Project Development Phase

Project Development - Delivery of Sprint-1

Date	10 November 2022
Team ID	PNT2022TMID39445
Project Name	Project – Analytics for Hospitals' Health- Care Data

Task 3: Data Preparation (Data Module) and Exploratory Data Analysis

Data Preparation

Step 1: Adding Data Source

Step 2: Create a View of Table

IBM Cognos Analytics with Watson   * New data module   ⌄   🔍 Search content

Data module

🔍 Search

Navigation

Test Data

Train Data

Train Data

\# Case Id

\# Hospita

City Cod

Hospita

Availabl

Departm

Ward Ty

Ward Fa

Bed Gra

Patient

City Cod

Type Of

Severity

Visitors

Age

Admission Deposit

Properties

Create a view of a table   ✕

New table name: Test Data - View (1)

Select items

🔍 Find

▸ ⊞ Test Data   ☑

City Code Patient	Type Of Admission	Severity Of Illness	Visitors With Patient	Age	Admission Deposit
2	Emergency	Moderate	2	71-80	3095
2	Trauma	Moderate	4	71-80	4018
2	Emergency	Moderate	3	71-80	4492
2	Trauma	Moderate	3	71-80	4173
2	Trauma	Moderate	4	71-80	4161
2	Trauma	Moderate	2	71-80	4659
2	Trauma	Moderate	2	71-80	4167
Null	Emergency	Moderate	2	31-40	4396
Null	Trauma	Moderate	2	31-40	4088
Null	Urgent	Moderate	2	31-40	3925
Null	Trauma	Moderate	2	31-40	4241
Null	Emergency	Moderate	6	31-40	3468

Invert   Clear all

(17) columns selected.

Previous   Cancel   Finish

Step 3: Created new Data Module

First screen — Grid view (test_data.csv)

Row Id	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Available E...in Hospital	Department	Ward_Type	Ward_Facility_Cod
12482	330920	23	a	6	X	4	gynecology	Q	F
12483	330921	5	a	1	X	4	gynecology	Q	E
12484	330922	24	a	1	X	3	gynecology	R	E
12485	330923	31	c	3	Z	3	gynecology	R	A
12486	330924	9	d	5	Z	2	TB & Chest disease	Q	F
12487	330925	28	b	11	X	4	gynecology	R	F
12488	330926	23	a	6	X	4	TB & Chest disease	Q	F
12489	330927	32	f	9	Y	2	gynecology	S	B
12490	330928	26	b	2	Y	4	gynecology	R	D
12491	330929	11	b	2	Y	4	gynecology	Q	D
12492	330930	32	f	9	Y	4	radiotherapy	S	B
12493	330931	9	d	5	Z	4	radiotherapy	S	F
12494	330932	21	c	3	Z	4	radiotherapy	S	A
12495	330933	13	a	6	Z	2	radiotherapy	R	F
12496	330934	9	d	5	Z	2	radiotherapy	R	F
12497	330935	16	c	5	Z	2	gynecology	S	F
12498	330936	2	c	5	Z	2	gynecology	S	F
12499	330937	29	a	4	X	2	gynecology	S	F
12500	330938	19	a	7	Y	2	gynecology	S	C

Second screen — Grid view (test_data.csv)

| rpe	Ward_Facility_Code	Bed Grade	patientid	City_Code_Patient	Type of Admission	Severity of Illness	Visitors with Patient	Age	Admission_Deposit
	A	2	17006	2	Emergency	Moderate	2	71-80	3095
	F	2	17006	2	Trauma	Moderate	4	71-80	4018
	D	4	17006	2	Emergency	Moderate	3	71-80	4492
	F	2	17006	2	Trauma	Moderate	3	71-80	4173
	F	2	17006	2	Trauma	Moderate	4	71-80	4161
	F	2	17006	2	Trauma	Moderate	2	71-80	4659
	D	2	17006	2	Trauma	Moderate	2	71-80	4167
	E	3	95946	Null	Emergency	Moderate	2	31-40	4396
	F	3	95946	Null	Trauma	Moderate	2	31-40	4088
	F	4	95946	Null	Urgent	Moderate	2	31-40	3925
	E	2	95946	Null	Trauma	Moderate	2	31-40	4241
	F	3	95946	Null	Emergency	Moderate	6	31-40	3468
	A	3	95946	Null	Trauma	Moderate	3	31-40	4322
	F	4	95946	Null	Urgent	Moderate	2	31-40	4315
	C	2	40728	8	Emergency	Moderate	4	51-60	3288
	D	4	40728	8	Emergency	Moderate	2	51-60	6818
	C	4	40728	8	Emergency	Moderate	2	51-60	3410
	D	2	40728	8	Trauma	Moderate	6	51-60	4782
	F	2	40728	8	Emergency	Moderate	4	51-60	5387

Data Relationship Exploration
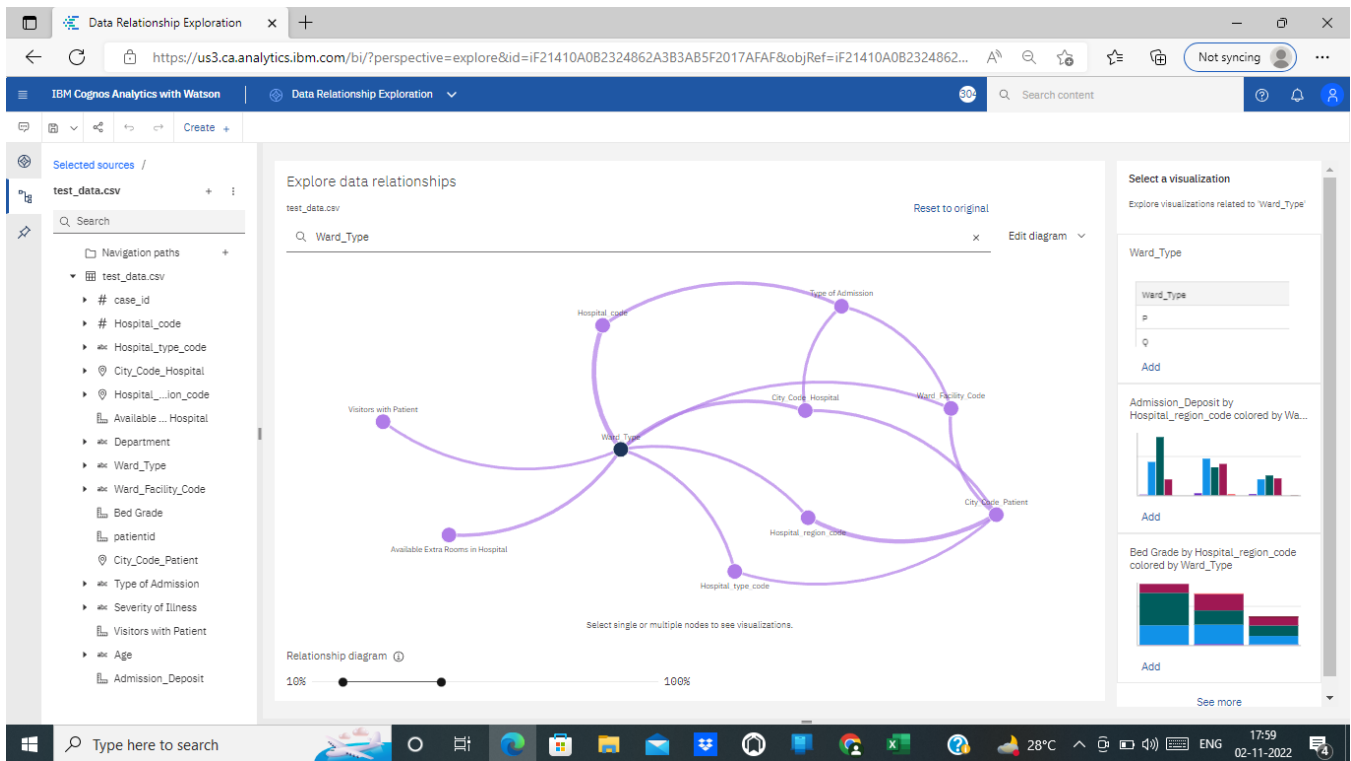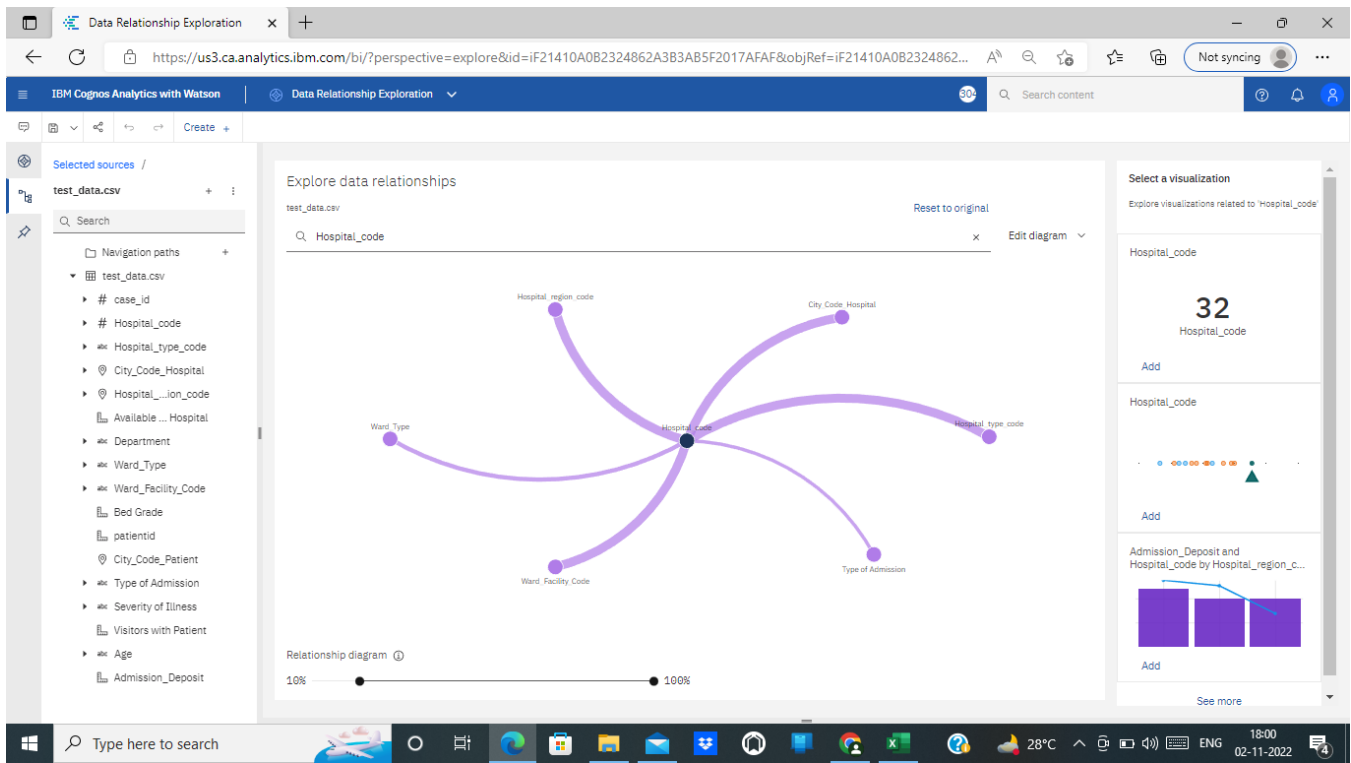
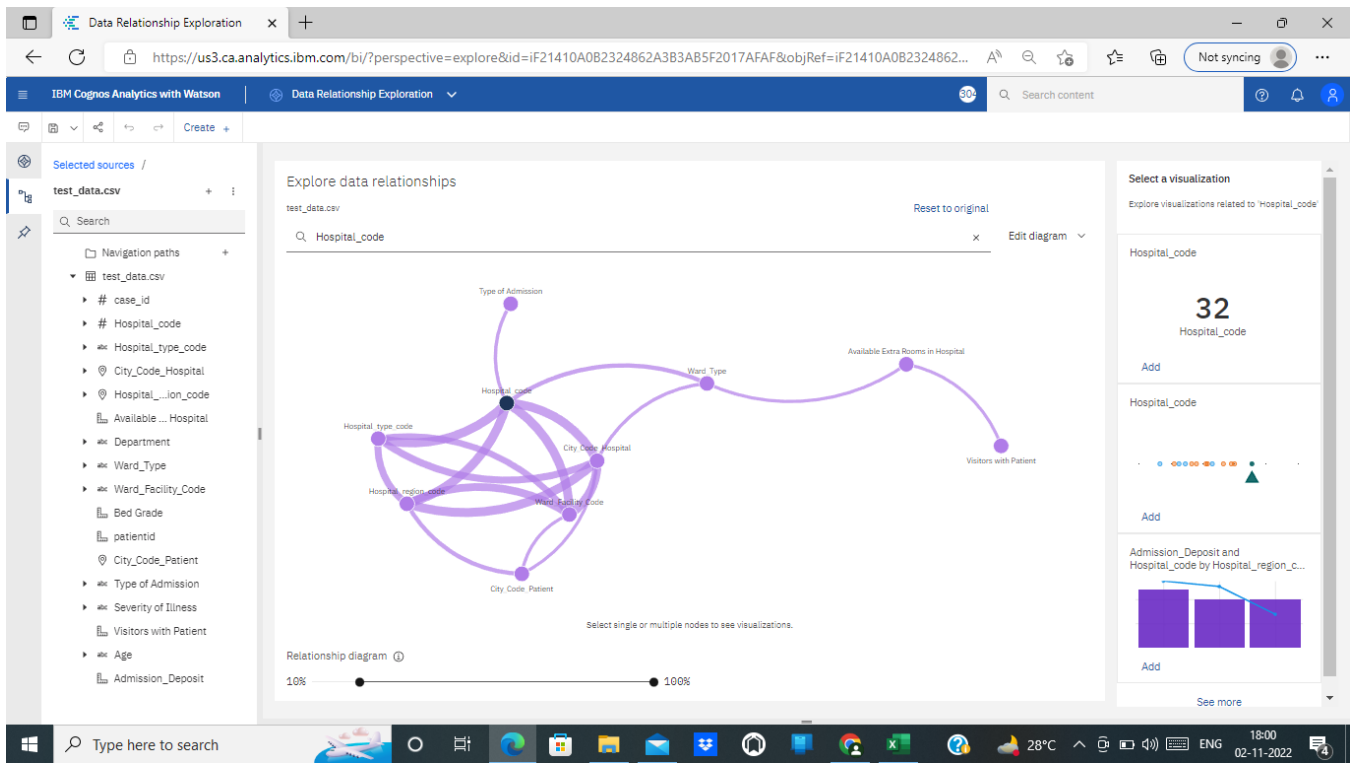## Step 4: Explore Data Relationship
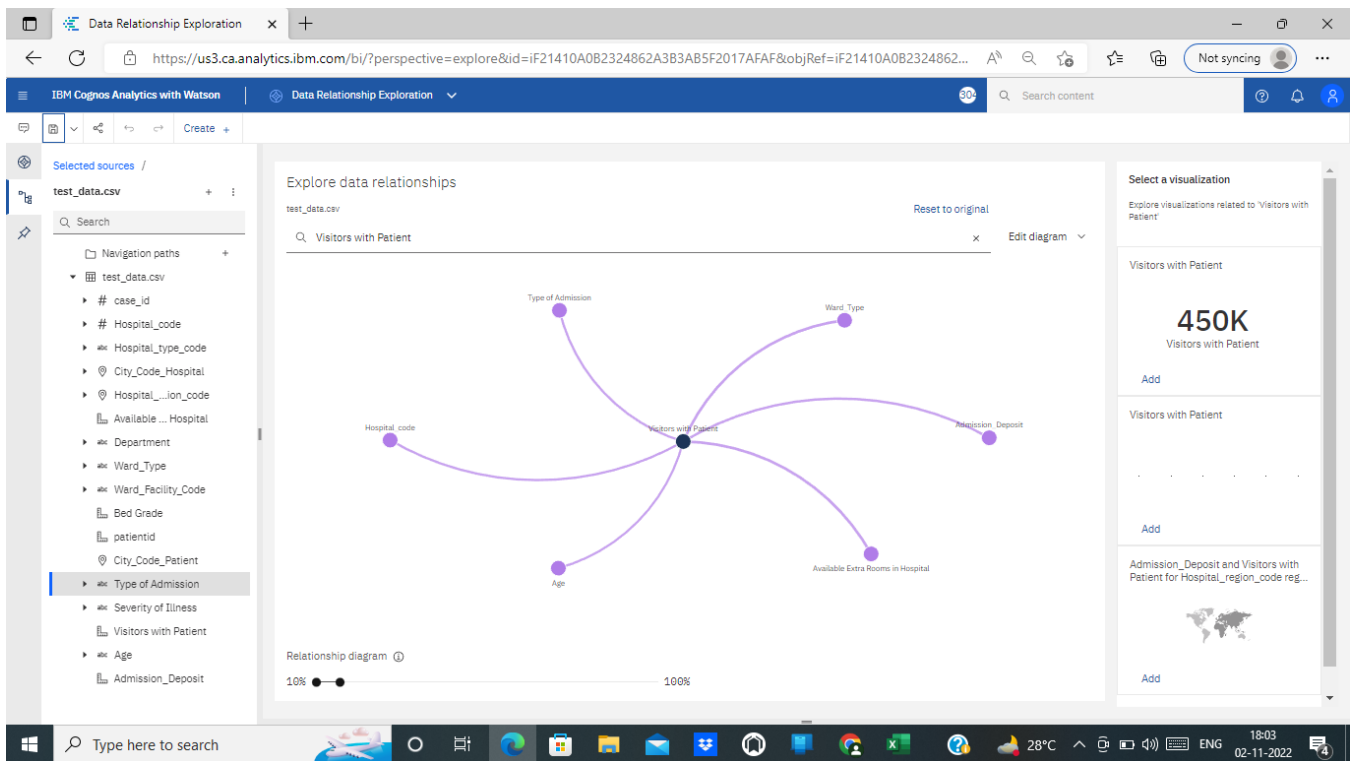
1. Type of Admission
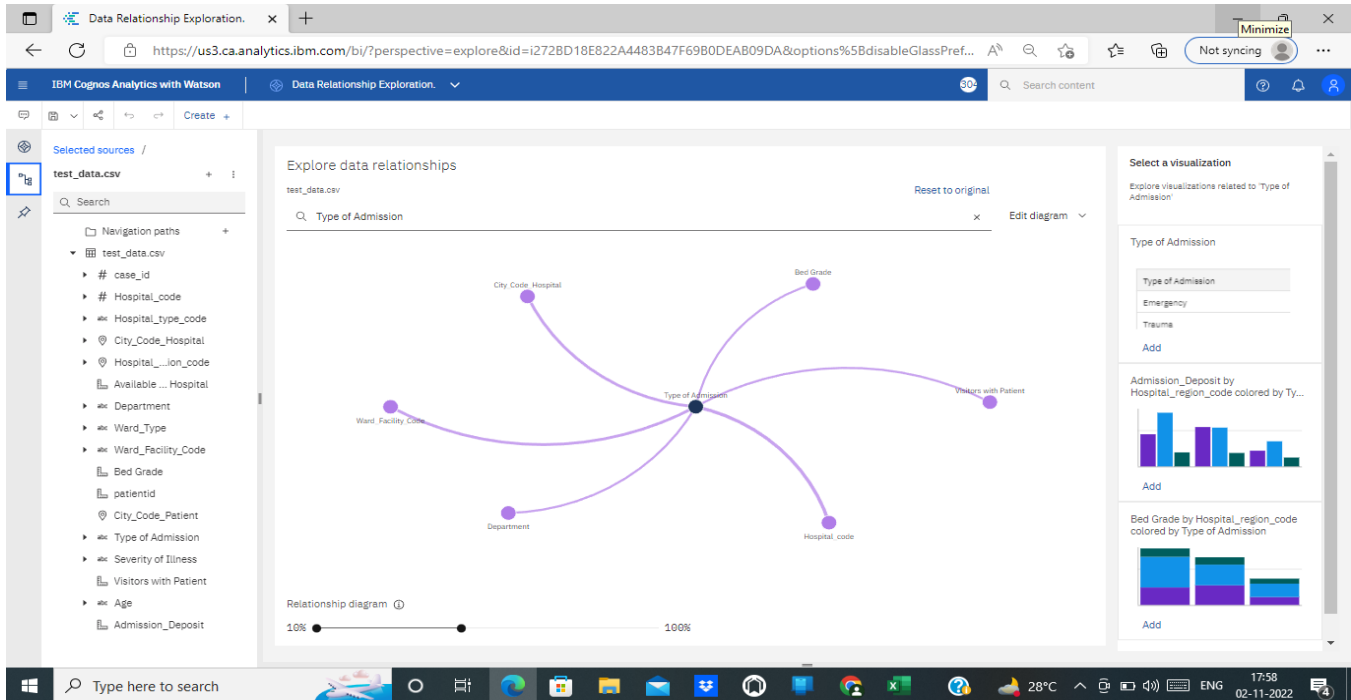
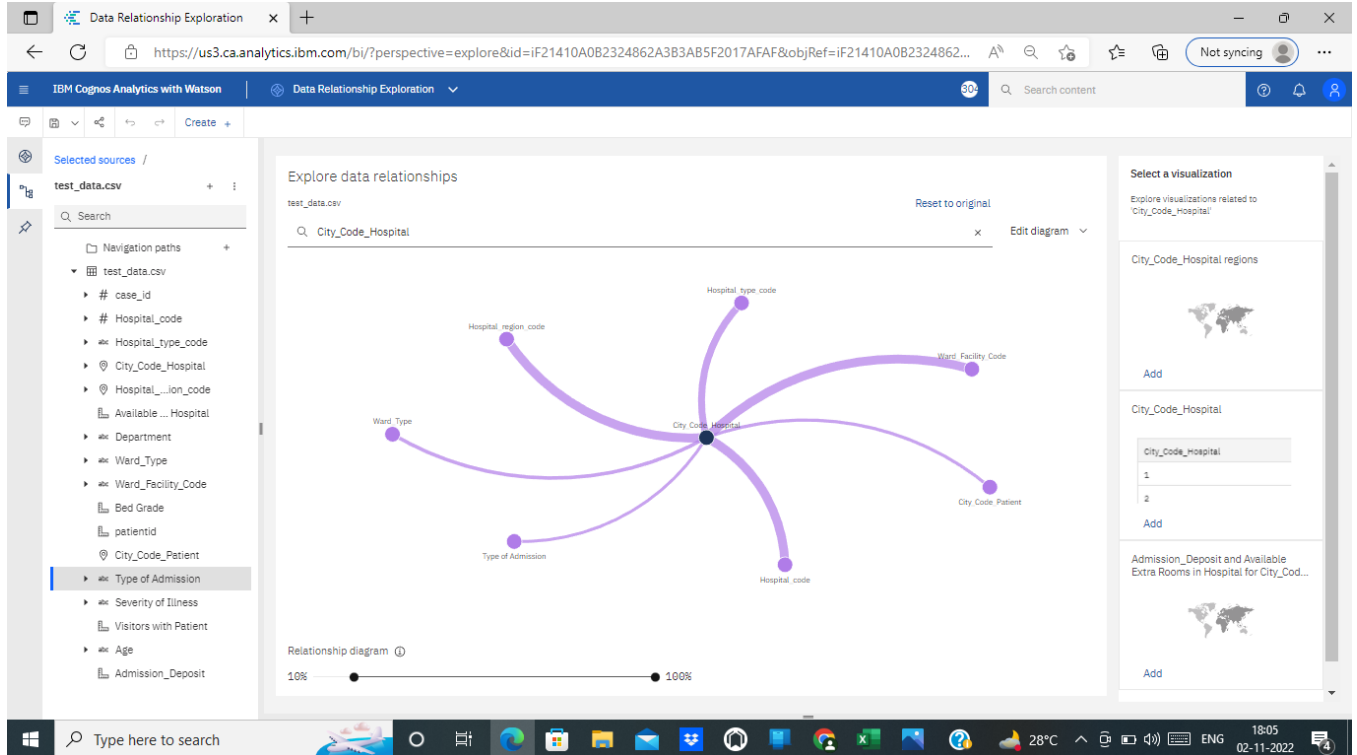2. Admission_Deposit
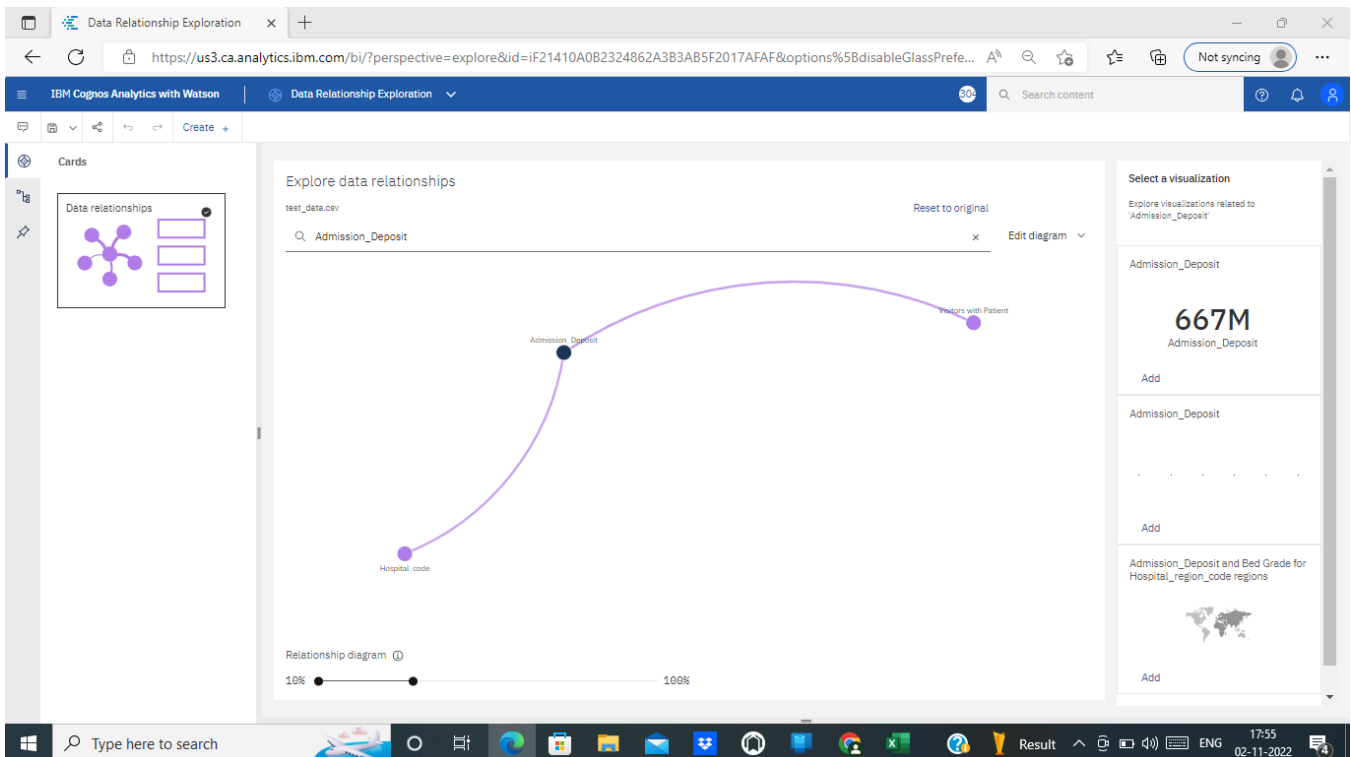
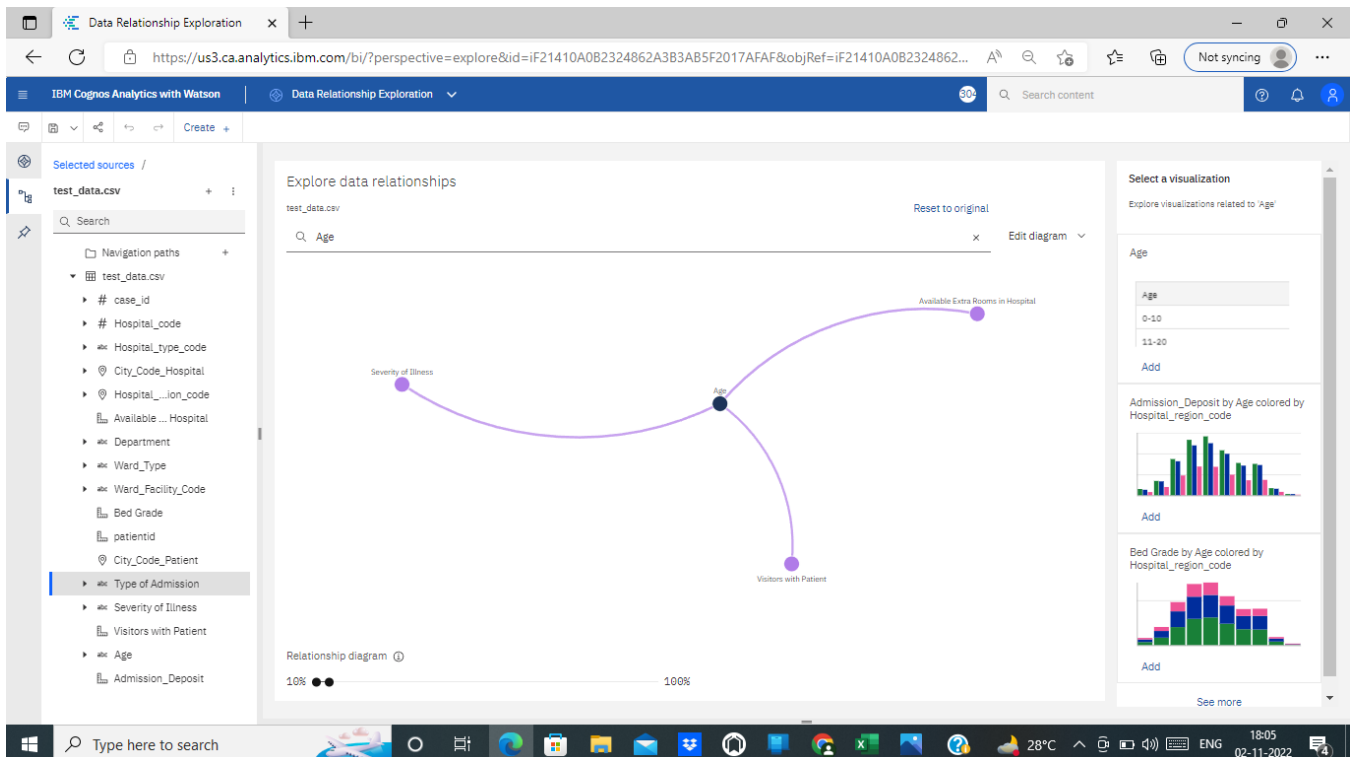## 3. Ward_Type

4. Hospital_Code
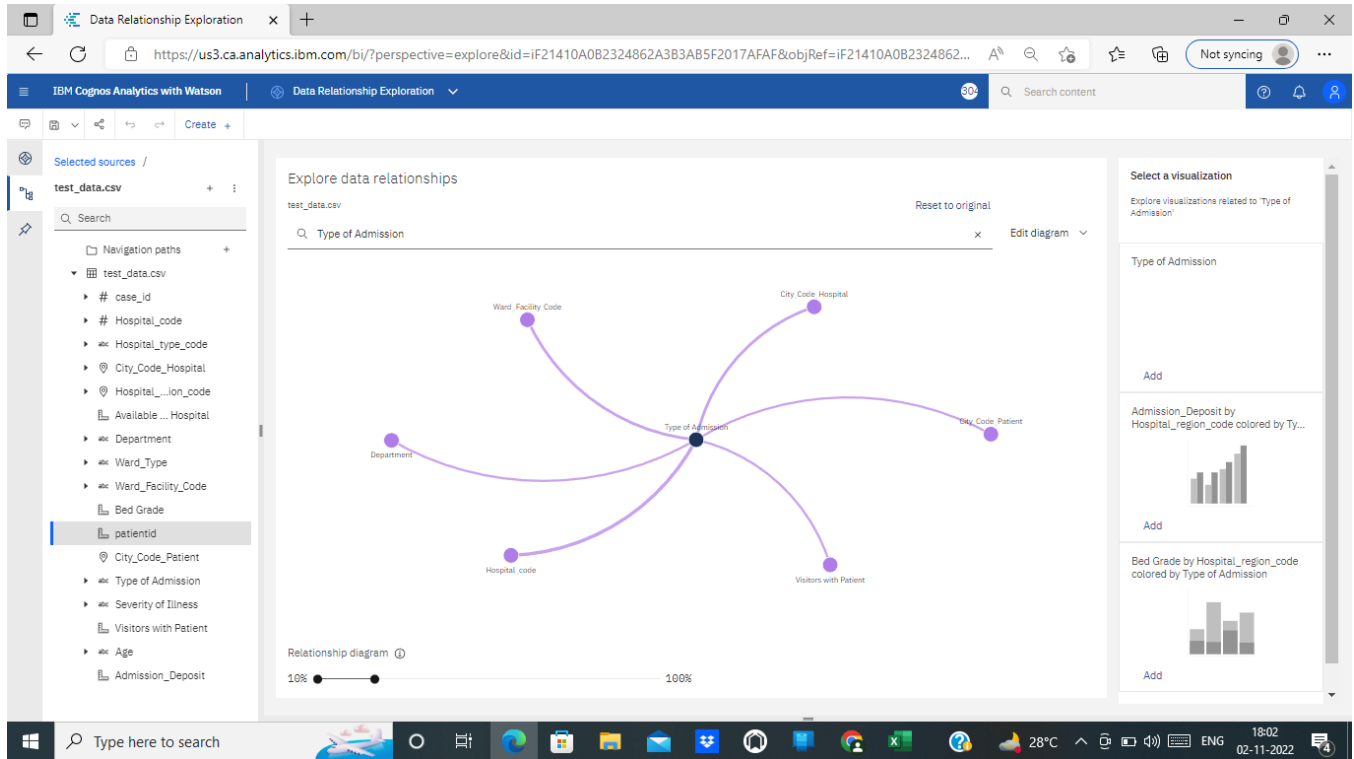
5. Visitor with Patient
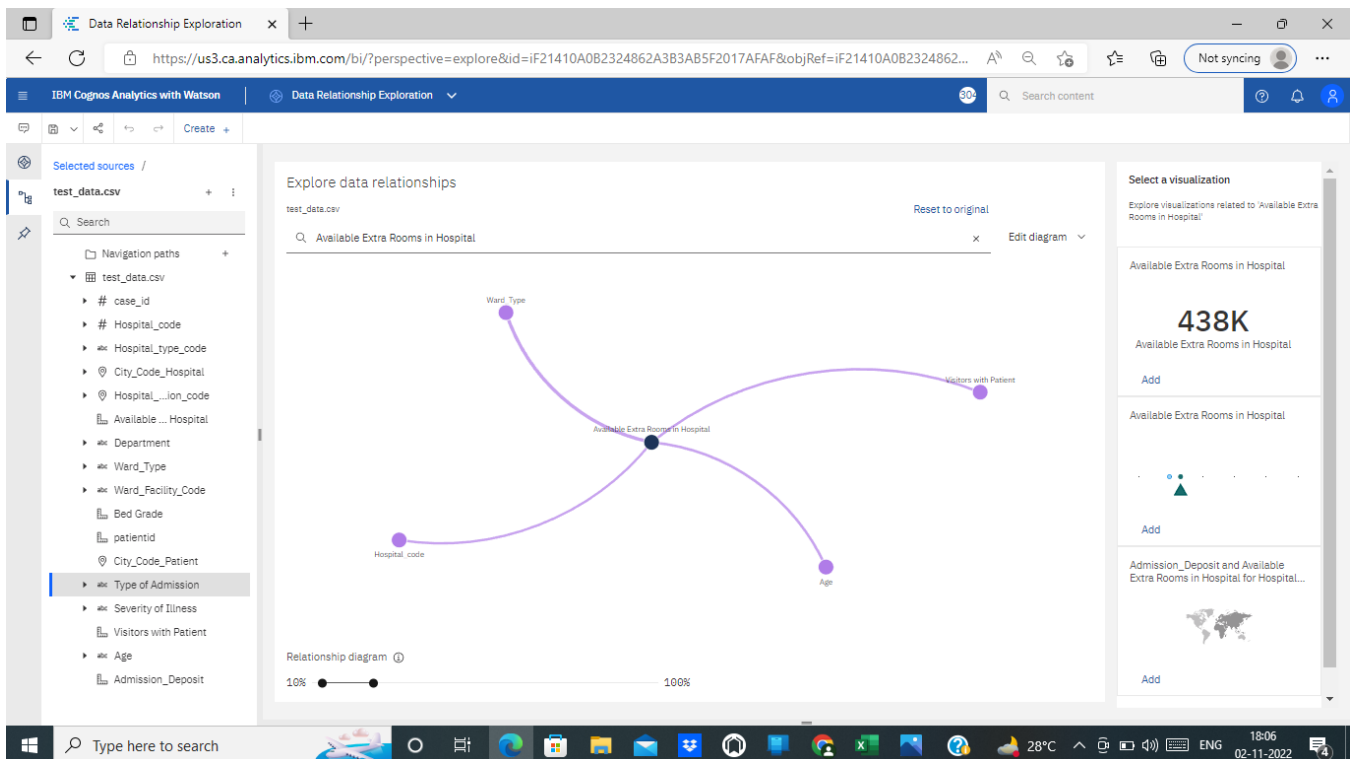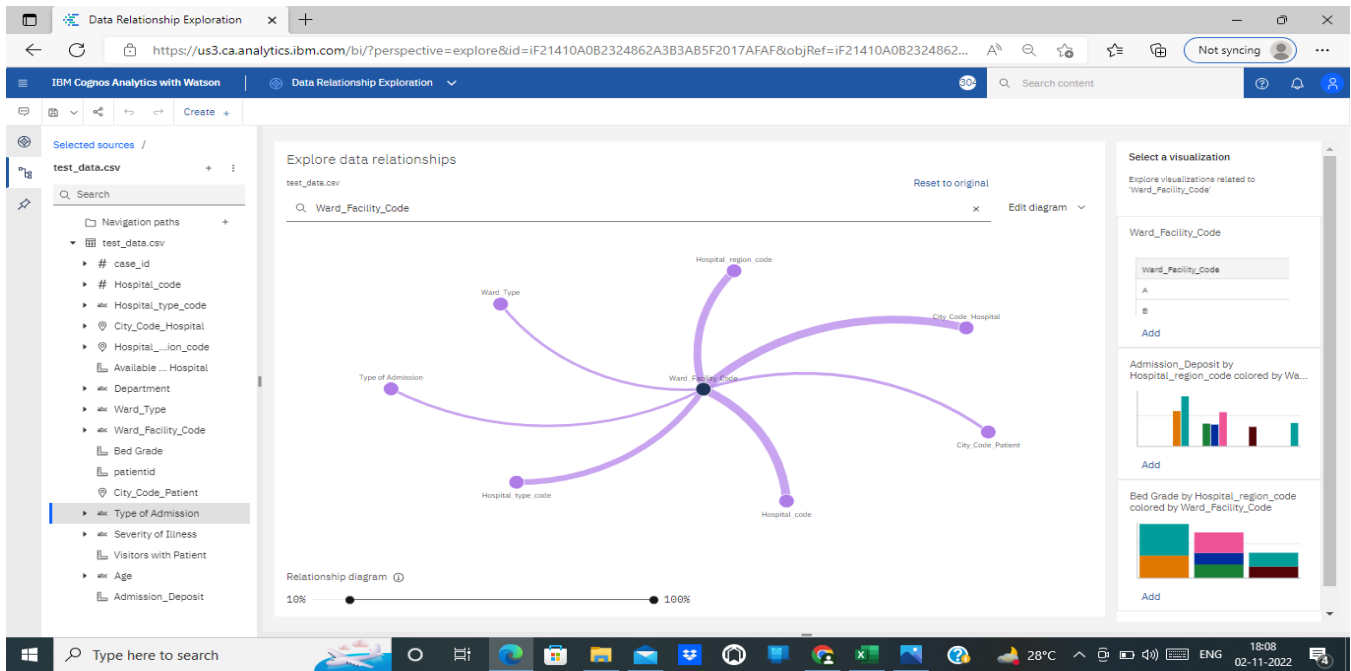
6. City_Code_Hospital

7. Age

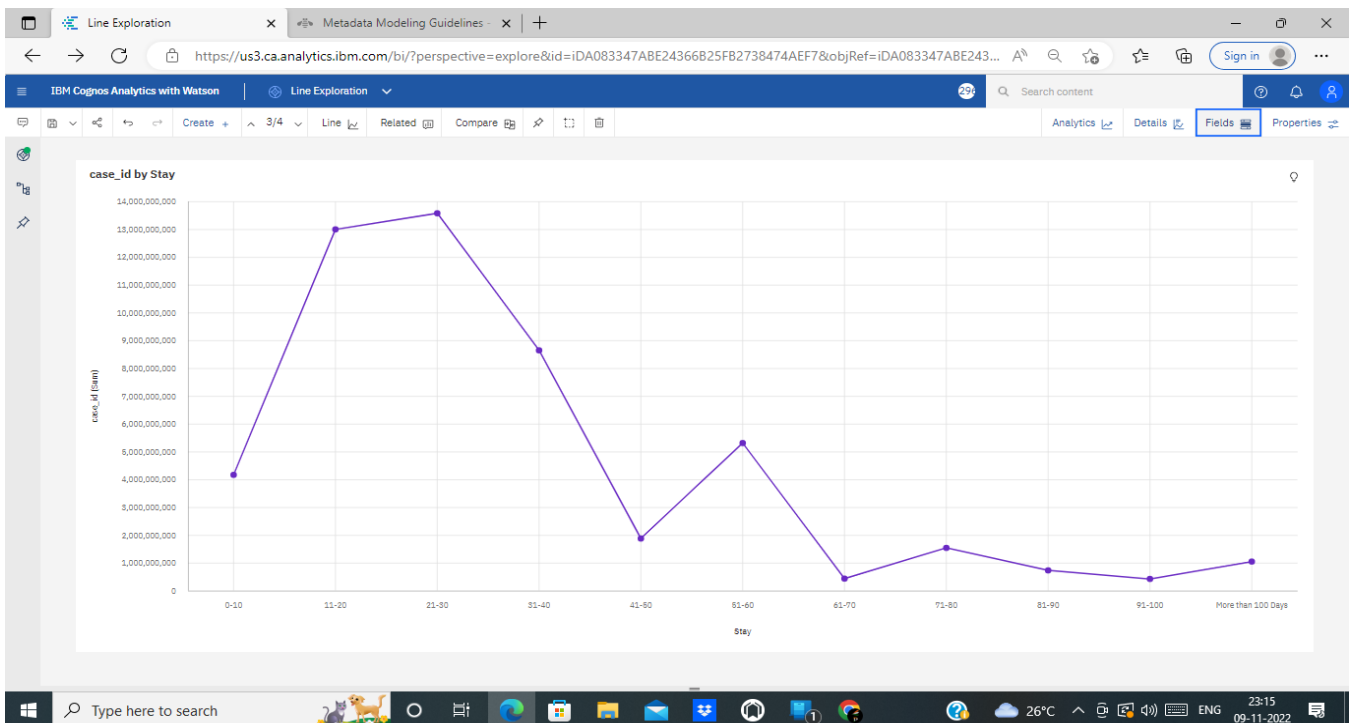8. Type of Admission

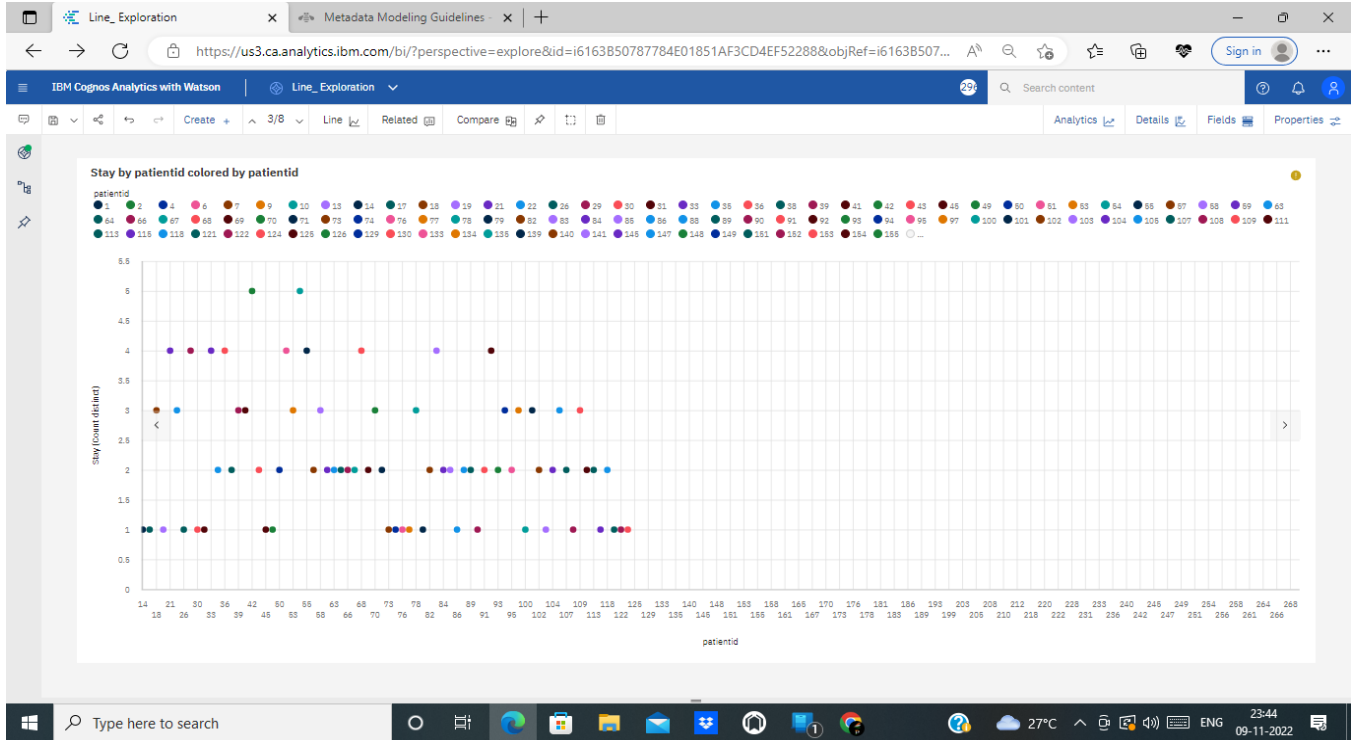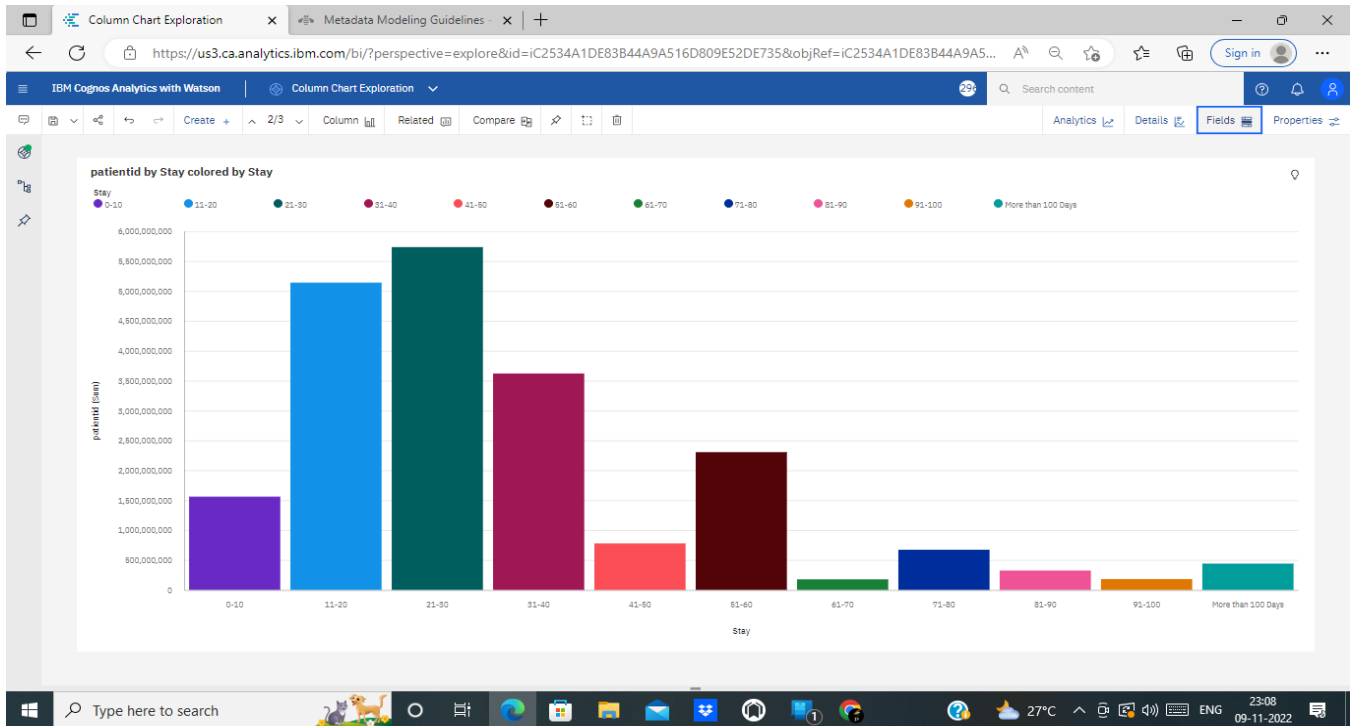9. Available Extra Rooms in Hospital

10. Ward_Facility_Code

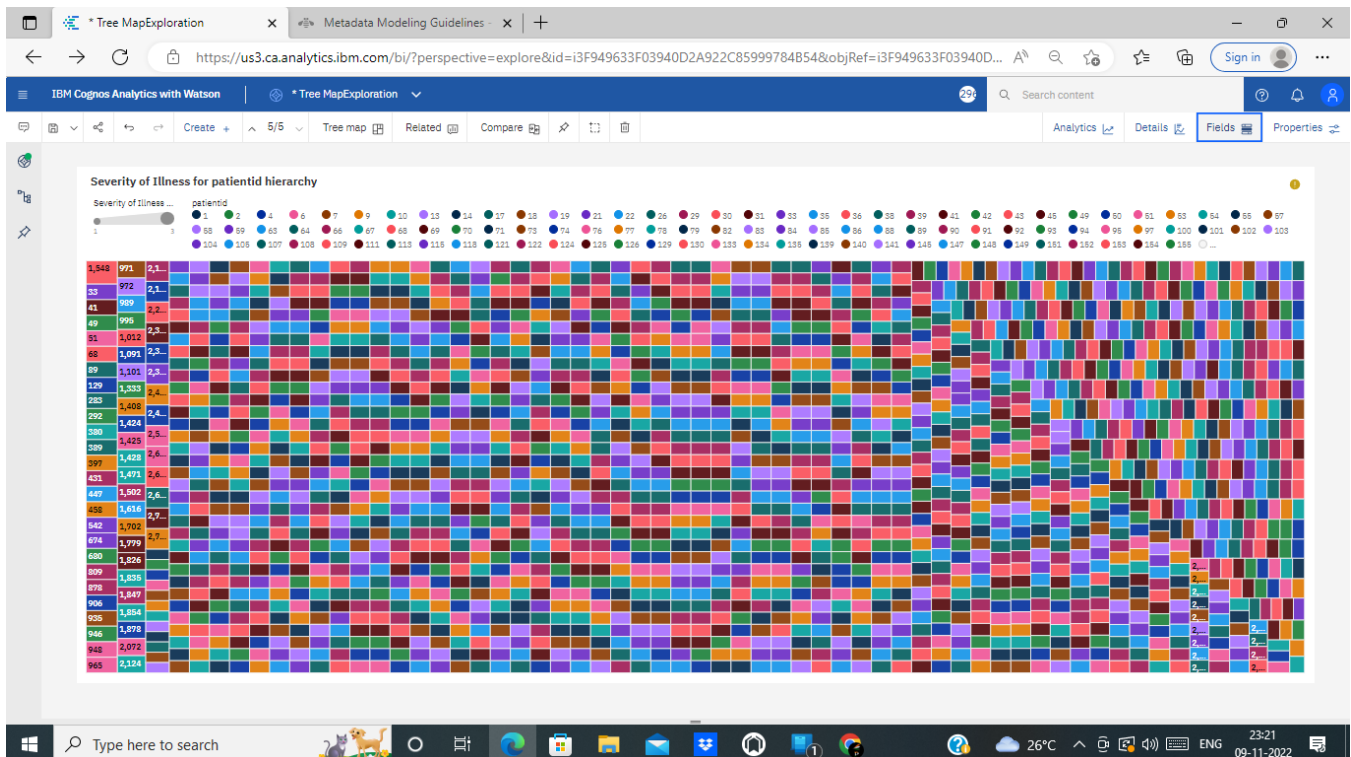# Exploratory Dara Analysis

Step 5: Data Exploration

1. Length of Stay for Each case of Patient

2. Stay of Patient ID using Column Chart

3. Severity of Illness by Patient ID using Tree Map

4. Age, Department wise Patient using Table

Age, Department and patientid

Age	Department	patientid
0-10	TB & Chest disease	23,680,982
	anesthesia	30,694,534
	gynecology	284,678,432
	radiotherapy	64,116,014
	surgery	6,617,214
Summary		409,787,176
11-20	TB & Chest disease	48,330,331
	anesthesia	83,063,011
	gynecology	858,899,345
	radiotherapy	110,355,216
	surgery	2,327,198
Summary		1,102,975,101
21-30	TB & Chest disease	77,582,312
	anesthesia	215,910,306
	gynecology	2,202,327,507
	radiotherapy	182,409,301
	surgery	5,983,878
Summary		2,684,213,304

Age, Department and patientid

| Age	Department	patientid
51-60	anesthesia	318,896,262
	gynecology	2,480,534,712
	radiotherapy	250,829,445
	surgery	13,400,007
Summary		3,188,152,500
61-70	TB & Chest disease	87,174,984
	anesthesia	259,938,034
	gynecology	1,574,618,521
	radiotherapy	259,189,540
	surgery	13,997,212
Summary		2,194,918,291
71-80	TB & Chest disease	48,086,939
	anesthesia	265,201,600
	gynecology	1,645,164,854
	radiotherapy	388,325,417
	surgery	13,980,869
Summary		2,358,759,679
	TB & Chest disease	5,054,654

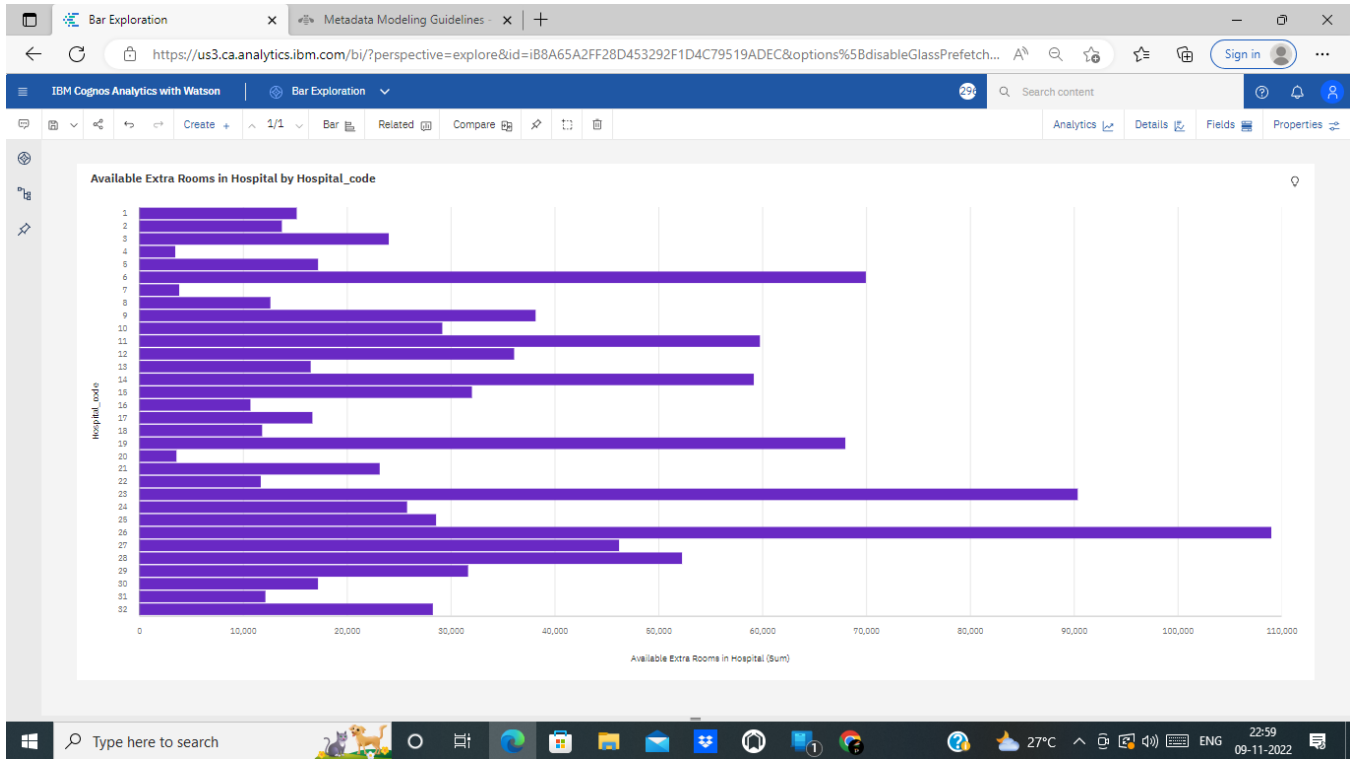5. Room Availability by Pie Chart
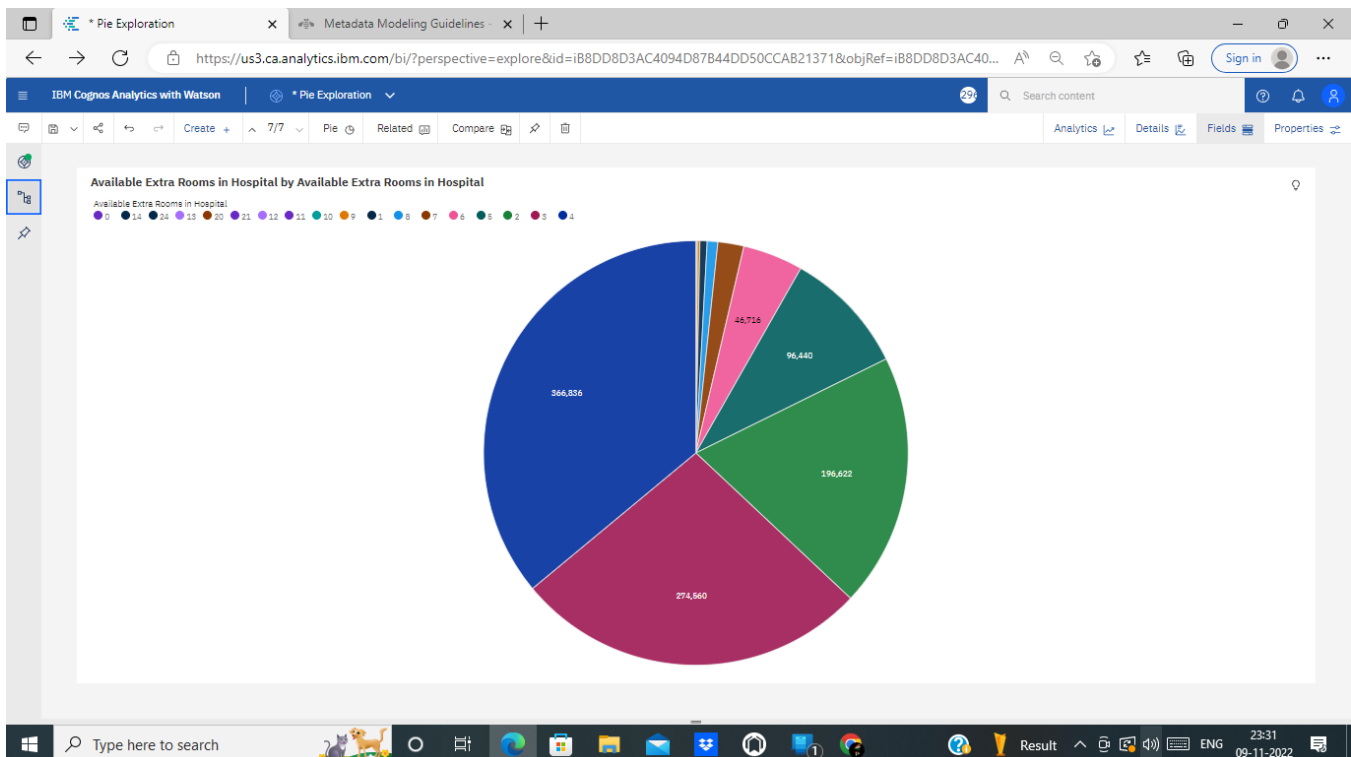
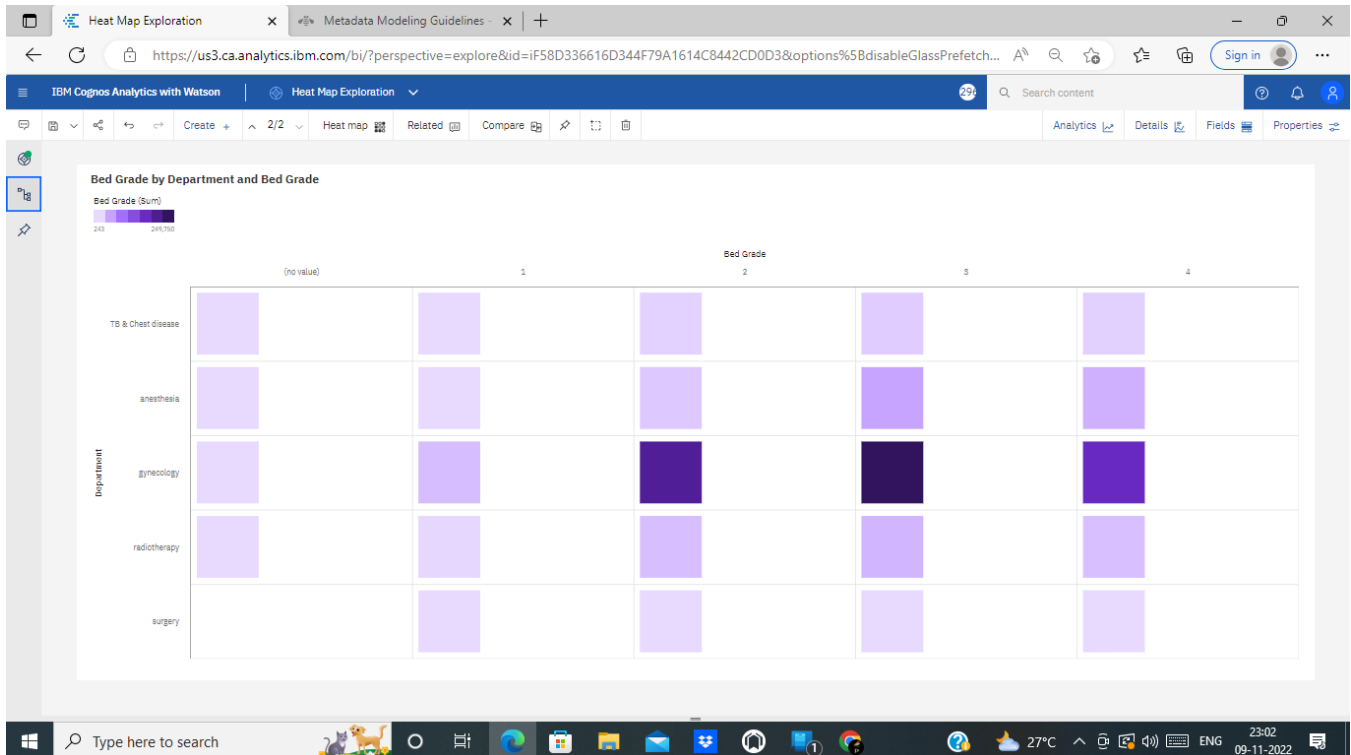6. Department wise number of Admissions by Waterfall Chart
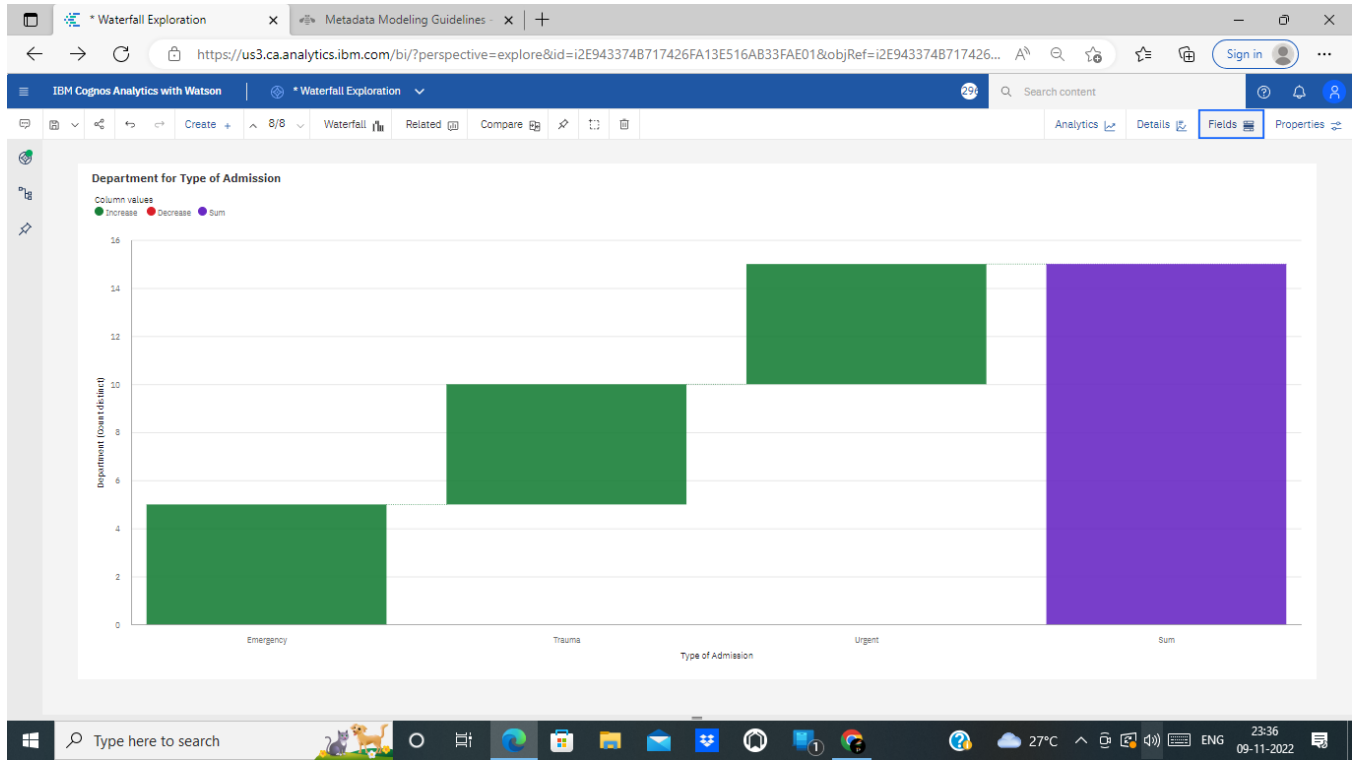
7. Admission_Deposit for Department
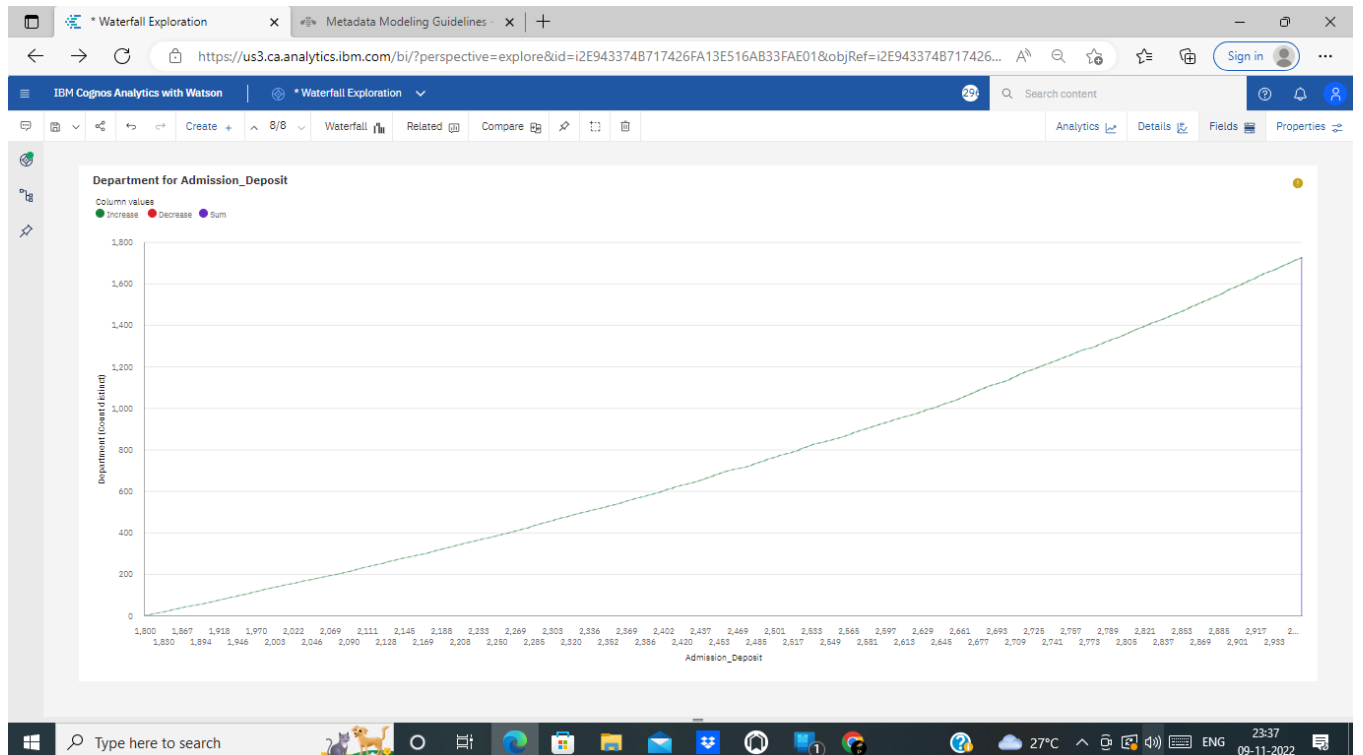
8. Available Extra Rooms in Hospital

9. Bed Grade by Department

10. Age, Department and ward_Type

11. Number of Patient by Ward_Types
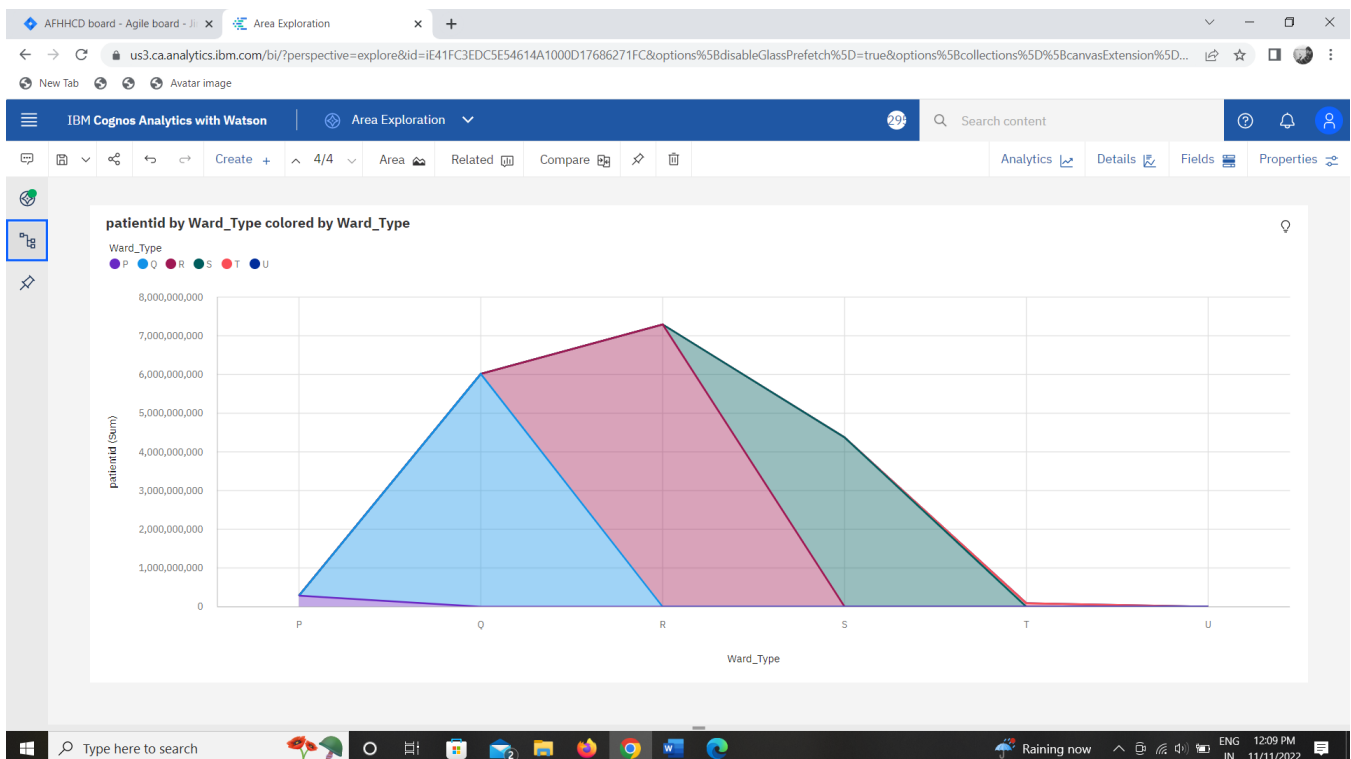
12. Age wise Patients with Department and Severity Filter