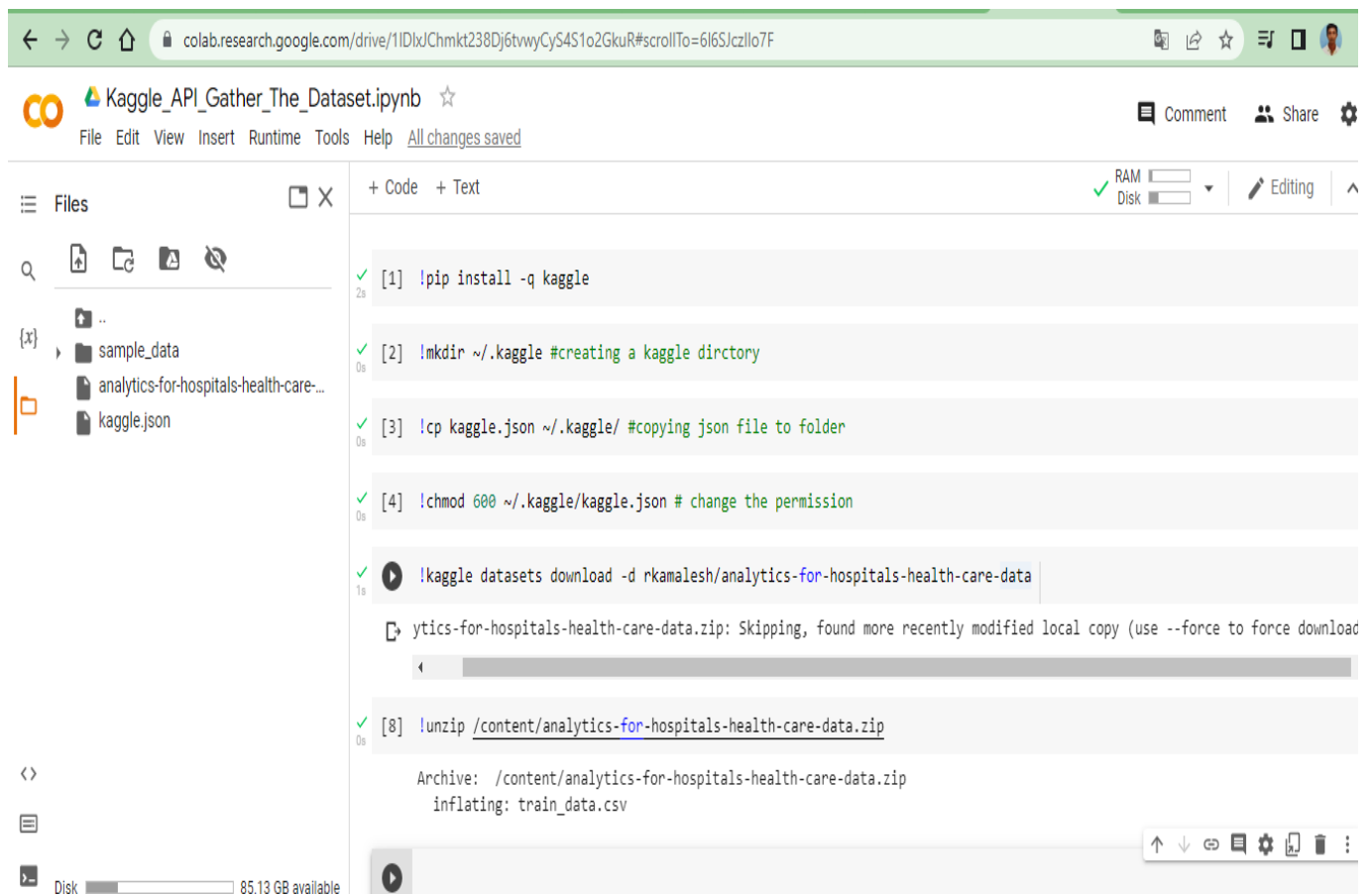


Sprint Delivery Plan I

Date	28 October 2022
Team ID	PNT2022TMID40524
Project Name	Project – Analytics for Hospitals Health Care Data

Fetch data from external API (Kaggle API). (Ipynb file):



The screenshot displays a Google Colab notebook interface. The browser address bar shows the URL: `colab.research.google.com/drive/1IDlxChmkt238Dj6twvyCyS4S1o2GkuR#scrollTo=616SJczllo7F`. The notebook title is `Kaggle_API_Gather_The_Dataset.ipynb`. The left sidebar shows a file explorer with a folder named `sample_data` containing files `analytics-for-hospitals-health-care...` and `kaggle.json`. The main area shows a series of terminal commands executed in a Jupyter notebook cell:

```
[1] !pip install -q kaggle
[2] !mkdir ~/.kaggle #creating a kaggle directory
[3] !cp kaggle.json ~/.kaggle/ #copying json file to folder
[4] !chmod 600 ~/.kaggle/kaggle.json # change the permission
[5] !kaggle datasets download -d rkmalesh/analytics-for-hospitals-health-care-data
[6] ytics-for-hospitals-health-care-data.zip: Skipping, found more recently modified local copy (use --force to force download
[7] 
[8] !unzip /content/analytics-for-hospitals-health-care-data.zip
Archive: /content/analytics-for-hospitals-health-care-data.zip
inflating: train_data.csv
```

The output of the commands shows the successful installation of kaggle, the creation of the `~/.kaggle` directory, the copying of `kaggle.json`, the change of permissions, and the downloading of the dataset `analytics-for-hospitals-health-care-data.zip`. The output also shows that the dataset was skipped due to a local copy and then unzipped into `train_data.csv`.

←

→

↺

🏠

kaggle.com/datasets/rkamalesh/analytics-for-hospitals-health-care-data

🔍

Search

👤

📄

☆

☰

🖨

👤

≡

kaggle

+

Create

🏠

Home

🏆

Competitions

📁

Datasets

🔗

Code

💬

Discussions

🎓

Learn

✓

More

📁

Your Work

▼

RECENTLY VIEWED

📁

Analytics for hospita...

📁

View Active Events

👤

R KAMALESH · UPDATED 3 MINUTES AGO · PRIVATE

▲ 0

New Notebook

Download (5 MB)

⋮

Analytics for hospitals health care data

Add a subtitle [Edit](#)

Data

Code (0)

Discussion (0)

Settings

Pending Actions

USABILITY SCORE: 1.18

Add a subtitle

Stand out on the listings page with a snappy subtitle

Add tags

Make it easy for users to find your dataset in search

Add a description

Share specifics about the context, sources, and inspiration behind your...

Upload an image

Make your dataset pop with an eye-catching cover image and thumbnail

🔍

Search

Analytics for hospitals health care data

▲ 0

New Notebook

Download (5 MB)

⋮

Data

Code (0)

Discussion (0)

Settings

train_data.csv (26.92 MB)

Detail

Compact

Column

10 of 18 columns ▼

About this file

This file does not have a description yet.

case_id	Hospital_code	Hospital_type_co...	City_Code_Hospital	H
1	8	a	1	X
2	2	b	5	Y
3	10	c	1	X
4	26	e	2	Y

📄

🔍

➡

Data Explorer

Version 1 (26.92 MB)

train_data.csv

←

→

↺

🏠

kaggle.com/datasets/rkamalesh/analytics-for-hospitals-health-care-data

🔍

Search

👤

📄

☆

☰

🖨

👤

≡

kaggle

+

Create

🏠

Home

🏆

Competitions

📁

Datasets

🔗

Code

💬

Discussions

🎓

Learn

✓

More

📁

Your Work

▼

RECENTLY VIEWED

📁

Analytics for hospita...

📁

View Active Events

👤

R KAMALESH · UPDATED 3 MINUTES AGO · PRIVATE

▲ 0

New Notebook

Download (5 MB)

⋮

Analytics for hospitals health care data

Add a subtitle [Edit](#)

Data

Code (0)

Discussion (0)

Settings

train_data.csv (26.92 MB)

Detail

Compact

Column

10 of 18 columns ▼

About this file

This file does not have a description yet.

case_id	Hospital_code	Hospital_type_co...	City_Code_Hospital	H
1	8	a	1	X
2	2	b	5	Y
3	10	c	1	X
4	26	e	2	Y

📄

🔍

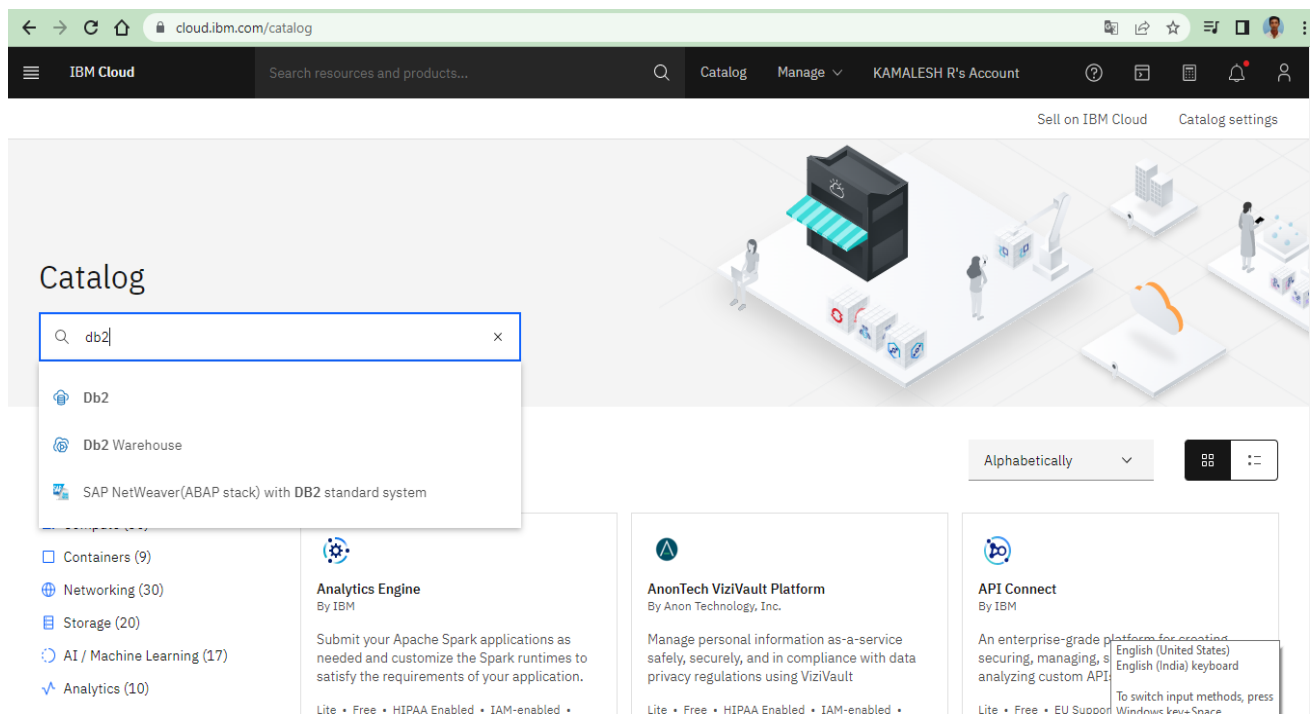
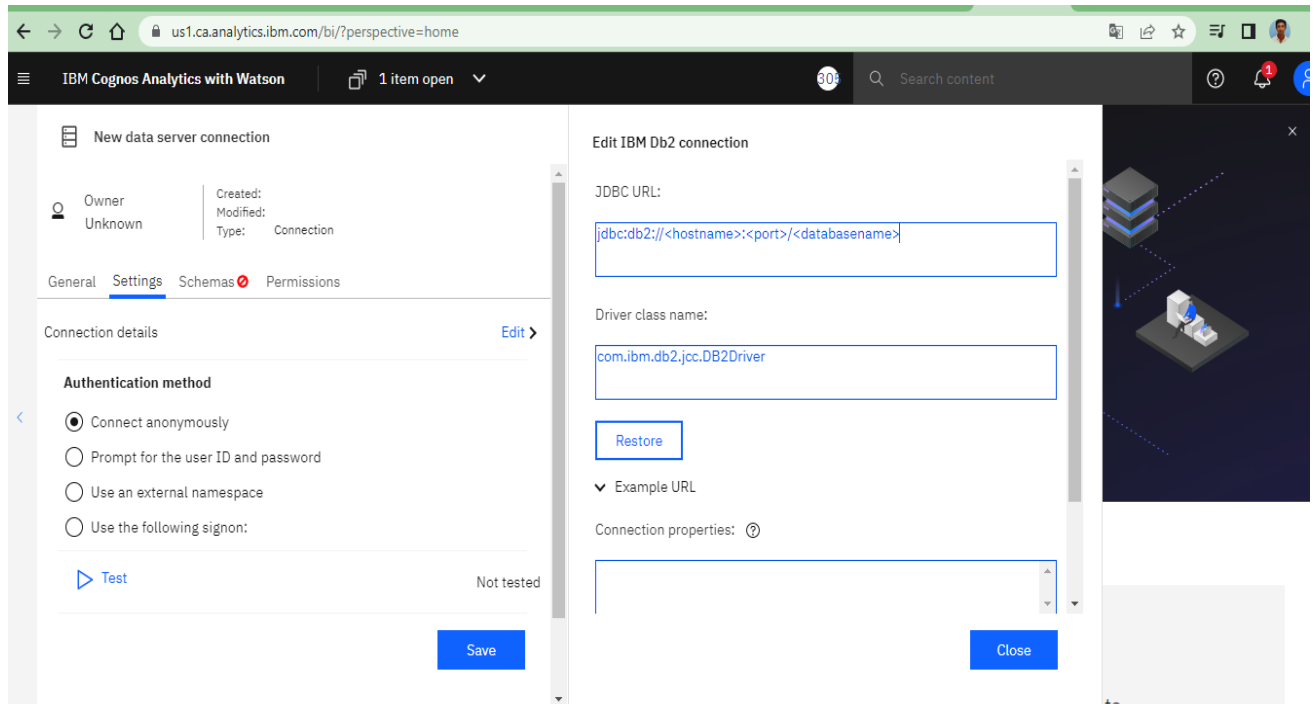
➡

Data Explorer

Version 1 (26.92 MB)

train_data.csv

IBM DB2 service creation and DB2 connectivity with Cognos. (Pdf file)



cloud.ibm.com/resources

IBM Cloud

Search resources and products...

Q

Catalog

Manage

KAMALESH R's Account

?

Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...					
Filter by group or org...					
Filter...					
Q Filter...					
Q Filter...					
Filter...					
Compute (0)					
Containers (0)					
Networking (0)					
Storage (0)					
AI / Machine Learning (0)					
Analytics (0)					
Blockchain (0)					
Databases (1)					
Db2-h6	Default	Dallas	Db2	Active	-
Developer tools (0)					
Logging and monitoring (0)					

Mail

cloud.ibm.com/services/dashdb-for-transactions/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F2ed4428a6af94d5...

IBM Cloud

Search resources and products...

Q

Catalog

Manage

KAMALESH R's Account

?

Resource list /

Db2-h6

Active

Add tags

Details

Actions...

Manage

Getting started

Service credentials

Connections

Service credentials

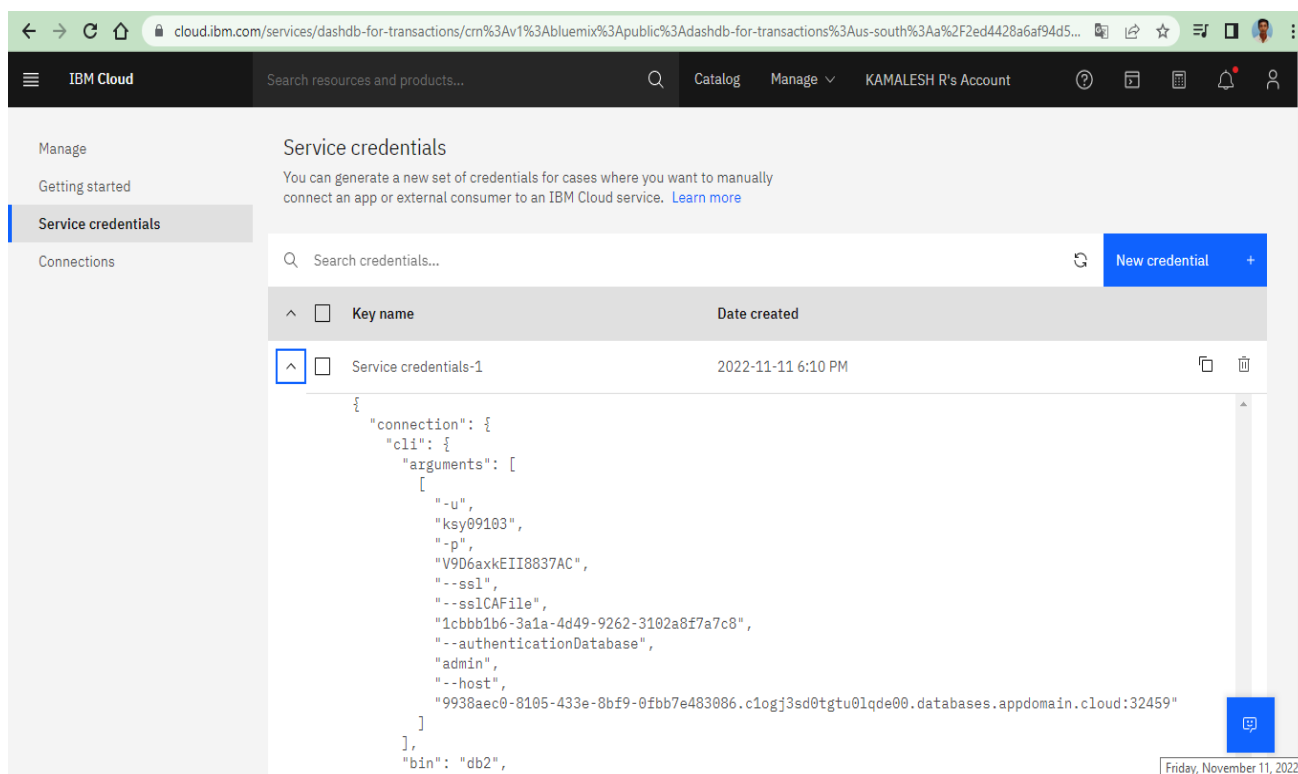
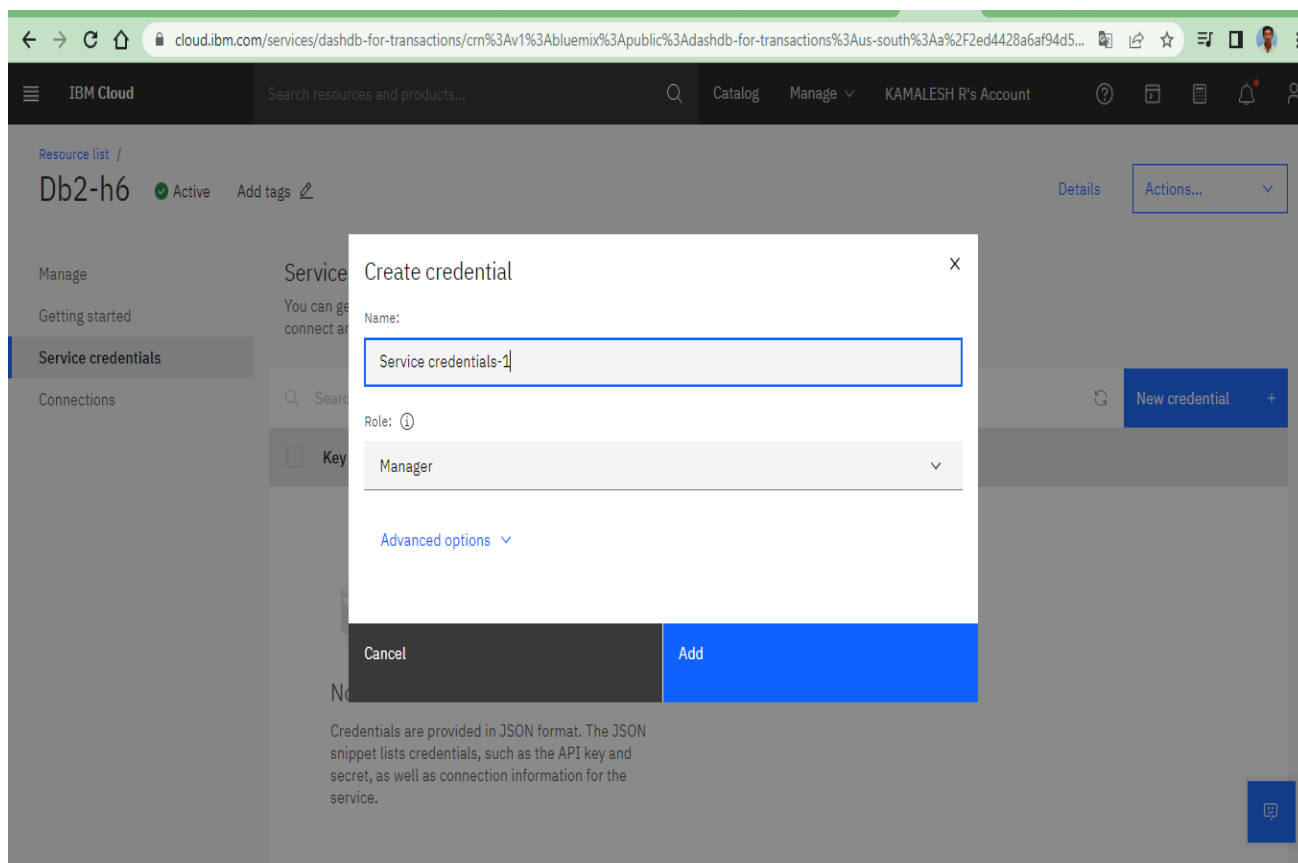
You can generate a new set of credentials for cases where you want to manually connect an app or external consumer to an IBM Cloud service. [Learn more](#)

Search credentials...

New credential +

Key name	Date created
<div><div></div><div>No service credentials</div><div>Credentials are provided in JSON format. The JSON snippet lists credentials, such as the API key and secret, as well as connection information for the service.</div></div>	

Mail



us1.ca.analytics.ibm.com/bi/?perspective=home

IBM Cognos Analytics with Watson 1 item open

New data server connection

Owner: Unknown
Created: Modified: Type: Connection

General Settings Schemas Permissions

Connection details Edit

Authentication method

- ☒ Connect anonymously
- ☐ Prompt for the user ID and password
- ☐ Use an external namespace
- ☐ Use the following signon:

Test Not tested

Save

Edit IBM Db2 connection

JDBC URL:

```
jdbc:db2://9938aec0-8105-433e-8bf9-0fbb7e483086.c1o.g3sd0tgu0lqde00.databases.appdomain.cloud:32459/bludb:user=ksy09103;password=V9D6axkEII8837AC;sslConnecton=true
```

Driver class name:

```
com.ibm.db2.jcc.DB2Driver
```

Restore

Example URL

Connection properties:

Cloud certificate details

Close

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/cm%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F2ed4428a6af94d5d...

IBM Db2 on Cloud

Overview In-flight executions Connections Table performance

Resource usage

Last 1 hour

Storage (0M / 0M)
current value

Storage usage (%)

Time

05:20 PM 05:40 PM 06:00 PM 06:20 PM

us1.ca.analytics.ibm.com/bi/?perspective=home

IBM Cognos Analytics with Watson 1 item open

Analytics for Hospi ... H ... Care data test

Owner: KAMAL ... 12602 Created: 11/11/2022, 6:47 AM Modified: 11/11/2022, 6:47 AM Type: Data Server

General Connections Permissions

Name	Modified
Analytics for H ... data test	11/11/2022 6:59 AM

Analytics for Hospitals Health Care data test

Owner: KAMAL ... 12602 Created: 11/11/2022, 6:47 AM Modified: 11/11/2022, 6:59 AM Type: Connection

General Settings Schemas Permissions

Connection details Edit >

Authentication method

☒ Connect anonymously

☐ Prompt for the user ID and password

☐ Use an external namespace

☐ Use the following signon:

Test Success

Save

Present data

Create sophisticated, multi-page, multi-query

bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F2ed4428a6af94d5d...

IBM Db2 on Cloud

Load Data Load History Tables Views Indexes Aliases MQTs Sequences Application objects

Source Target Define Finalize

You are loading the file **train_data.csv**

My Computer

A single delimited text file (CSV) without header row.

Amazon S3

Cloud Object Storage

File selection

Selected file

train_data.csv

Drag a file here or browse files

Next

← → ↻ 🏠 🔒 bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F2ed4428a6af94d5d...

IBM Db2 on Cloud 🔔 👤

☰ Load Data Load History Tables Views Indexes Aliases MQTs Sequences Application objects

🔗 SQL 📁 📌

🔍 Source 🔍 Target 🔍 Define 🔍 Finalize

You are loading the file **train_data.csv** into **KSY09103.HEALTHCARE_DATA**

Select a load target

Refresh ↻

Schema

🔍 Find schemas

KSY09103 ✓

Table

New table +

🔍 Find tables in KSY09103

HEALTHCARE_DATA ✓

Back Next

← → ↻ 🏠 🔒 bpe61bfd0365e9u4psdglite.db2.cloud.ibm.com/crn%3Av1%3Abluemix%3Apublic%3Adashdb-for-transactions%3Aus-south%3Aa%2F2ed4428a6af94d5d...

IBM Db2 on Cloud 🔔 👤

☰ Load Data Load History Tables Views Indexes Aliases MQTs Sequences Application objects

🔗 SQL 📁 📌

🔍 Source 🔍 Target 🔍 Define 🔍 Finalize

You are loading the file **train_data.csv** into **KSY09103.HEALTHCARE_DATA**

Code page (character encoding): 1208 (UTF-8) 🔍 Separator: , Header in first row: ☒ Time & date format: 🔍 Detect data types: ☐ 🔍

	CASE_ID SMALLINT	HOSPITAL_CODE SMALLINT	HOSPITAL_TYPE_CODE VARCHAR(1)	CITY_CODE_HOSPITAL SMALLINT	HOSPITAL_REGION_CODE VARCHAR(1)	AVAILABLE_EXTRA_ROOMS_IN SMALLINT
1	1	8	c	3	Z	3
2	2	2	c	5	Z	2
3	3	10	e	1	X	2
4	4	26	b	2	Y	2
5	5	26	b	2	Y	2
6	6	23	a	6	X	2
7	7	32	f	9	Y	1
8	8	23	a	6	X	4
9	9	1	d	10	V	?

Back Next

IBM Db2 on Cloud

Load Data

Load History

Tables

Views

Indexes

Aliases

MQTs

Sequences

Application objects

Source

Target

Define

Finalize

You are loading the file **train_data.csv** into **KSY09103.HEALTHCARE_DATA**

Review settings

Summary

Code page:

1208 (Default)

Separator:

, (Default)

Time format:

HH:MM:SS (Default)

Date format:

YYYY-MM-DD (Default)

Timestamp format:

YYYY-MM-DD HH:MM:SS (Default)

String delimiter:

(Default)

Option

Maximum number of warnings

1000

Back

Begin Load

us1.ca.analytics.ibm.com/bi/?perspective=home

IBM Cognos Analytics with Watson

1 item open

Search content

Analytics for Hospi ... H ... Care data test

Owner

KAMAL ... 12602

Created:

11/11/2022, 6:47 AM

Modified:

11/11/2022, 6:47 AM

Type:

Data Server

General

Connections

Permissions

Name

Modified

Analytics for H ... data test

11/11/2022 7:01 AM

Analytics for Hospitals Health Care data test

Owner

KAMAL ... 12602

Created:

11/11/2022, 6:47 AM

Modified:

11/11/2022, 7:01 AM

Type:

Connection

General

Settings

Schemas

Permissions

Status

Schema name

Tables loaded

☐

IBM_RTMON_BASELINE

☐

IBM_RTMON_DATA

☐

IBM_RTMON_EVMON

☐

IBM_RTMON_METADATA

☒

KSY09103

2 / 2

☐

PROCMGMT

☐

ST_INFORMTN_SCHEMA

Show system schemas

Present data

Create sophisticated, multi-node, multi-query

Importing Data Sets of Analytics for Hospitals Health Care Data Using Cognos Analysis:

USN-1:

- As a User I can enter the details of the patients working in our organization of the details.
- Uploading the dataset of test_data.csv and train_data.csv file to IBM Cognos Analytics.

The screenshot displays the IBM Cognos Analytics web interface. The browser address bar shows the URL: `us1.ca.analytics.ibm.com/bi/?perspective=content&tab=myContent&folder=IFC24D3F5F94644C0924C7A711ED71C33`. The page header includes the text "IBM Cognos Analytics with Watson", a "Content" dropdown menu, a search bar labeled "Search content", and a user profile icon. The main content area is titled "Hospitals health care" and features a "New +" button. Below the title, there are tabs for "My content", "Team content", and "Samples". The "My content" tab is selected, showing a breadcrumb path: "My content / Hospitals health care". A table lists the contents of the folder:

<input type="checkbox"/>	Name	Type	Last Accessed	
<input type="checkbox"/>	Test_data module	Data module	30/10/2022, 8:59 AM	
<input type="checkbox"/>	test_data.csv CSV	Uploaded file	30/10/2022, 3:39 AM	
<input type="checkbox"/>	train_data.csv CSV	Uploaded file	30/10/2022, 3:12 AM	

us1.ca.analytics.ibm.com/bi/?perspective=content&tab=myContent&folder=iFC24D3F5F94644C0924C7A711ED71C33

IBM Cognos Analytics with Watson

Content

Search content

Hospitals health care

My content Team content Samples

My content / Hospitals health care

Name	Type	Last Accessed
train_data.csv CSV	Uploaded file	30/10/2022, 3:12 AM

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=957208312_2fcadee017a1436c8180c1d480b8ce25_sessionTemp&objRef=&tid=957208312_2fcade...

IBM Cognos Analytics with Watson

* New data module

Search content

Properties

Data module

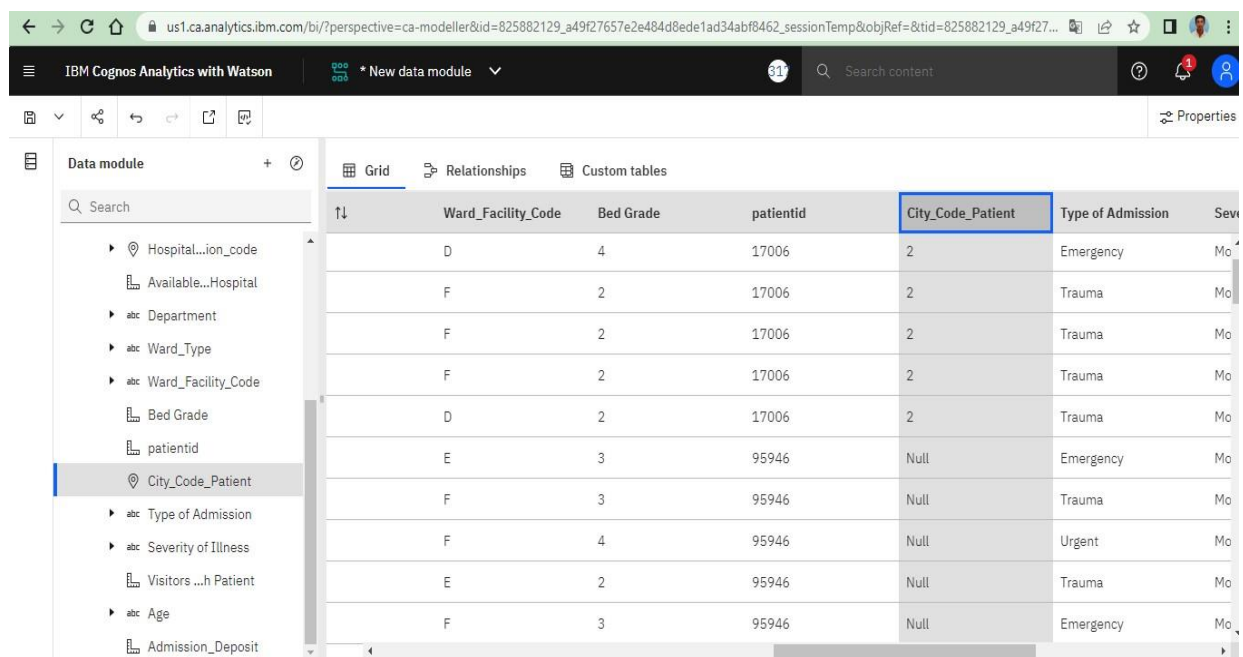
Grid Relationships Custom tables

case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Av
1	8	c	3	Z	3
2	2	c	5	Z	2
3	10	e	1	X	2
4	26	b	2	Y	2
5	26	b	2	Y	2
6	23	a	6	X	2
7	32	f	9	Y	1
8	23	a	6	X	4
9	1	d	10	Y	2
10	10	e	1	X	2

Data Cleaning and Data Processing using Cognos Analytics:

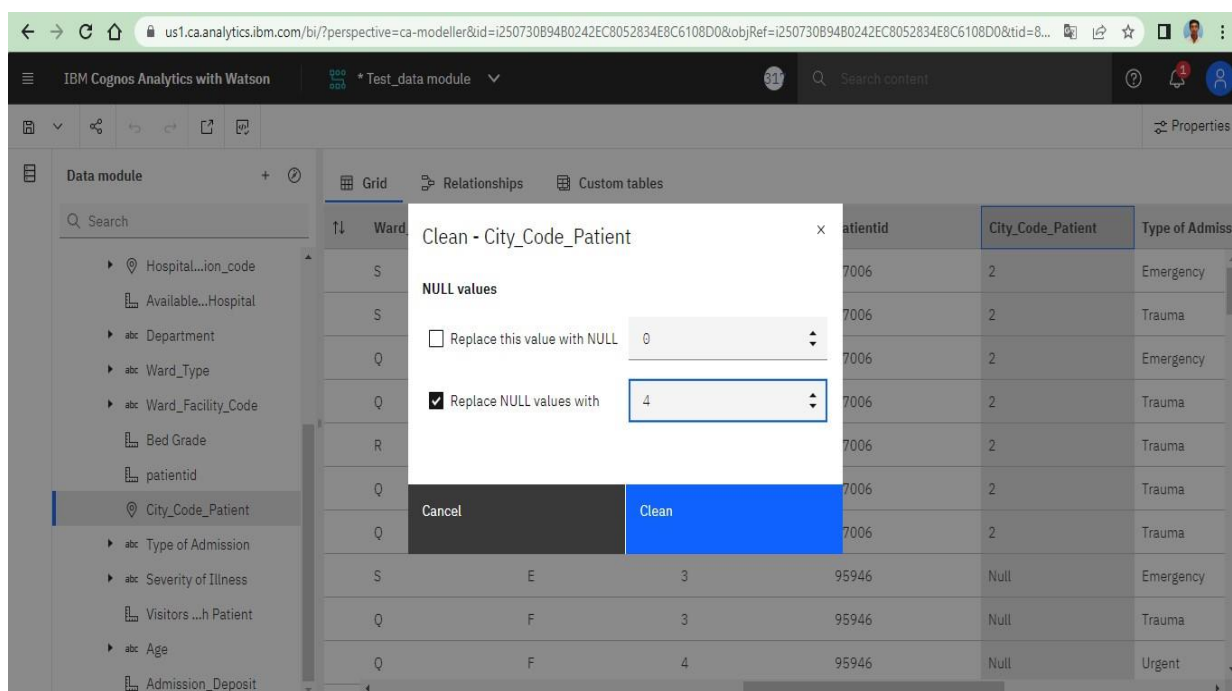
USN-2:

- As an Analyst, I will check the data set and clean the dataset to create an efficient model.
- To Data cleaning the null values in test_data.csv dataset first.



The screenshot shows the IBM Cognos Analytics interface. On the left, a 'Data module' pane lists various fields, with 'City_Code_Patient' selected. The main area displays a table with columns: Ward_Facility_Code, Bed Grade, patientid, City_Code_Patient, Type of Admission, and Severity. The table contains 10 rows of data. The 'City_Code_Patient' column has values 2, 2, 2, 2, 2, Null, Null, Null, Null, and Null.

Ward_Facility_Code	Bed Grade	patientid	City_Code_Patient	Type of Admission	Severity
D	4	17006	2	Emergency	Mo
F	2	17006	2	Trauma	Mo
F	2	17006	2	Trauma	Mo
F	2	17006	2	Trauma	Mo
D	2	17006	2	Trauma	Mo
E	3	95946	Null	Emergency	Mo
F	3	95946	Null	Trauma	Mo
F	4	95946	Null	Urgent	Mo
E	2	95946	Null	Trauma	Mo
F	3	95946	Null	Emergency	Mo



The screenshot shows the same IBM Cognos Analytics interface, but with a 'Clean - City_Code_Patient' dialog box open. The dialog box has a title bar 'Clean - City_Code_Patient' and a close button 'x'. It contains a section 'NULL values' with two options: 'Replace this value with NULL' (unchecked) and 'Replace NULL values with' (checked). The 'Replace NULL values with' option has a dropdown menu showing the value '4'. There are 'Cancel' and 'Clean' buttons at the bottom of the dialog box. The background table is dimmed.

Ward_Facility_Code	Bed Grade	patientid	City_Code_Patient	Type of Admission	Severity
S		7006	2	Emergency	
S		7006	2	Trauma	
Q		7006	2	Emergency	
Q		7006	2	Trauma	
R		7006	2	Trauma	
Q		7006	2	Trauma	
Q		7006	2	Trauma	
Q		7006	2	Trauma	
S	E	3	95946	Null	Emergency
Q	F	3	95946	Null	Trauma
Q	F	4	95946	Null	Urgent

The screenshot shows the IBM Cognos Analytics interface. On the left, the 'Data module' pane lists various fields: Hospital...ion_code, Available...Hospital, Department, Ward_Type, Ward_Facility_Code, Bed Grade, patientid, City_Code_Patient, Type of Admission, Severity of Illness, Visitors ...h Patient, Age, and Admission_Deposit. The 'City_Code_Patient' field is selected. The main grid view displays the following data:

ient	Ward_Type	Ward_Facility_Code	Bed Grade	patientid	City_Code_Patient
QY	Q	F	2	17006	2
QY	R	F	2	17006	2
QY	Q	F	2	17006	2
QY	Q	D	2	17006	2
QY	S	E	3	95946	4
QY	Q	F	3	95946	4
QY	Q	F	4	95946	4
QY	Q	E	2	95946	4
QY	R	F	3	95946	4
QY	R	A	3	95946	4

- To Data cleaning the null values in train_data.csv dataset.

The screenshot shows the IBM Cognos Analytics interface with a 'Clean - City_Code_Patient' dialog box open. The dialog box has a 'NULL values' section with two options: 'Replace this value with NULL' (unchecked) and 'Replace NULL values with' (checked). The value '7' is entered in the input field next to the checked option. The background shows a grid view of patient data with columns: Type of Admission, Severity of Illness, and Visitors wi.

Type of Admission	Severity of Illness	Visitors wi
Emergency	Extreme	2
Trauma	Extreme	2
Trauma	Extreme	2
Trauma	Extreme	2
Trauma	Extreme	2
Trauma	Extreme	2
Emergency	Extreme	2
Trauma	Extreme	2
Trauma	Extreme	2
Trauma	Extreme	2

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=957208312_2fcadee017a1436c8180c1d480b8ce25_sessionTemp&objRef=&tid=957208312_2fcade...

IBM Cognos Analytics with Watson

Data module

Search

- Available...Hospital
- abc Department
- abc Ward_Type
- abc Ward_Facility_Code
- Bed Grade
- patientid
- City_Code_Patient
- abc Type of Admission
- abc Severity of Illness
- Visitors ...h Patient
- abc Age
- Admission_Deposit
- abc Stay

Whitespace

☐ Trim leading and trailing whitespace

Convert case to

☐ UPPERCASE ☐ lowercase ☒ Do not change

Return a substring of characters

Start Length

Preview

This is a preview

NULL values

☐ Replace this value with NULL

☒ Replace NULL values with

Cancel Clean

ent	Age	Admission_Deposit
51-60		4911
51-60		5954
51-60		4745
51-60		7272
51-60		5558
51-60		4449
51-60		6167
51-60		5571
51-60		7223
51-60		6056

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=957208312_2fcadee017a1436c8180c1d480b8ce25_sessionTemp&objRef=&tid=957208312_2fcade...

IBM Cognos Analytics with Watson

* New data module

Search content

Properties

Data module

Search

New data module

- Navigation paths
- train_data.csv
 - # Row Id
 - # case_id
 - # Hospital_code
 - abc Hospital...ype_code
 - City_Code_Hospital
 - Hospital...ion_code
 - Available...Hospital
 - abc Department
 - abc Ward_Type
 - abc Ward_Facility_Code

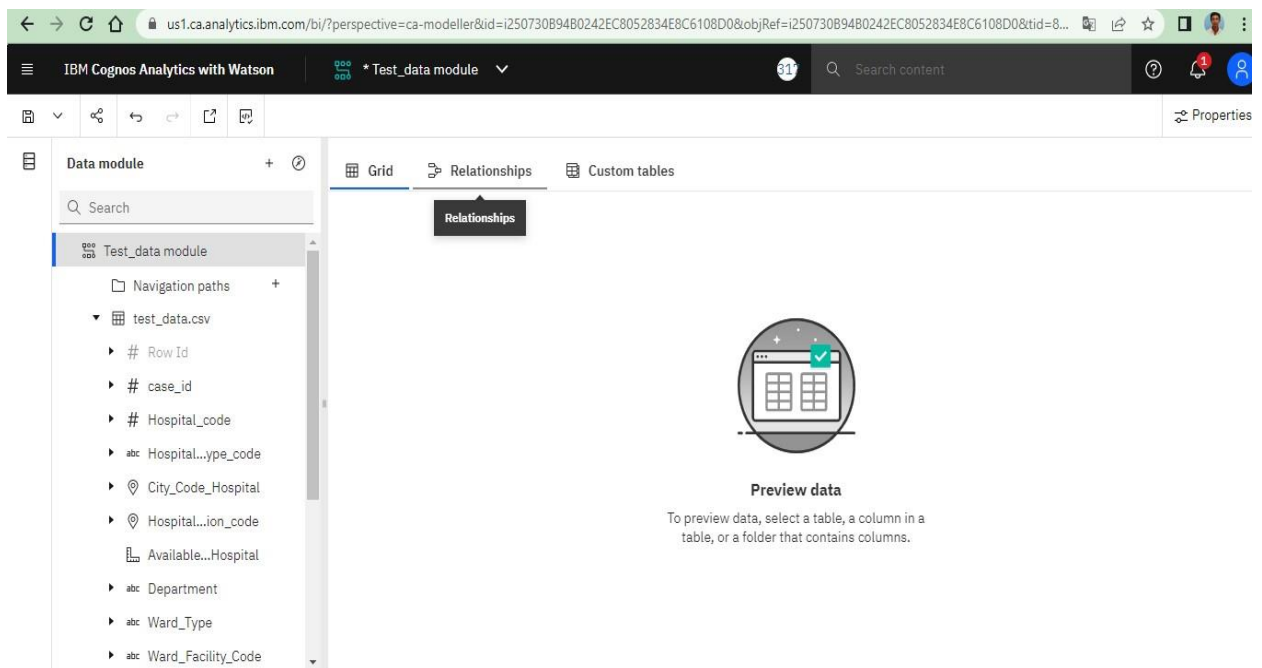
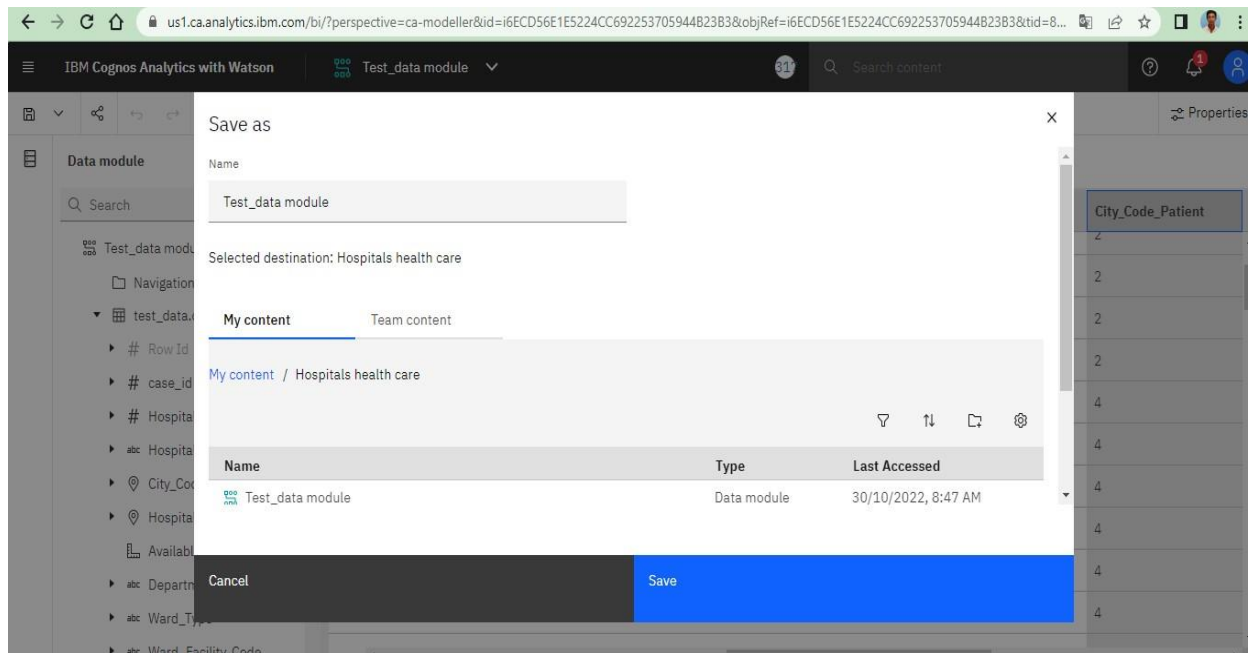
Grid Relationships Custom tables

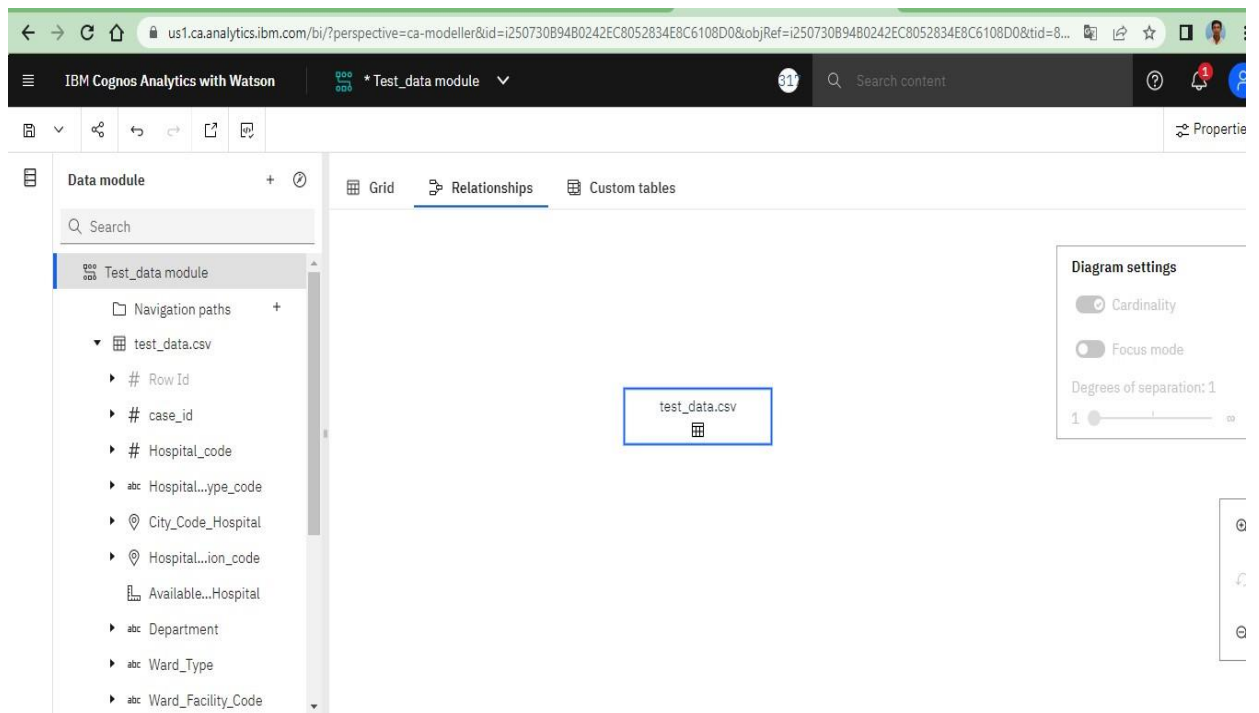
↑↓	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Av
1	8	c	3	Z	3	
2	2	c	5	Z	2	
3	10	e	1	X	2	
4	26	b	2	Y	2	
5	26	b	2	Y	2	
6	23	a	6	X	2	
7	32	f	9	Y	1	
8	23	a	6	X	4	
9	1	d	10	Y	2	
10	10	e	1	X	2	

Creating The Data Module using Cognos Analytics:

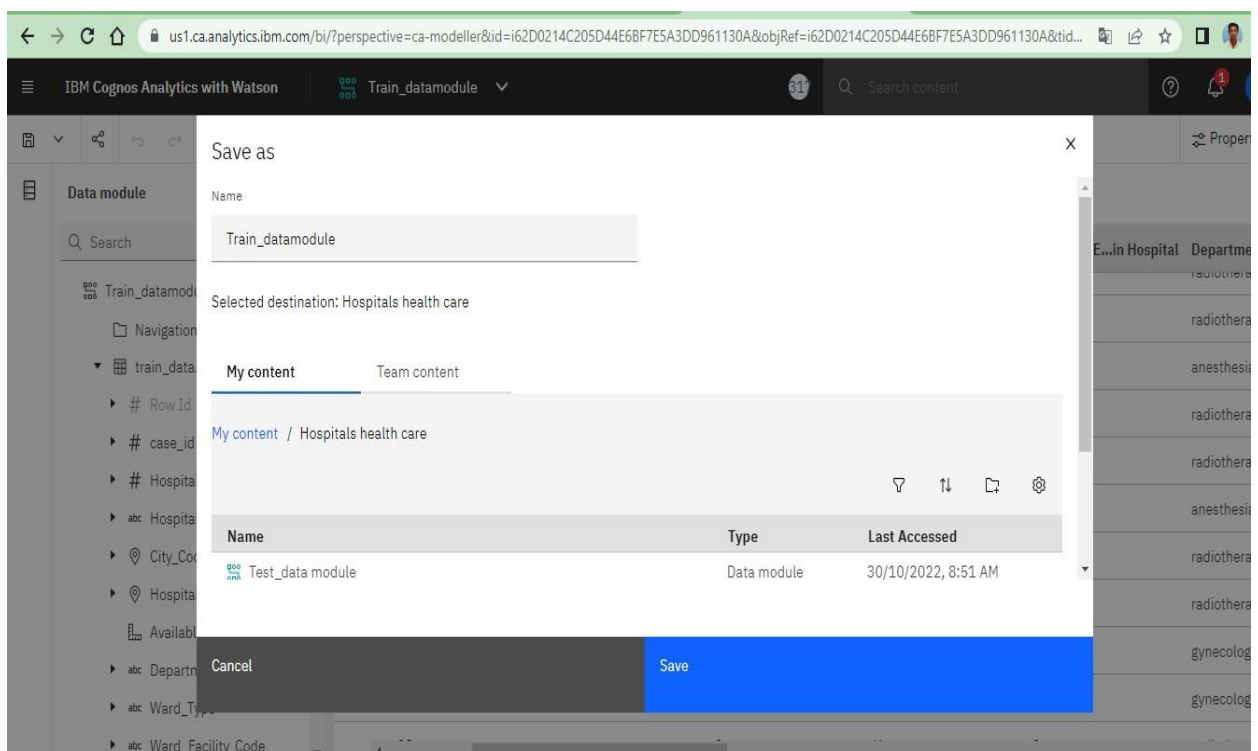
USN-3:

- As an Analyst I will also correct the raw data and create a data module.
- I will Create the data module using test_data.csv dataset first.





- Then I will Create the data module using train_data.csv dataset.



us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=i62D0214C205D44E6BF7E5A3DD961130A&objRef=i62D0214C205D44E6BF7E5A3DD961130A&tid...

IBM Cognos Analytics with Watson Train_datamodule 317 Search content


Data module +

Search

Train_datamodule

- Navigation paths +
 - train_data.csv
 - # Row Id
 - # case_id
 - # Hospital_code
 - abc Hospital...ype_code
 - City_Code_Hospital
 - Hospital...ion_code
 - Available...Hospital
 - abc Department
 - abc Ward_Type
 - abc Ward_Facility_Code

Grid Relationships Custom tables



Preview data

To preview data, select a table, a column in a table, or a folder that contains columns.

us1.ca.analytics.ibm.com/bi/?perspective=ca-modeller&id=i62D0214C205D44E6BF7E5A3DD961130A&objRef=i62D0214C205D44E6BF7E5A3DD961130A&tid...

IBM Cognos Analytics with Watson Train_datamodule 317 Search content

Data module +

Search

Train_datamodule

- Navigation paths +
 - train_data.csv
 - # Row Id
 - # case_id
 - # Hospital_code
 - abc Hospital...ype_code
 - City_Code_Hospital
 - Hospital...ion_code
 - Available...Hospital
 - abc Department
 - abc Ward_Type
 - abc Ward_Facility_Code

Grid Relationships Custom tables





Diagram settings

- ☒ Cardinality
- ☐ Focus mode

Degrees of separation: 1

1  10

