays the following commands and results:

```
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.

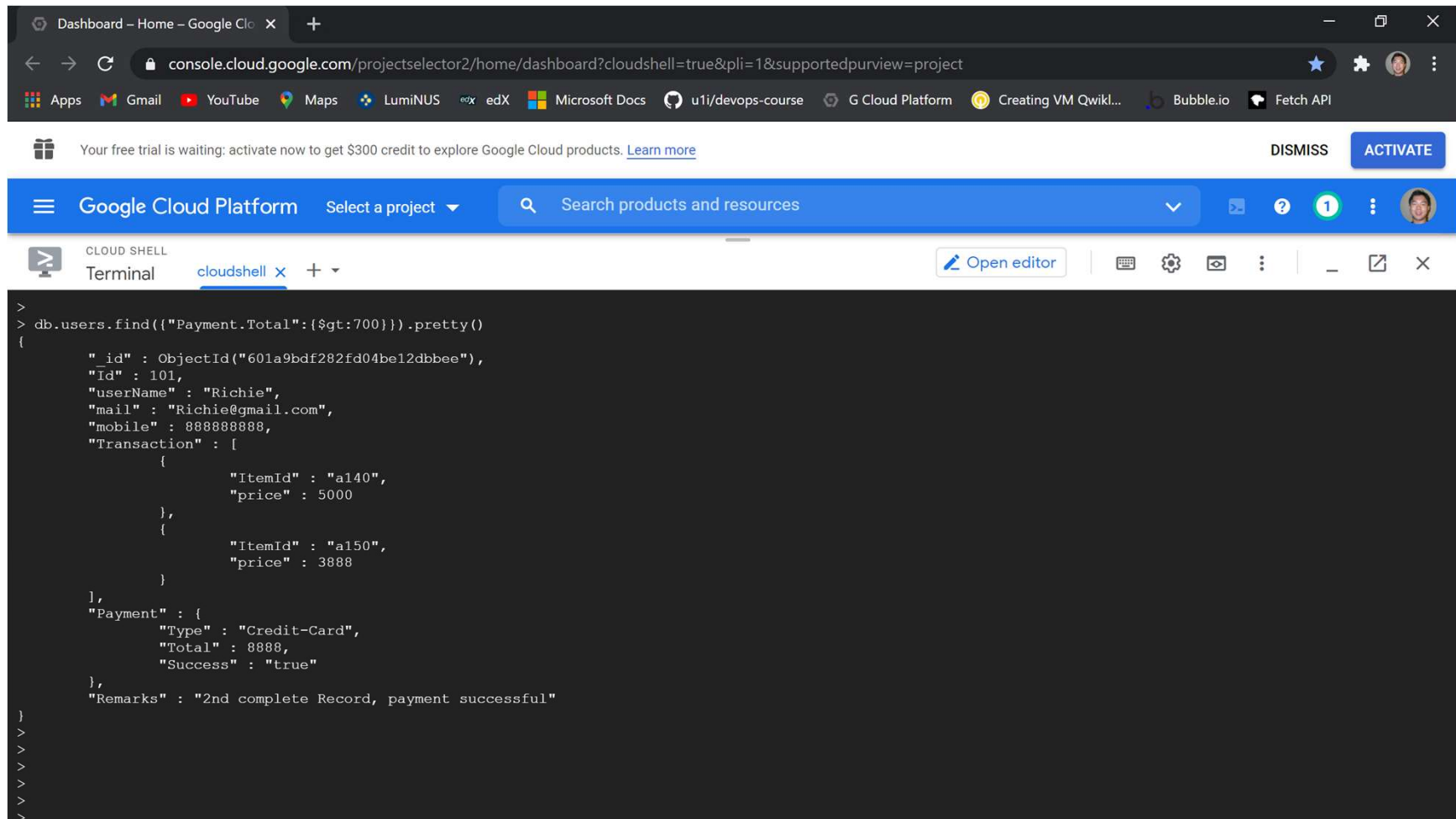
To enable free monitoring, run the following command: db.enableFreeMonitoring()
To permanently disable this reminder, run the following command: db.disableFreeMonitoring()

---
> use FintechSG
switched to db FintechSG
> db.createCollection("users")
{ "ok" : 1 }
>
>
>
> db.users.insert({"Id":100, "userName":"John", "mail":"John@gmail.com", "mobile": 123456789, "Transaction":[{"ItemId": "a100", "price":200}, {"ItemId": "a110", "pr
ice":200}], "Payment":{"Type":"Credit-Card", "Total":400, "Success": "true"}, "Remarks":"1st complete Record, payment successful"})
WriteResult({ "nInserted" : 1 })
>
>
> db.users.insert({"Id":101, "userName":"Richie", "mail":"Richie@gmail.com", "mobile": 888888888, "Transaction":[{"ItemId": "a140", "price":5000}, {"ItemId": "a150"
, "price":3888}], "Payment":{"Type":"Credit-Card", "Total":8888, "Success": "true"}, "Remarks":"2nd complete Record, payment successful"})
WriteResult({ "nInserted" : 1 })
>
>
> db.users.insert({"Id":102, "userName":"Alice", "mail":"Alice@gmail.com", "mobile": 987654321, "Transaction":[{"ItemId": "a120", "price":100}, {"ItemId": "a130", "
price":180}], "Payment":{"Type":"Credit-Card", "Total":280, "Success": "true"}, "Remarks":null})
WriteResult({ "nInserted" : 1 })
>
>
>
> db.users.find().pretty()
{
```

1. Create a collection (users) to store information about the users
2. Populate the collection with random data



3. Find any record where the total payment amount is greater than 700



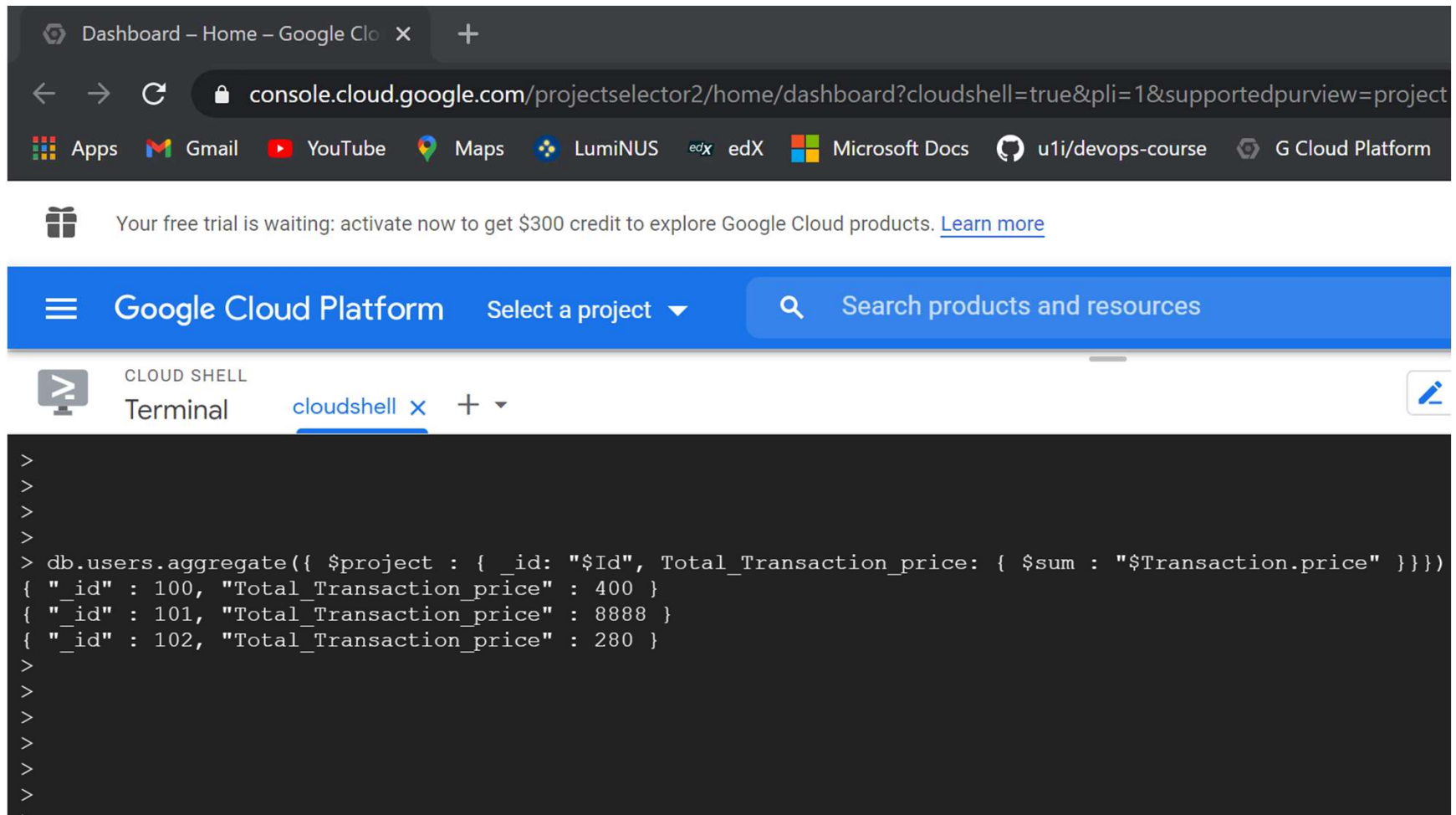
The screenshot shows a web browser window with the Google Cloud Platform console. The address bar shows the URL `console.cloud.google.com/projectselector2/home/dashboard?cloudshell=true&pli=1&supportedpurview=project`. The browser's address bar and tabs are visible at the top. Below the browser window, the Google Cloud Platform interface is shown, including a navigation bar with the Google Cloud Platform logo, a search bar, and a user profile icon. The main content area displays the Cloud Shell terminal. The terminal shows a MongoDB query and its result. The query is `db.users.find({"Payment.Total":{$gt:700}}).pretty()`. The result is a JSON object representing a user record with a total payment amount greater than 700.

```
>
> db.users.find({"Payment.Total":{$gt:700}}).pretty()
{
  "_id" : ObjectId("601a9bdf282fd04be12dbbee"),
  "Id" : 101,
  "userName" : "Richie",
  "mail" : "Richie@gmail.com",
  "mobile" : 888888888,
  "Transaction" : [
    {
      "ItemId" : "a140",
      "price" : 5000
    },
    {
      "ItemId" : "a150",
      "price" : 3888
    }
  ],
  "Payment" : {
    "Type" : "Credit-Card",
    "Total" : 8888,
    "Success" : "true"
  },
  "Remarks" : "2nd complete Record, payment successful"
}
>
>
>
>
>
>
```

4. Find the total payment of all the records

A screenshot of the Google Cloud Platform console. The top navigation bar is blue with the Google Cloud Platform logo, a search bar, and a 'Select a project' dropdown. Below this, the 'Cloud Shell' section is visible, showing a terminal window with the command 'db.users.aggregate' being executed. The terminal output shows a JSON document with '_id' as null and 'Payment_Total' as 9568. The browser's address bar shows the URL 'console.cloud.google.com/projectselector2/home/dashboard?cloudshell=true&pli=1&supportedpurview=project'.

5. Find the total Transaction price per record




The screenshot shows the Google Cloud Platform console interface. At the top, there's a navigation bar with the Google Cloud Platform logo, a "Select a project" dropdown, and a search bar. Below this, a banner for a free trial is visible. The main content area features a "CLOUD SHELL" terminal window. The terminal displays a MongoDB aggregation query and its results.

Dashboard – Home – Google Clo x +

console.cloud.google.com/projectselector2/home/dashboard?cloudshell=true&pli=1&supportedpurview=project

Apps Gmail YouTube Maps LumiNUS edX edX Microsoft Docs u1i/devops-course G Cloud Platform

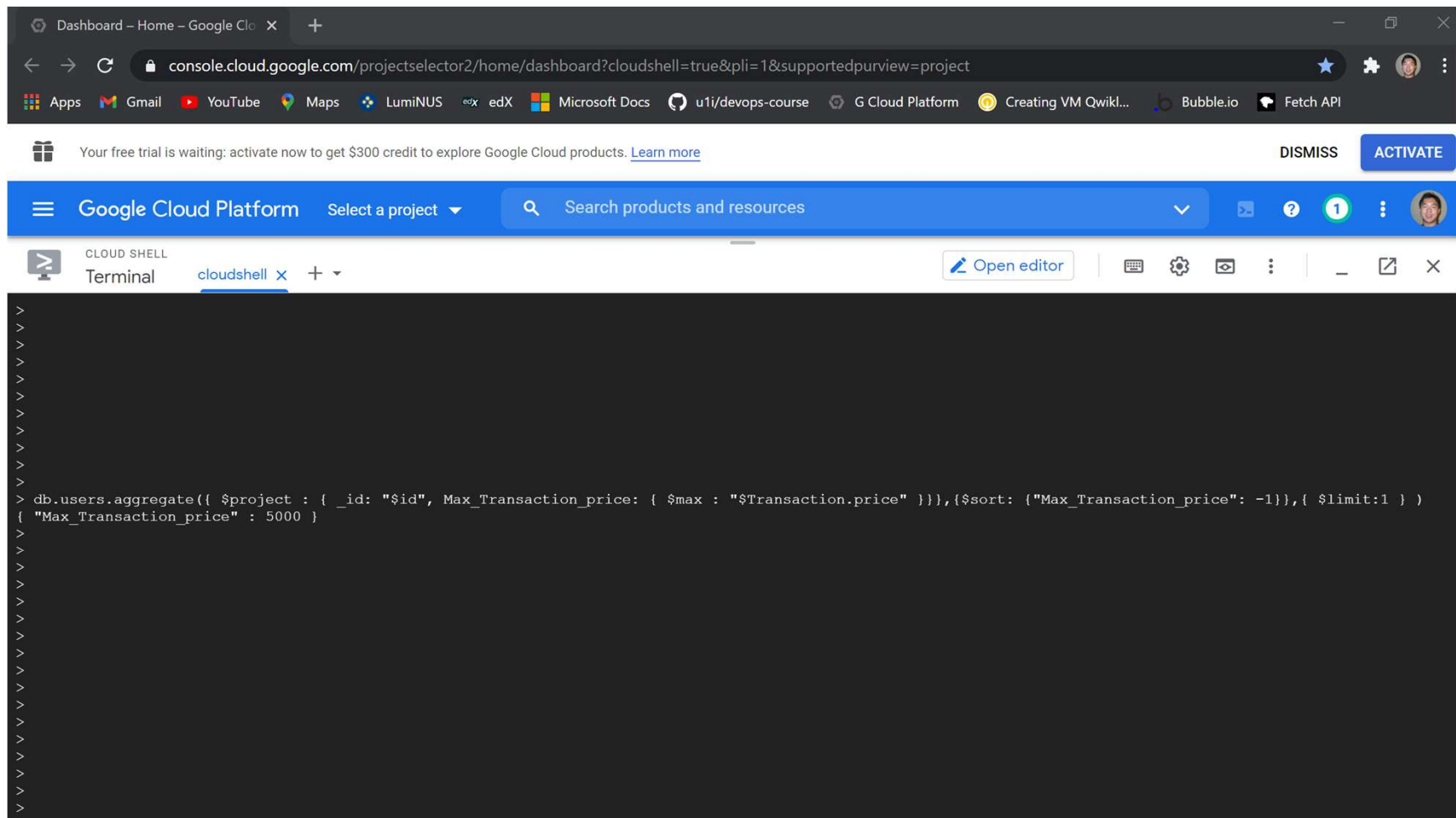
 Your free trial is waiting: activate now to get \$300 credit to explore Google Cloud products. [Learn more](#)

Google Cloud Platform Select a project Search products and resources

CLOUD SHELL Terminal cloudshell x +

```
>
>
>
>
> db.users.aggregate({ $project : { _id: "$Id", Total_Transaction_price: { $sum : "$Transaction.price" }}})
{ "_id" : 100, "Total_Transaction_price" : 400 }
{ "_id" : 101, "Total_Transaction_price" : 8888 }
{ "_id" : 102, "Total_Transaction_price" : 280 }
>
>
>
>
>
>
>
```

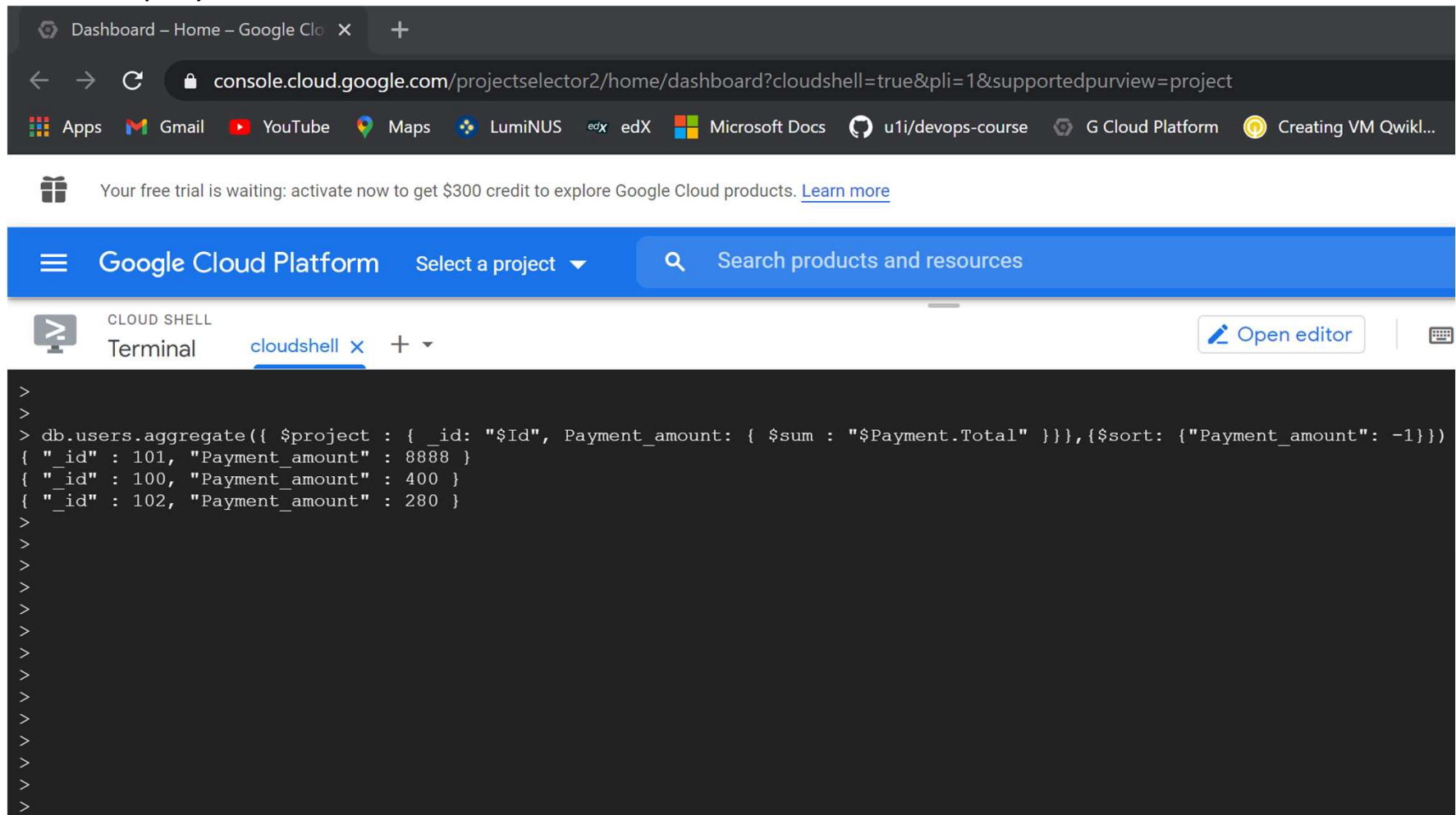
6. Find the max Transaction price



The screenshot shows the Google Cloud Platform console interface. At the top, there's a navigation bar with the Google Cloud Platform logo, a search bar, and a user profile. Below this, a banner for a free trial is visible. The main content area shows the Cloud Shell terminal, which is currently open and displaying a MongoDB aggregation query. The query is designed to find the maximum transaction price across all transactions, sorted in descending order and limited to one result.

```
>
>
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>
> db.users.aggregate({ $project : { _id: "$id", Max_Transaction_price: { $max : "$Transaction.price" } } }, { $sort: { "Max_Transaction_price": -1 }, { $limit: 1 } } )
> { "Max_Transaction_price" : 5000 }
>
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>
```

7. Find the record having the highest payment and the record having the lowest payment

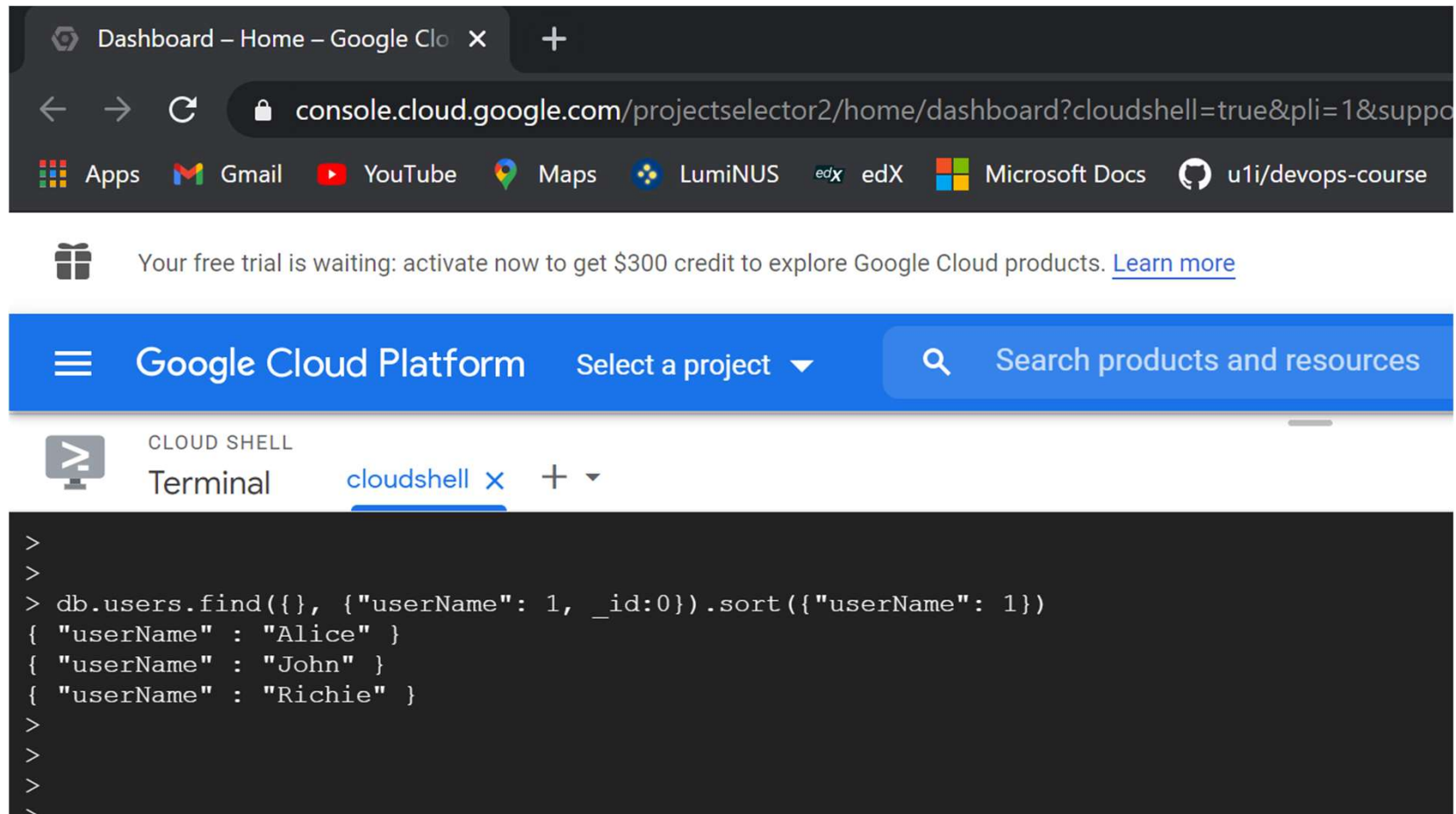


The screenshot shows the Google Cloud Platform console interface. At the top, there's a navigation bar with the Google Cloud Platform logo, a 'Select a project' dropdown, and a search bar. Below this, a 'CLOUD SHELL' tab is active, showing a terminal window. The terminal displays a MongoDB aggregation query and its results.

```
>
>
> db.users.aggregate({ $project : { _id: "$Id", Payment_amount: { $sum : "$Payment.Total" } } }, {$sort: {"Payment_amount": -1}})
{ "_id" : 101, "Payment_amount" : 8888 }
{ "_id" : 100, "Payment_amount" : 400 }
{ "_id" : 102, "Payment_amount" : 280 }
>
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>
```


8. Find the records that have the username either “John” or “Alice”

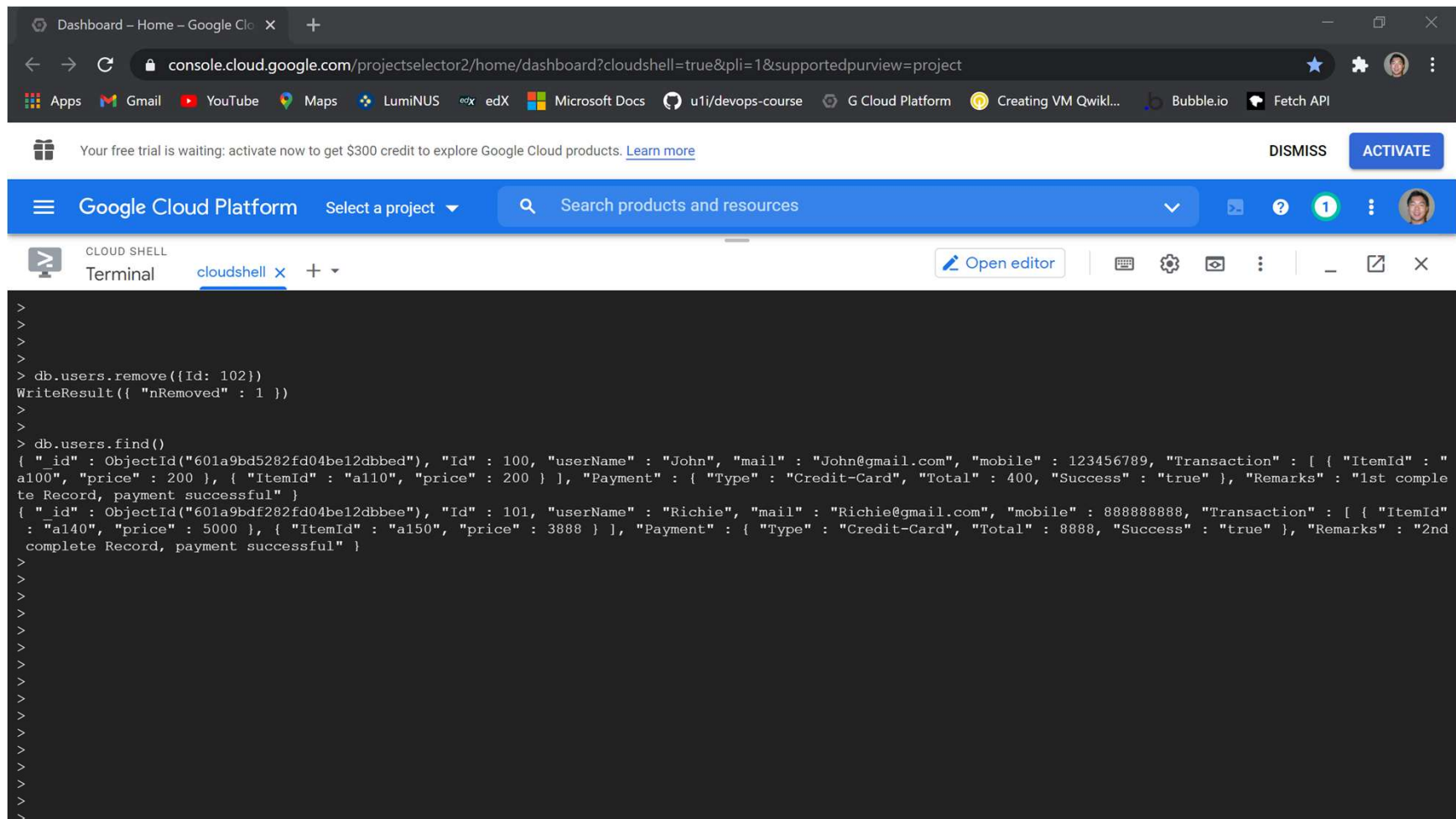
10. Arrange the name of the users in ascending order
(answering this before qn9 which involves deleting a record)



The screenshot shows a web browser window with the Google Cloud Platform console. The address bar displays the URL `console.cloud.google.com/projectselector2/home/dashboard?cloudshell=true&pli=1&suppo`. The browser's bookmark bar includes links to Apps, Gmail, YouTube, Maps, LumiNUS, edX, Microsoft Docs, and a GitHub repository `u1i/devops-course`. A notification banner at the top states: "Your free trial is waiting: activate now to get \$300 credit to explore Google Cloud products. [Learn more](#)". The main header of the console is blue and contains the "Google Cloud Platform" logo, a "Select a project" dropdown, and a search bar labeled "Search products and resources". Below the header, the "CLOUD SHELL" section is active, showing a terminal window with the title "cloudshell". The terminal displays the following commands and output:

```
>
>
> db.users.find({}, {"userName": 1, _id:0}).sort({"userName": 1})
{ "userName" : "Alice" }
{ "userName" : "John" }
{ "userName" : "Richie" }
>
>
>
>
```

9. Delete a record by using Id



The screenshot shows the Google Cloud Platform console interface. At the top, there's a navigation bar with the Google Cloud Platform logo, a search bar, and a user profile. Below this, a banner for a free trial is visible. The main content area shows a Cloud Shell terminal window. The terminal output displays a MongoDB command to delete a record by ID, followed by a confirmation message and a list of remaining users.

```
>
>
>
> db.users.remove({Id: 102})
WriteResult({ "nRemoved" : 1 })
>
>
> db.users.find()
{ "id" : ObjectId("601a9bd5282fd04be12dbbed"), "Id" : 100, "userName" : "John", "mail" : "John@gmail.com", "mobile" : 123456789, "Transaction" : [ { "ItemId" : "a100", "price" : 200 }, { "ItemId" : "a110", "price" : 200 } ], "Payment" : { "Type" : "Credit-Card", "Total" : 400, "Success" : "true" }, "Remarks" : "1st complete Record, payment successful" }
{ "id" : ObjectId("601a9bdf282fd04be12dbbee"), "Id" : 101, "userName" : "Richie", "mail" : "Richie@gmail.com", "mobile" : 888888888, "Transaction" : [ { "ItemId" : "a140", "price" : 5000 }, { "ItemId" : "a150", "price" : 3888 } ], "Payment" : { "Type" : "Credit-Card", "Total" : 8888, "Success" : "true" }, "Remarks" : "2nd complete Record, payment successful" }
>
>
>
>
>
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>
>
```