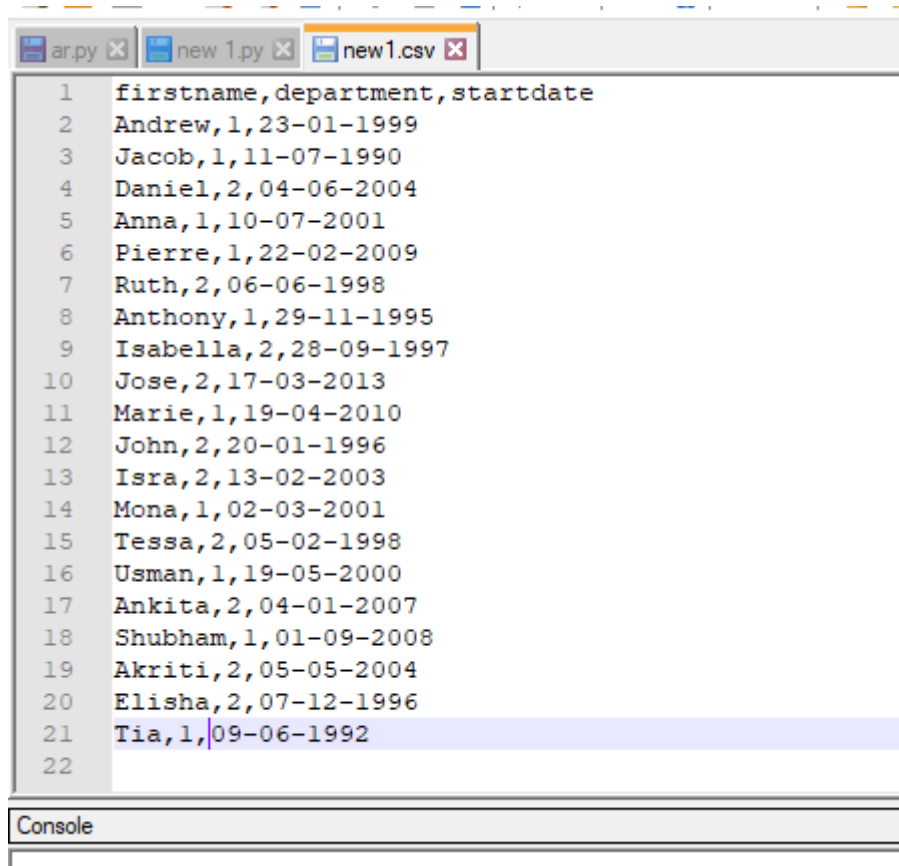


## Module 6----- Assignment

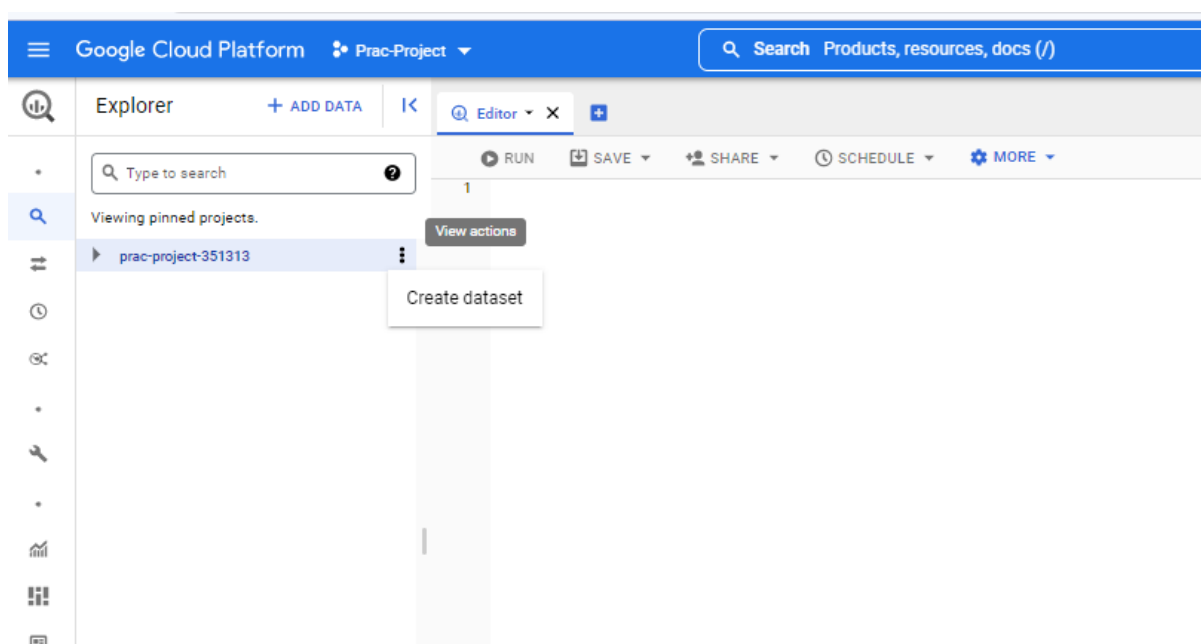
Create a CSV file with 20 records with dates ranging from 1999-2010.

Create a CSV file.



```
1  firstname,department,startdate
2  Andrew,1,23-01-1999
3  Jacob,1,11-07-1990
4  Daniel,2,04-06-2004
5  Anna,1,10-07-2001
6  Pierre,1,22-02-2009
7  Ruth,2,06-06-1998
8  Anthony,1,29-11-1995
9  Isabella,2,28-09-1997
10 Jose,2,17-03-2013
11 Marie,1,19-04-2010
12 John,2,20-01-1996
13 Isra,2,13-02-2003
14 Mona,1,02-03-2001
15 Tessa,2,05-02-1998
16 Usman,1,19-05-2000
17 Ankita,2,04-01-2007
18 Shubham,1,01-09-2008
19 Akriti,2,05-05-2004
20 Elisha,2,07-12-1996
21 Tia,1,09-06-1992
22
```

Go to Big Query and create a dataset.



Provide name, location and expiration date.

Create dataset

Project ID

prac-project-351313

CHANGE

Dataset ID \*

dataset2

Letters, numbers, and underscores allowed

Data location

us-central1 (Iowa)

Default table expiration

☒ Enable table expiration

Default maximum table age \*

2

Days

Advanced options

Encryption

☐ Use a customer-managed encryption key (CMEK)

CREATE DATASET

CANCEL

SEND FEEDBACK

DISMISS

BigQuery

FEATURES & INFO

SHORTCUT

ENABLE EDITOR TABS

Query history

Saved queries

Job history

Transfers

Scheduled queries

Monitoring

Capacity management

BI Engine

Resources

+ ADD DATA

Search for your tables and datasets

prac-project-351313

dataset2

Query editor

+ COMPOSE NEW QUERY

HIDE EDITOR

FULL SCREEN

1

Run Save query Save view Schedule query More

prac-project-351313:dataset2

CREATE TABLE

SHARE DATASET

AUTHORIZE ROUTINES

COPY DATASET

DELETE DATASET

Description

None

Labels

None

Dataset info

Dataset ID

Created

Default table expiration

Last modified

Data location

prac-project-351313:dataset2

Jun 3, 2022, 3:12:45 PM

2 days 0 hr

Jun 3, 2022, 3:12:45 PM

us-central1

Click on Dataset and create a table.

The screenshot shows the Google Cloud Platform console interface for a dataset named 'dataset2' in the project 'prac-project-351313'. The top navigation bar includes buttons for 'Run', 'Save query', 'Save view', 'Schedule query', and 'More'. Below the navigation bar, the dataset name 'prac-project-351313:dataset2' is displayed. A red circle highlights the 'CREATE TABLE' button, which is located next to the 'SHARE DATASET' button. Other buttons visible are 'AUTHORIZE ROUTINES', 'COPY DATASET', and 'DELETE DATASET'. The main content area shows the 'Description' and 'Labels' sections, both set to 'None'. Below these is the 'Dataset info' section, which displays the following details:

Dataset ID	prac-project-351313:dataset2
Created	Jun 3, 2022, 3:13:46 PM
Default table expiration	2 days 0 hr
Last modified	Jun 3, 2022, 3:13:46 PM
Data location	us-central1

Upload the excel file.

The 'Create table' dialog is shown with the following configuration:

- Source:** Create table from: Upload. Select file: new1.csv. File format: CSV.
- Destination:** Search for a project (selected). Enter a project name (disabled).
- Project name:** Prac-Project.
- Dataset name:** dataset2.
- Table type:** Native table.
- Table name:** Letters, numbers, and underscores allowed.
- Schema:** Auto detect. Schema and input parameters (unchecked). Edit as text (unchecked).
- Fields:**

Name	Type	Mode
firstname	STRING	NULLABLE
department	INTEGER	NULLABLE
startdate	DATE	NULLABLE
- Partition and cluster settings:** Partitioning: (empty). Partitioning filter: (empty).

## Partition and cluster settings

Partitioning: ?

No partitioning

Clustering order (optional): ?

Clustering order determines the sort order of the data. Clustering can be used on both partitioned and non-partitioned tables.

Comma-separated list of fields to define clustering order (up to 4)

## Advanced options ^

Write preference:

Write if empty

Number of errors allowed: ?

0

Unknown values: ?

☐ Ignore unknown values

Field delimiter: ?

Comma

Header rows to skip: ?

1

Quoted newlines: ?

☐ Allow quoted newlines

Jagged rows: ?

☐ Allow jagged rows

## Encryption

Data is encrypted automatically. Select an encryption key management solution.

☒ Google-managed key

No configuration required

☐ Customer-managed key

Manage via Google Cloud Key Management Service

Create table

Cancel

Table has been created.

BigQuery

Query history | Unsaved query | Edited | + COMPOSE NEW QUERY | HIDE EDITOR | FULL SCREEN

1 department

Run | Save query | Save view | Schedule query | More

Table43

QUERY TABLE | SHARE TABLE | COPY TABLE | DELETE TABLE | EXPORT

Schema | Details | Preview

Field name	Type	Mode	Policy tags	Description
firstname	STRING	NULLABLE		
department	INTEGER	NULLABLE		
startdate	STRING	NULLABLE		

Edit schema | View row access policies

Query history

Saved queries

Job history

Transfers

Scheduled queries

Monitoring

Capacity management

BI Engine

Resources

+ ADD DATA

Search for your tables and datasets

prac-project-351313

dataset2

Table43

1

Run

Save query

Save view

Schedule query

More

Table43

Schema

Details

Preview

Row	firstname	department	startdate
1	Andrew	1	23-01-1999
2	Jacob	1	11-07-1990
3	Anna	1	10-07-2001
4	Pierre	1	22-02-2009
5	Anthony	1	29-11-1995
6	Marie	1	19-04-2010
7	Mona	1	02-03-2001
8	Usman	1	19-05-2000
9	Shubham	1	01-09-2008
10	Tia	1	09-06-1992
11	Daniel	2	04-06-2004
12	Ruth	2	06-06-1998
13	Isabella	2	28-09-1997

Create a partition table.

Upload the CSV file and provide table name and field.

Create table

Source

Create table from

Upload

Select file \*

new1.csv

BROWSE

File format

CSV

Destination

Project \*

prac-project-351313

BROWSE

Dataset \*

dataset2

Table \*

Table43

Unicode letters, marks, numbers, connectors, dashes or spaces allowed.

Table type

Native table

Schema

☐ Auto detect

☒ Edit as text

CREATE TABLE

CANCEL

Partition it by start date.

Partition and cluster settings

Partitioning

startdate

Partitioning filter ?

☒ Require WHERE clause to query data

Partitioning type ?

☐ By day

☐ By hour

☐ By month

☒ By year

Clustering order

Clustering order determines the sort order of the data. Clustering can be used on both partitioned and non-partitioned tables.

Advanced options

Write preference

Write if empty

CREATE TABLE

CANCEL

Table has been creat5ed.

on menu

Explorer

+ ADD DATA


I<


🔍 Type to search

?

Viewing pinned projects.

▼ prac-project-351313

▼  dataset2

 Table43

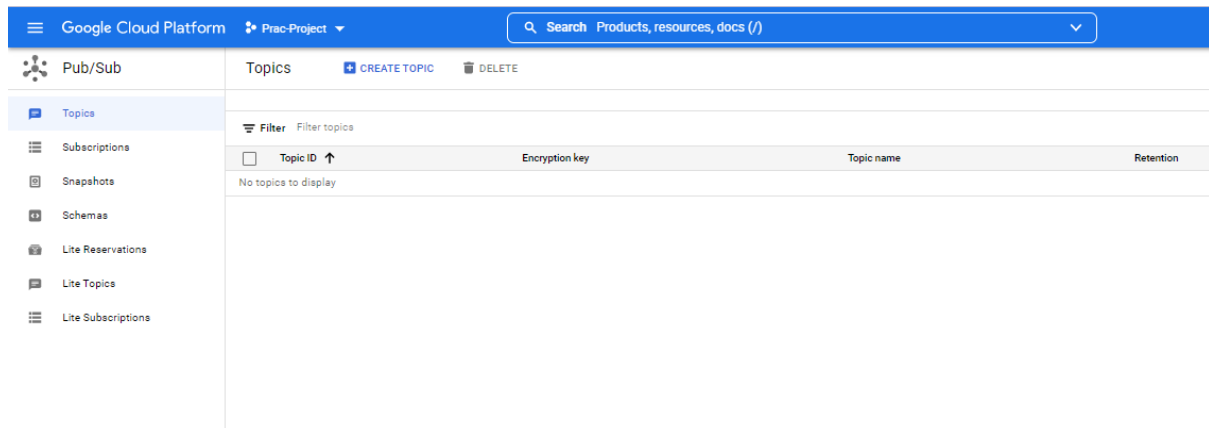
⋮

⋮

⋮

Create a Pub/Sub queue, publish 3 messages.

Go to Pub/Sub and create a Topic.



## Create a topic

A topic forwards messages from publishers to subscribers.

Topic ID \*

demopubsub



Topic name: projects/prac-project-351313/topics/demopubsub

- ☐ Add a default subscription ?
- ☐ Use a schema ?
- ☐ Set message retention duration (not free) ?

### Encryption

- ☒ Google-managed encryption key  
No configuration required
- ☐ Customer-managed encryption key (CMEK)  
Manage via Google Cloud Key Management Service

CANCEL

CREATE TOPIC

Pub/Sub successfully created.

← demopubsub

EDIT

+ TRIGGER CLOUD FUNCTION

IMPORT

DELETE

⚠ Messages published to this topic will be lost. [Add a subscription](#) or [set retention](#) to retain them.

❗ Export options have moved to the [Create subscription](#) dropdown menu under the Subscriptions tab below.

Topic name

projects/prac-project-351313/topics/demopubsub

Export to BigQuery

Create a Dataflow job to export data to a BigQuery table.

EXPORT TO BIGQUERY

Export to Cloud Storage

Create a Dataflow job to export data to a text or Avro file in Cloud Storage.

EXPORT TO TEXTEXPORT TO AVRO

SUBSCRIPTIONS

SNAPSHOTS

MESSAGES

METRICS

DETAILS

Only subscriptions attached to this topic are displayed. A subscription captures the stream of messages published to a given topic. You can also stream messages to BigQuery or Cloud Storage by creating a sub Dataflow job. [Learn more](#)

CREATE SUBSCRIPTION

Filter

Filter subscriptions

Subscription ID	Subscription name	Project

Message published is lost so we also need to create subscription.

← Add subscription to topic

A subscription directs messages on a topic to subscribers. Messages can be pushed to subscribers immediately, or subscribers can pull messages as needed.

Subscription ID \*

mysubscription

Subscription name: projects/prac-project-351313/subscriptions/mysubscription

Topic name

projects/prac-project-351313/topics/demopubsub

Delivery type

☒ Pull

☐ Push

Message retention duration

Duration is from 10 minutes to 7 days

Days

7

Hours

0

Minutes

0

☐ Retain acknowledged messages

When enabled, acknowledged messages are retained for the message retention duration specified above. This increases message storage fees. [Learn more](#)

Expiration period

☒ Expire after this many days of inactivity (up to 365)

31

Days

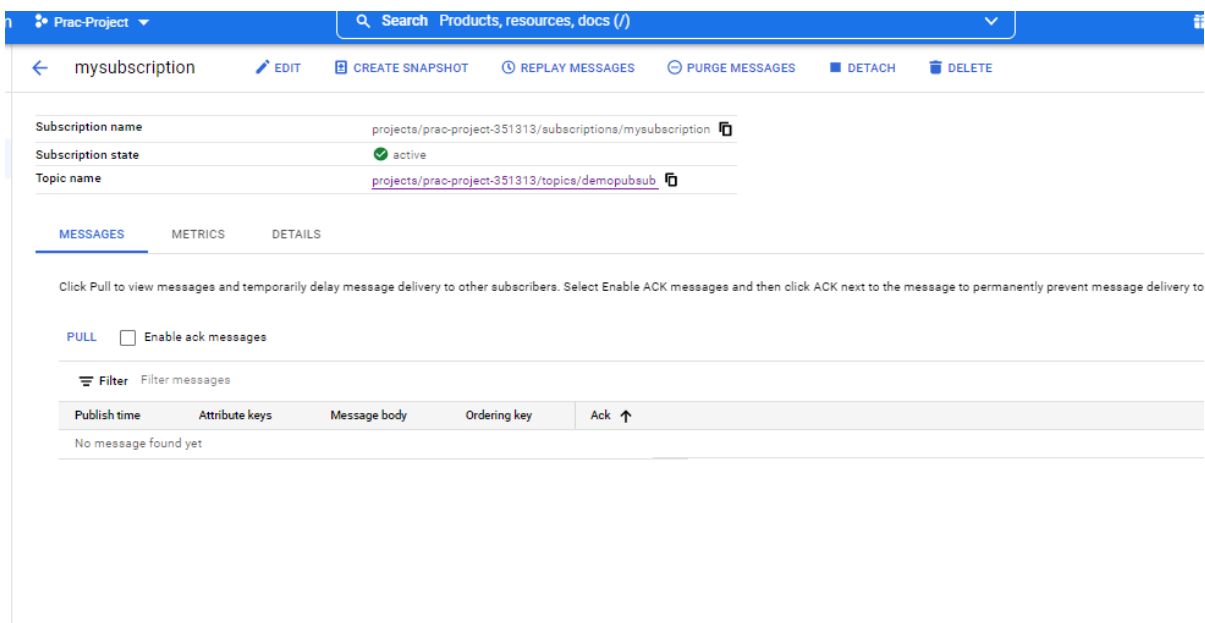
A subscription is inactive if there is no subscriber activity such as open connections, active pulls, or successful pushes.

☐ Never expire

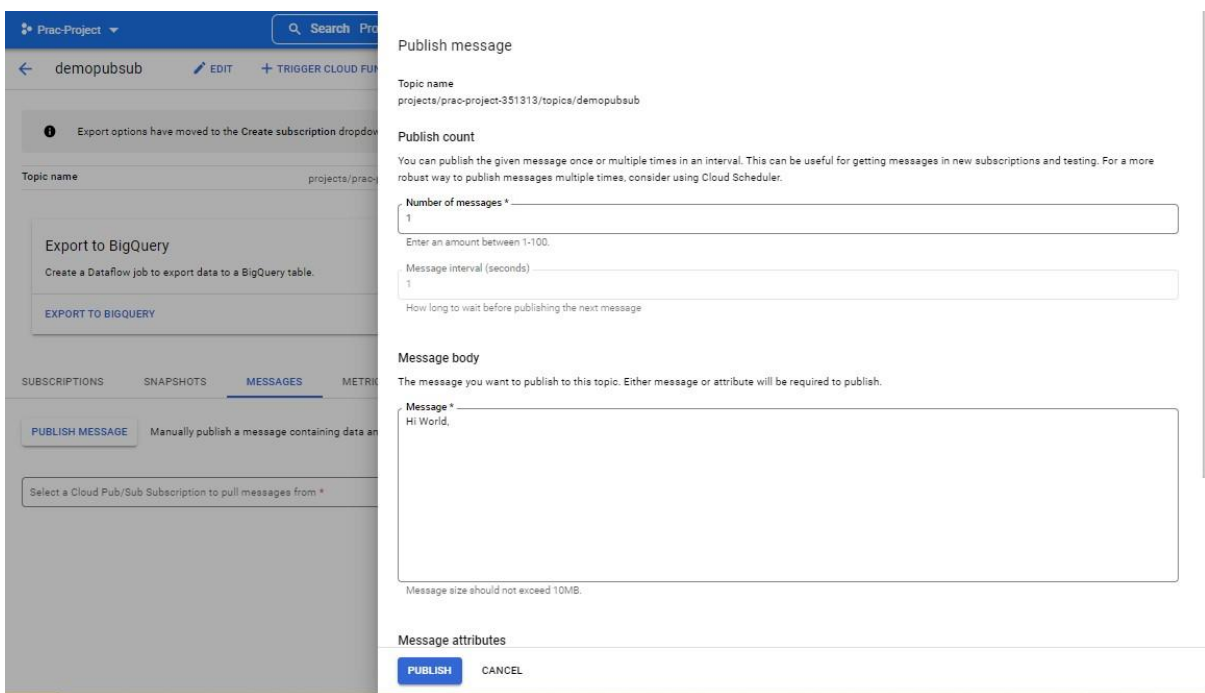
The subscription will never expire no matter the activity.



Subscription created.



Go to messages and publish 3 messages.



Message 2 and order 2.

Enter an amount between 1-100.

Message interval (seconds)

1

How long to wait before publishing the next message

### Message body

The message you want to publish to this topic. Either message or attribute will be required to publish.

Message \*

Good morning.

Message size should not exceed 10MB.

### Message attributes

At most 100 attributes per message, attribute key should not start with 'goog' and should not exceed 256 bytes, attribute value should not exceed 1024 bytes

+ ADD AN ATTRIBUTE

### Message ordering

For subscriptions with message ordering enabled, messages with the same ordering key are sent in the order in which they were published.

Ordering key (optional)

2

Must not be longer than 1024 characters.

PUBLISH

CANCEL

Message 3.

Enter an amount between 1-100.

Message interval (seconds)

1

How long to wait before publishing the next message

### Message body

The message you want to publish to this topic. Either message or attribute will be required to publish.

Message \*

have a nice day.

Message size should not exceed 10MB.

### Message attributes

At most 100 attributes per message, attribute key should not start with 'goog' and should not exceed 256 bytes, attribute value should not exceed 1024 bytes.

+ ADD AN ATTRIBUTE

### Message ordering

For subscriptions with message ordering enabled, messages with the same ordering key are sent in the order in which they were published.

Ordering key (optional)

3

Must not be longer than 1024 characters.

PUBLISH CANCEL

Consume the messages from the Cloudshell using auto acknowledge flag.

```

Terminal (prac-project-351313) x + v Open Editor
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to prac-project-351313.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
arpitacs0024@cloudshell:~ (prac-project-351313) $ gcloud pubsub subscriptions pull mysubscription --auto-ack
Listed 0 items.
arpitacs0024@cloudshell:~ (prac-project-351313) $ gcloud pubsub subscriptions pull mysubscription --auto-ack
DATA: Hi World,
MESSAGE ID: 4836711983581247
ORDERING KEY:
ATTRIBUTES:
DELIVERY ATTEMPT:
arpitacs0024@cloudshell:~ (prac-project-351313) $ gcloud pubsub subscriptions pull mysubscription --auto-ack
DATA: Good morning.
MESSAGE ID: 4836713689850896
ORDERING KEY: 2
ATTRIBUTES:
DELIVERY ATTEMPT:
arpitacs0024@cloudshell:~ (prac-project-351313) $ gcloud pubsub subscriptions pull mysubscription --auto-ack
DATA: have a nice day.
MESSAGE ID: 4836610933456515
ORDERING KEY: 3
ATTRIBUTES:
DELIVERY ATTEMPT:
arpitacs0024@cloudshell:~ (prac-project-351313) $ 

```

#### Destination

☒ Search for a project ☐ Enter a project name

Project name

Prac-Project

Dataset name

dataset2

Table type <sup>?</sup>

Native table

Table name

Table43pt

#### Schema

Auto detect

☐ Schema and input parameters

☐ Edit as text

Name	Type	Mode	
firstname	STRING	NULLABLE	×
department	INTEGER	NULLABLE	×
startdate	DATE	NULLABLE	×
<a href="#">+ Add field</a>			

#### Partition and cluster settings

Partitioning: <sup>?</sup>

startdate

Partitioning filter: <sup>?</sup>

☐ Require partition filter

Partitioning type: <sup>?</sup>

- ☐ By day  
☐ By month  
☒ By year

Clustering order (optional): <sup>?</sup>

Clustering order determines the sort order of the data. Clustering can be used on both

Create table

Cancel