Project Development Phase

Project Development - Delivery of Sprint-1

Date	23 November 2022
Team ID	PNT2022TMID25280
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 ⌄ | 29+ | Q Search content | ? ⟨⟩ ⟨⟩

Data module

Q Search

New data modu...
  📁 Navigation...
  ▸ ⊞ Test Data
  ▸ ⊞ Train Data
  ▾ ⊞ Train Data
    ▸ # Case Id
    ▸ # Hospita...
    ▸ abc Hospita...
    ▸ ◎ City Cod...
    ▸ ◎ Hospita...
      ⌷ Availabl...
    ▸ abc Departm...
    ▸ abc Ward Ty...
    ▸ abc Ward Fe...
      ⌷ Bed Gra...
      ⌷ Patient...
    ▸ ◎ City Cod...
    ▸ abc Type Of...
    ▸ abc Severity...
      ⌷ Visitors...
    ▸ abc Age
      ⌷ Admission Deposit

⇄ Properties

Create a view of a table   ×

New table name: Test Data - View (1)

Select items

Q 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 |

⊕ ⟲ ⊖

⟨Windows taskbar⟩ ⟨search⟩ Type here to search ... 27°C ENG 21:52 09-11-2022

Step 3: Created new Data Module

Screenshot 1

Grid | Relationships | Custom tables

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	2	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	5	Z	2	radiotherapy	R	F
12496	330934	9	d	5	Z	2	radiotherapy	R	F
12497	330935	15	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

Screenshot 2

Grid | Relationships | Custom tables

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	5	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	3	51-60	6818
	C	4	40728	8	Emergency	Moderate	2	51-60	3410
	D	4	40728	8	Trauma	Moderate	6	51-60	4782
	F	2	40728	8	Emergency	Moderate	4	51-60	5387

Data module — Data Preparation — test_data.csv
Row Id, case_id, Hospital_code, Hospital_type_code, City_Code_Hospital, Hospital_region_code, Available ...n Hospital, Department, Ward_Type, Ward_Facility_Code, Bed Grade, patientid, City_Code_Patient, Type of Admission, Severity of Illness, Visitors with Patient, Age, Admission_Deposit
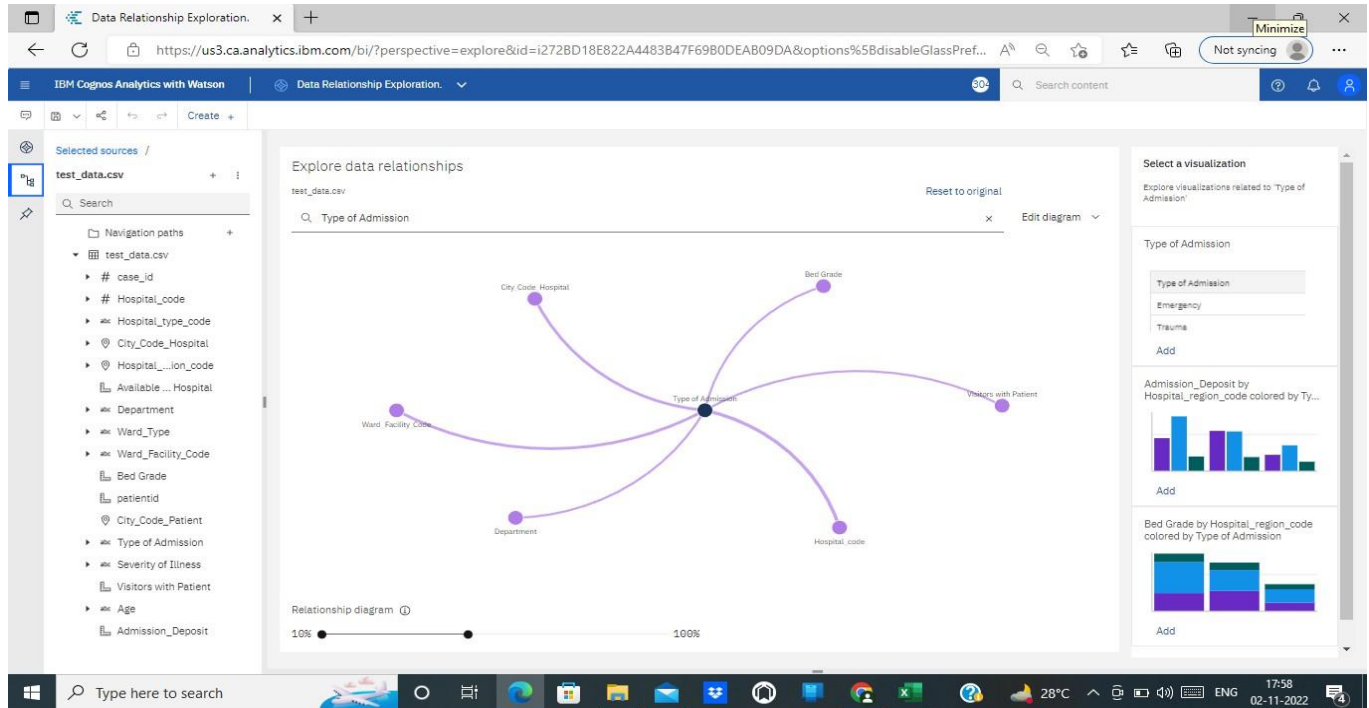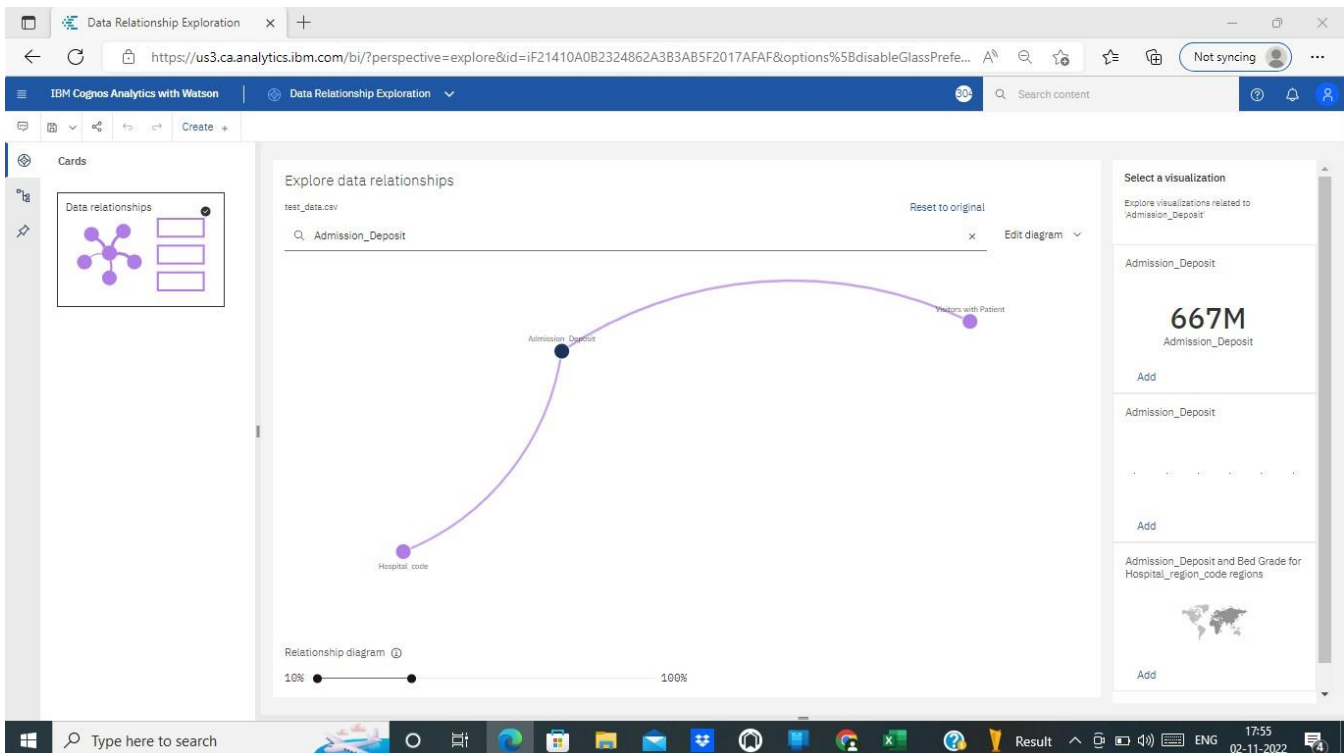
Data Relationship Exploration
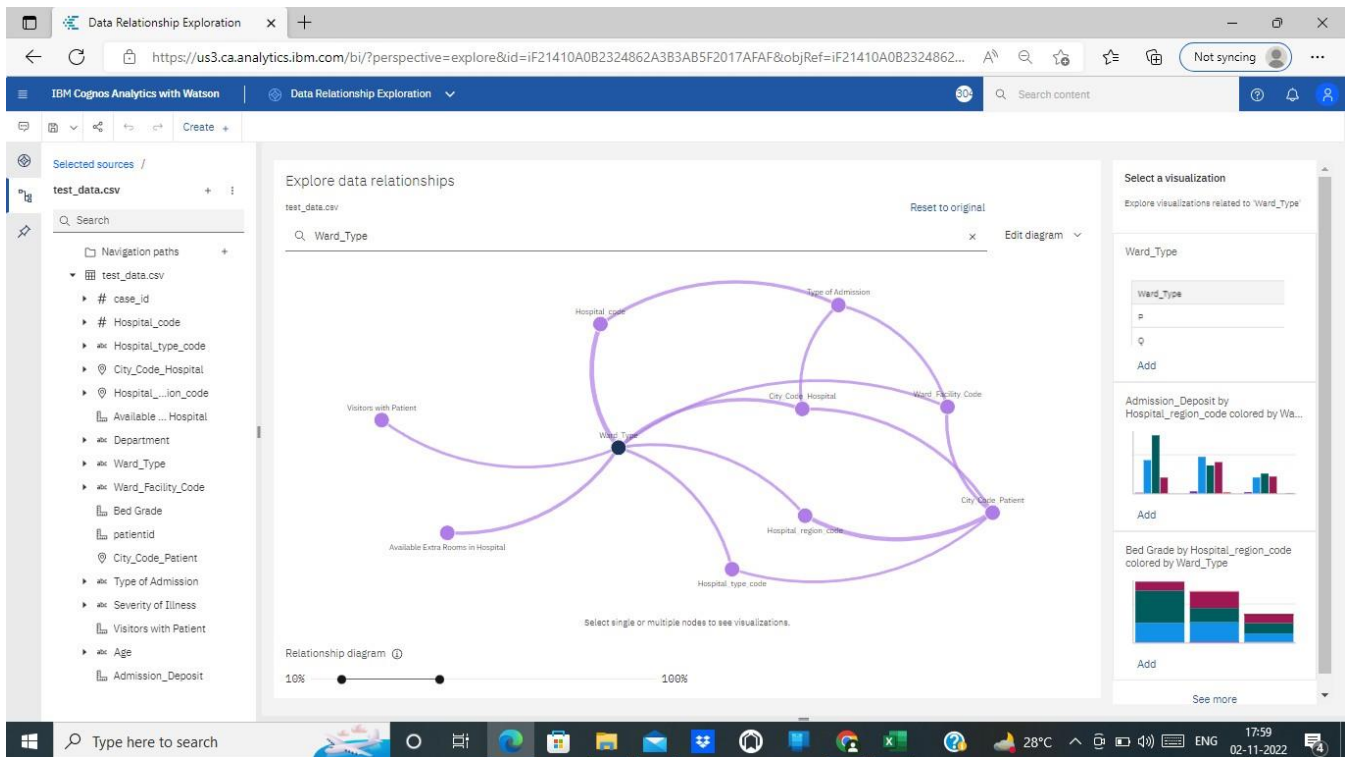
Step 4: Explore Data Relationship
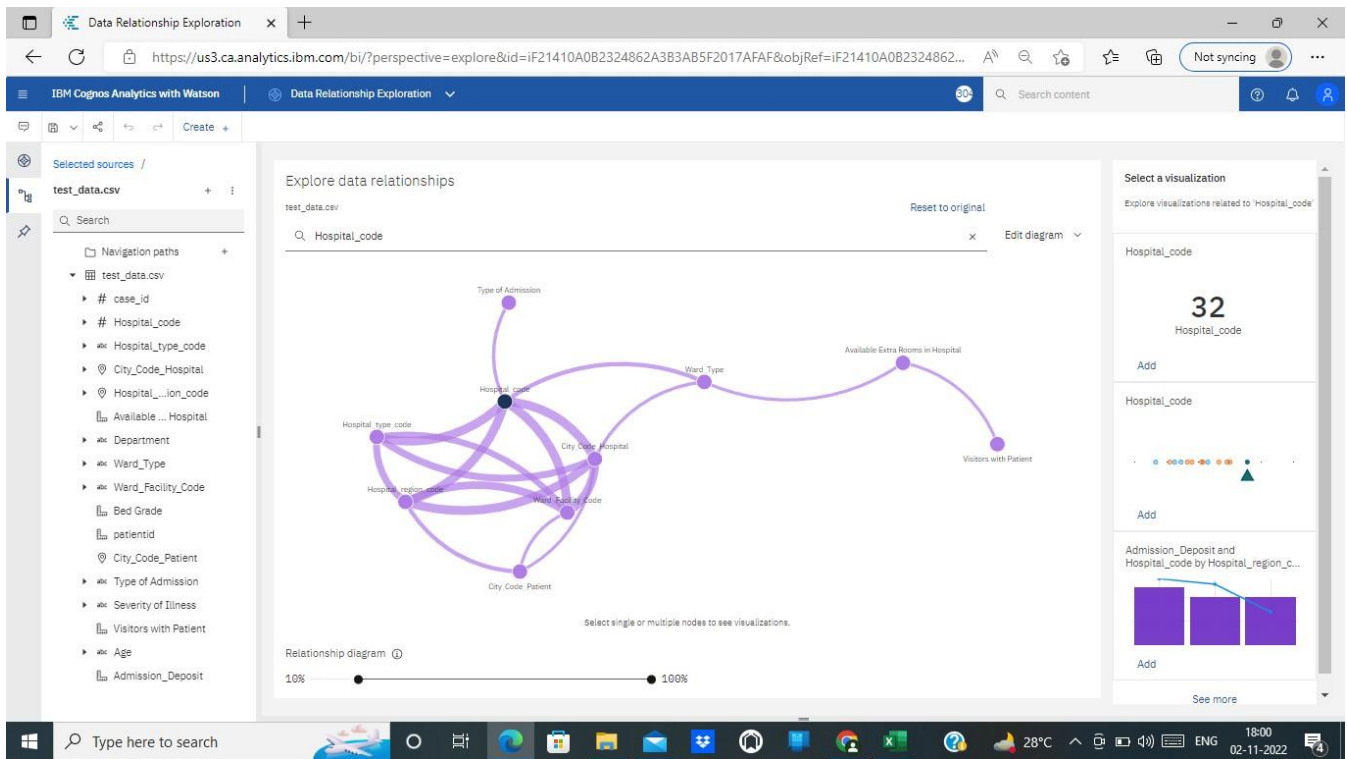
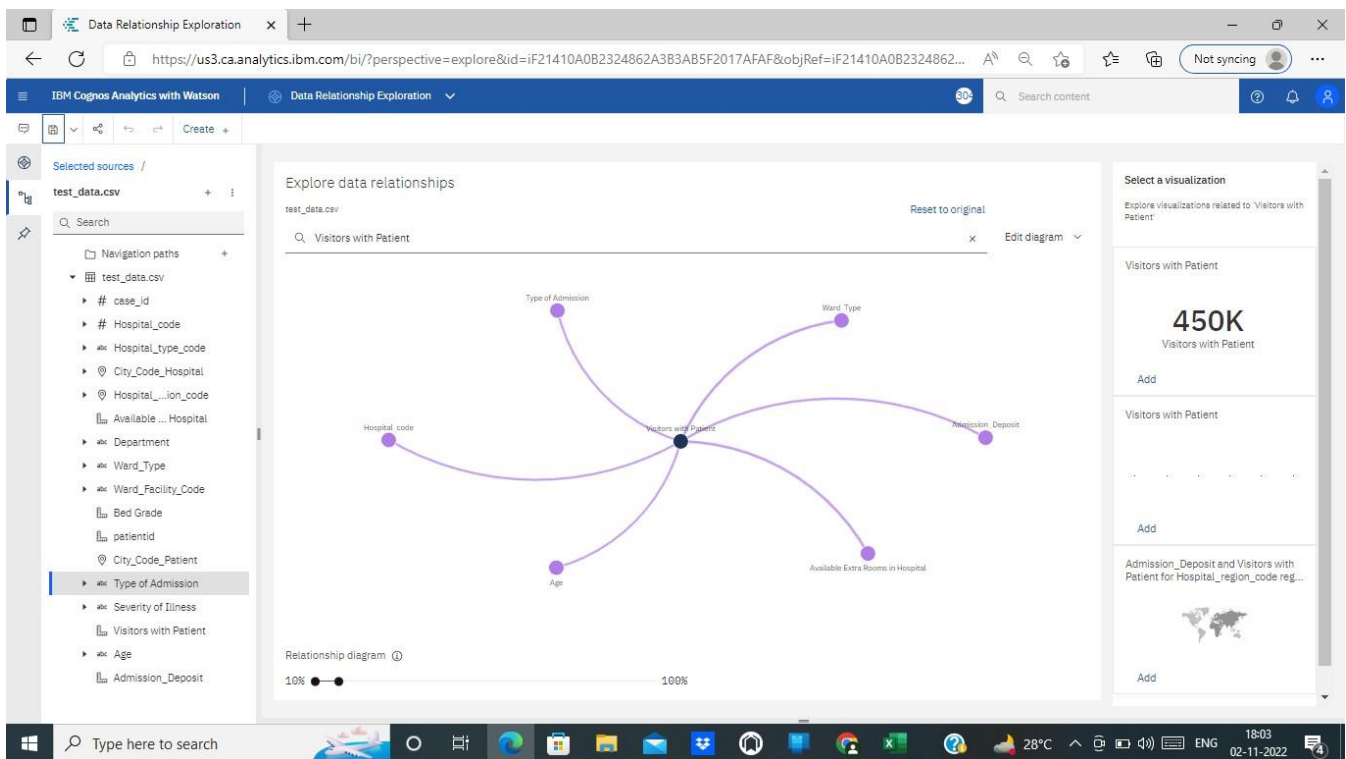1. Type of Admission
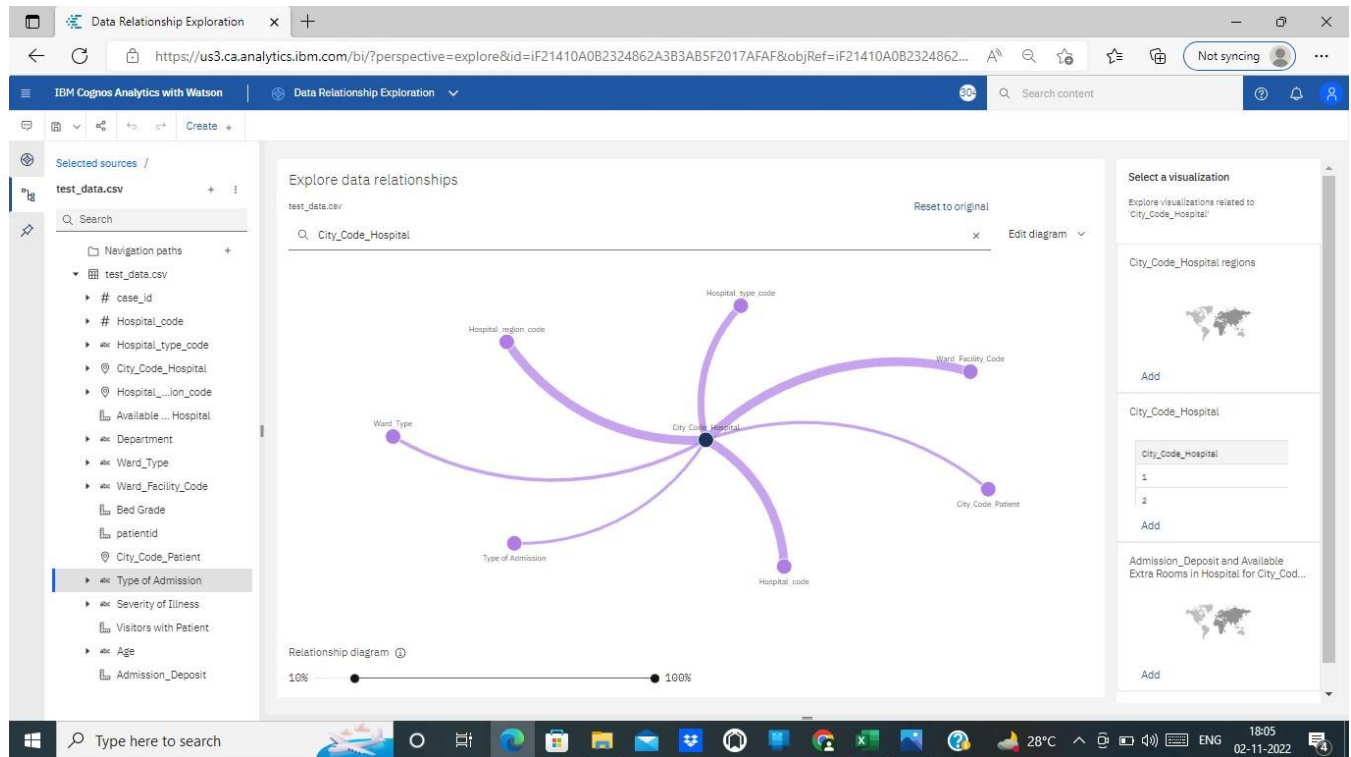

2. Admission_Deposit
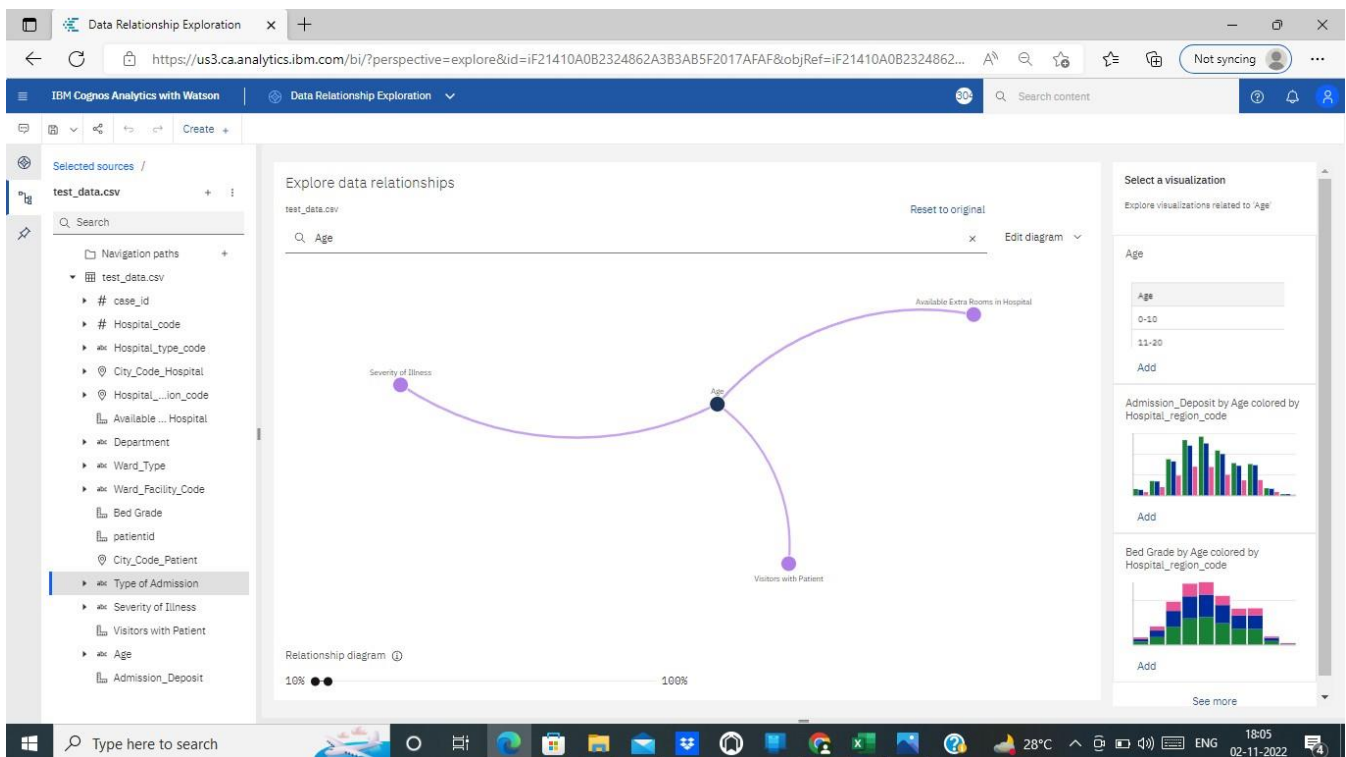
3. Ward_Type

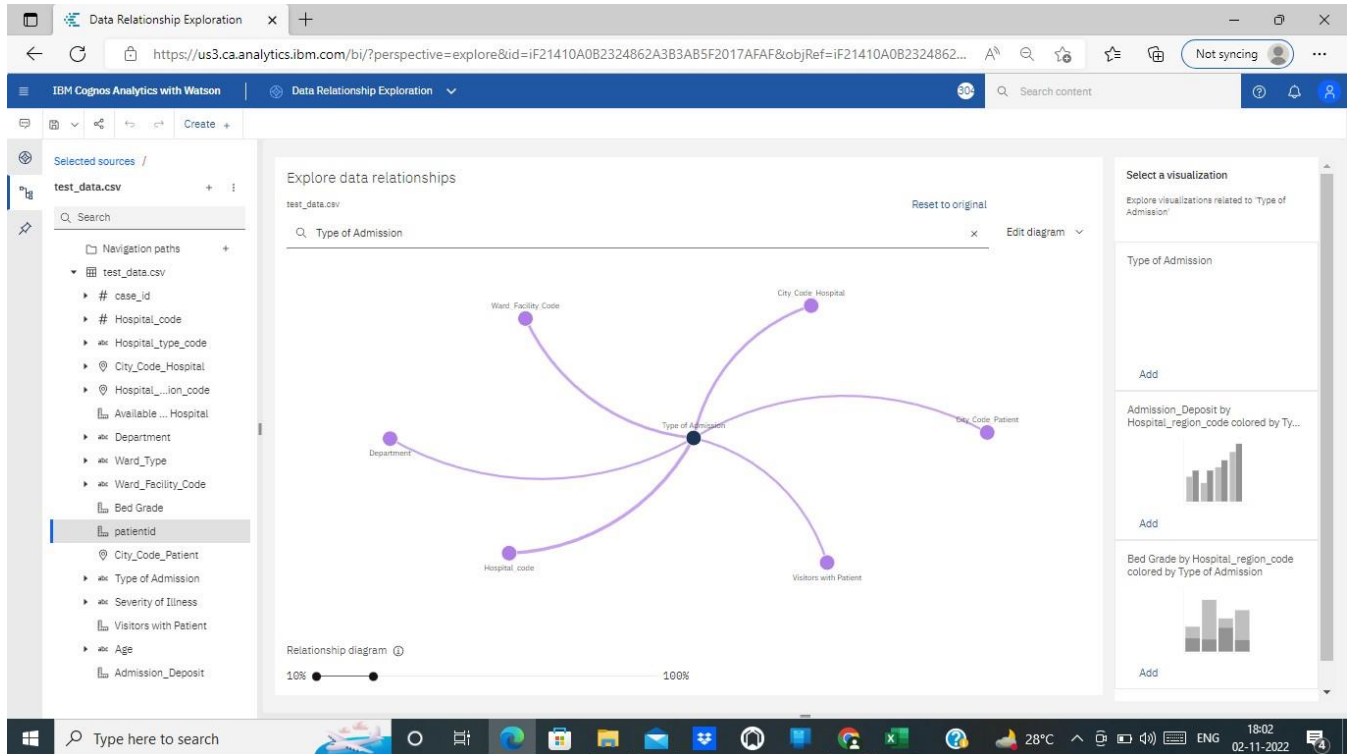### 4. Hospital_Code
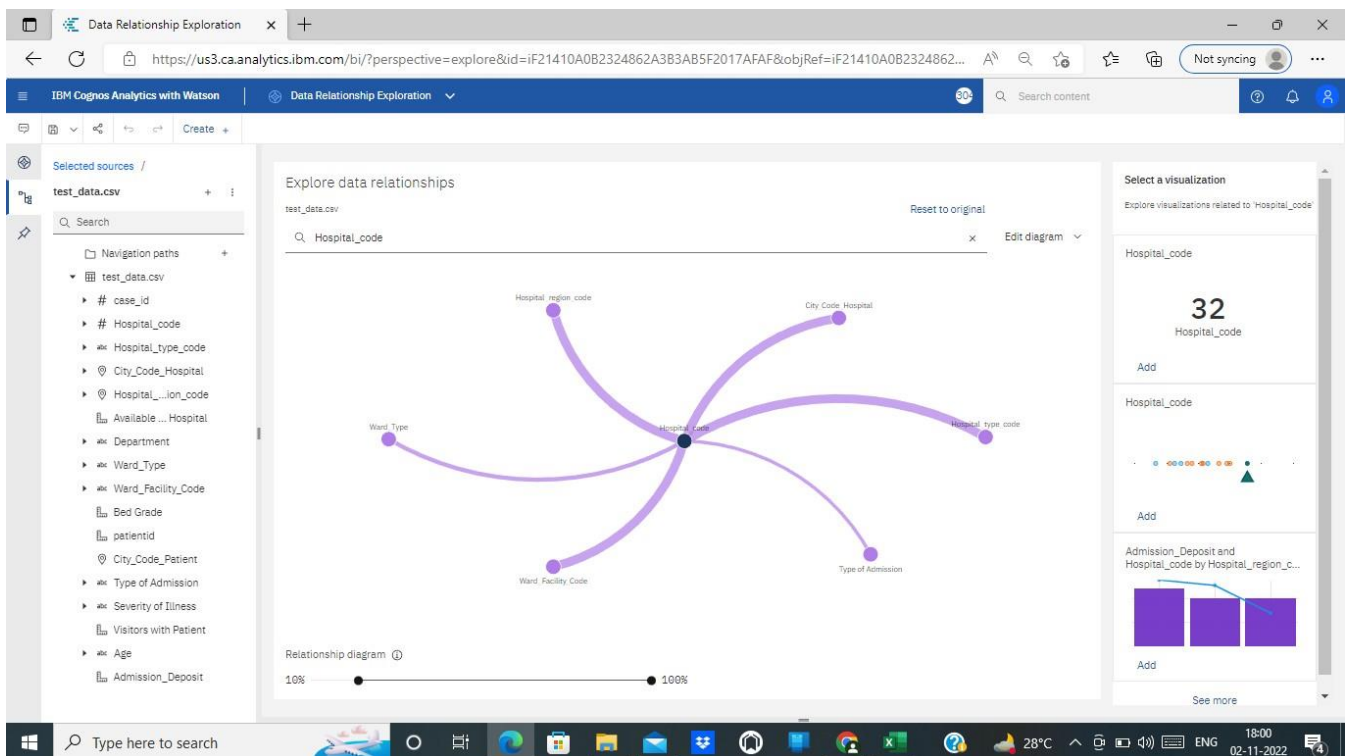
5. Visitor with Patient
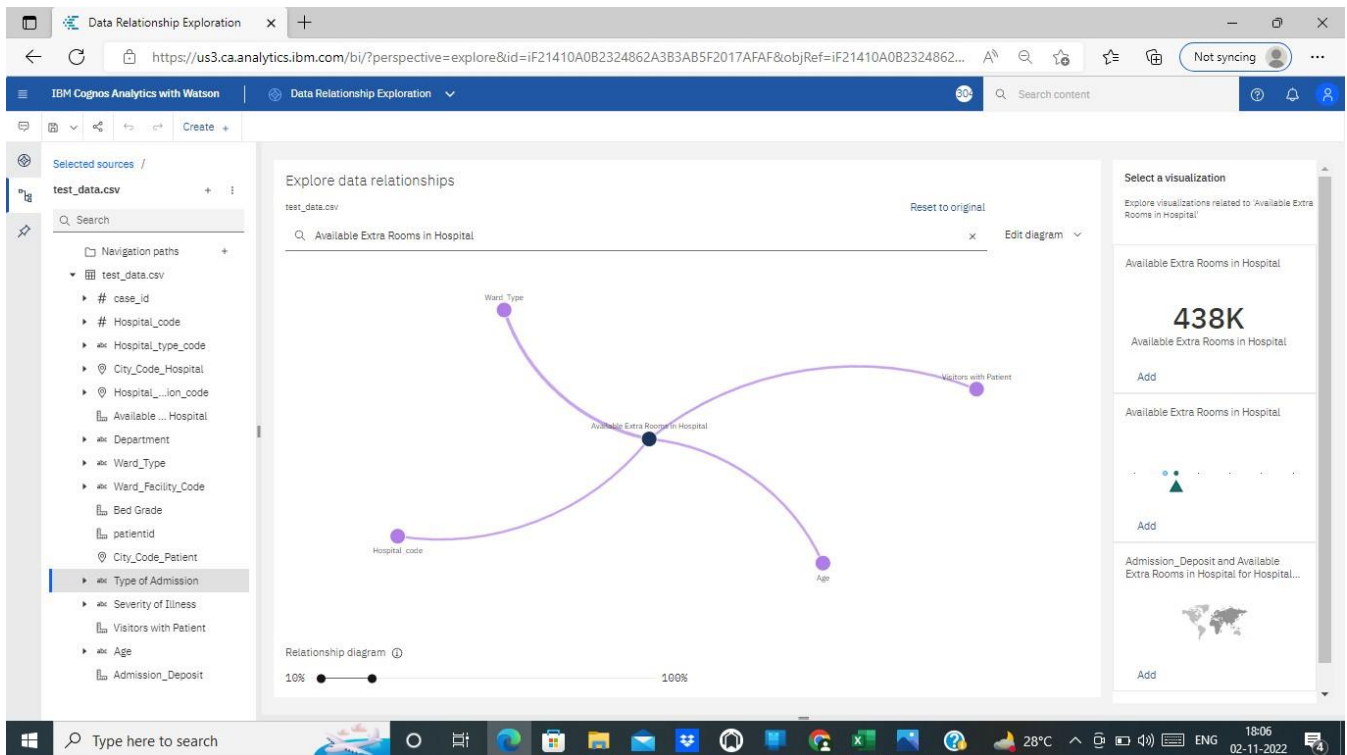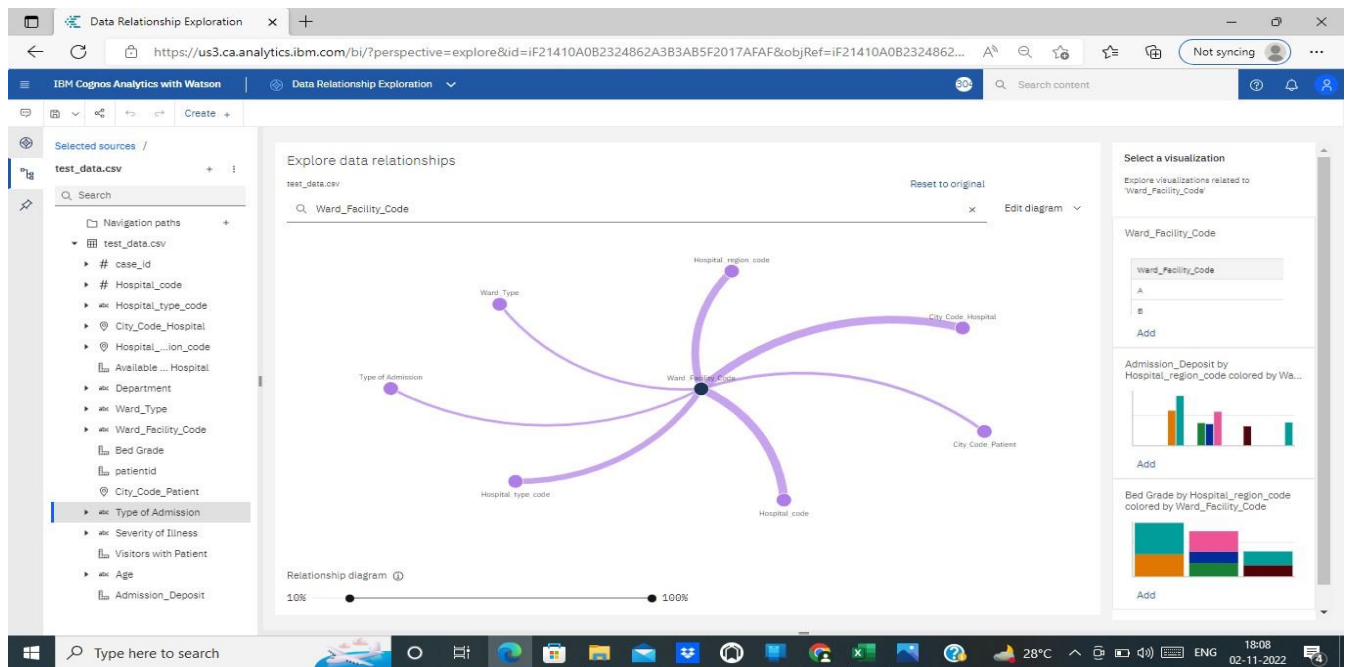
6. City_Code_Hospital

7. Age

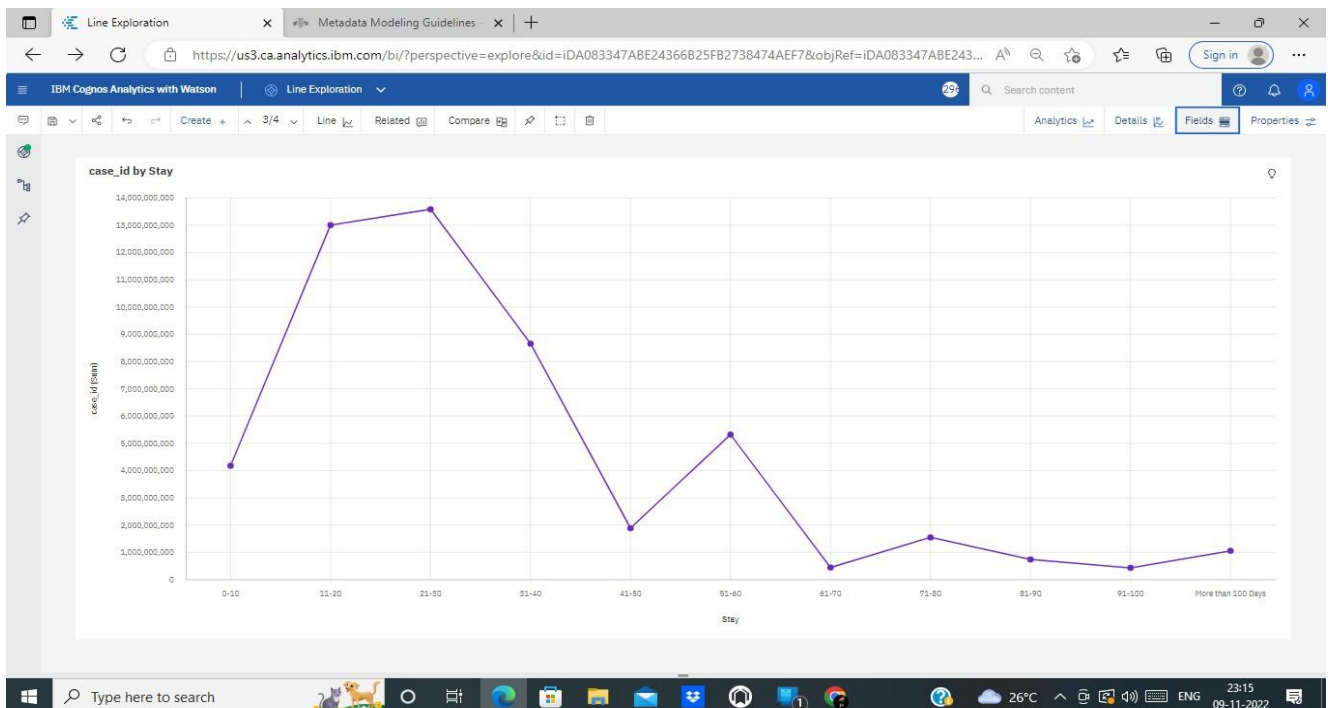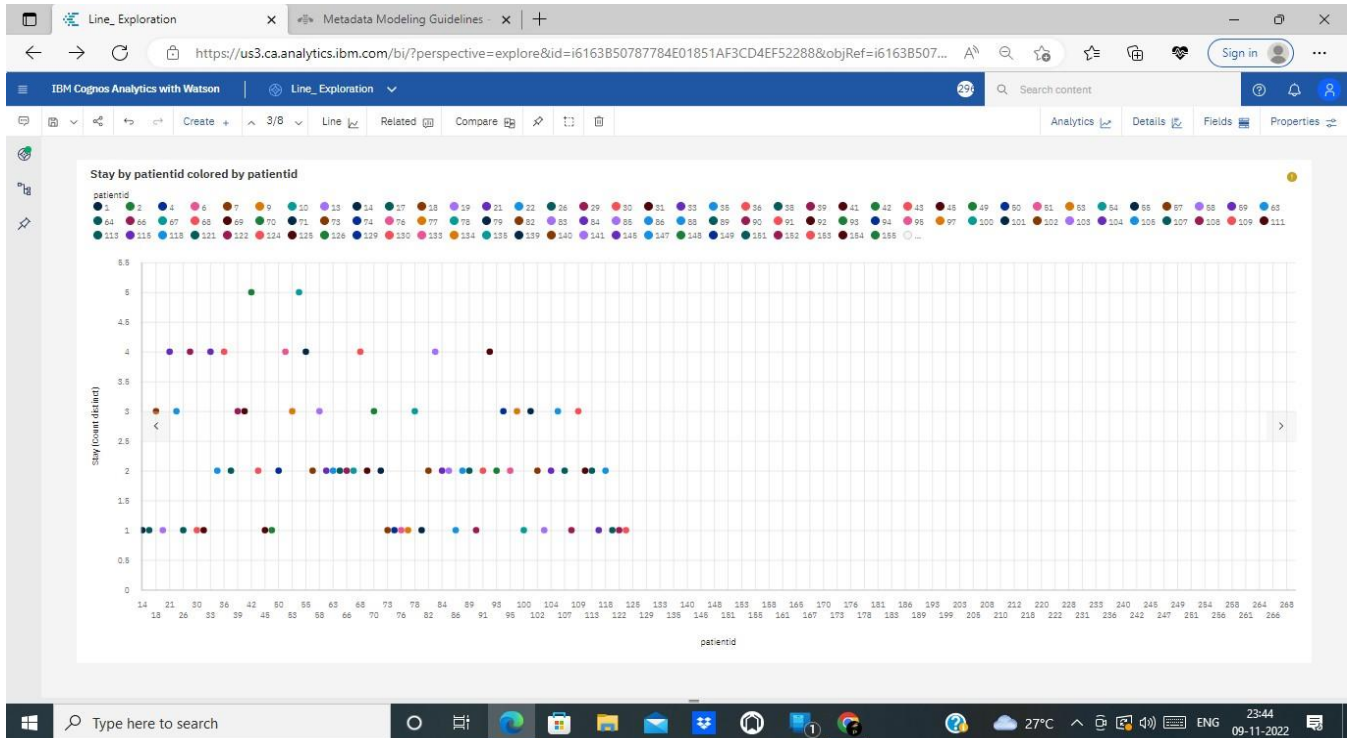8. Type of Admission

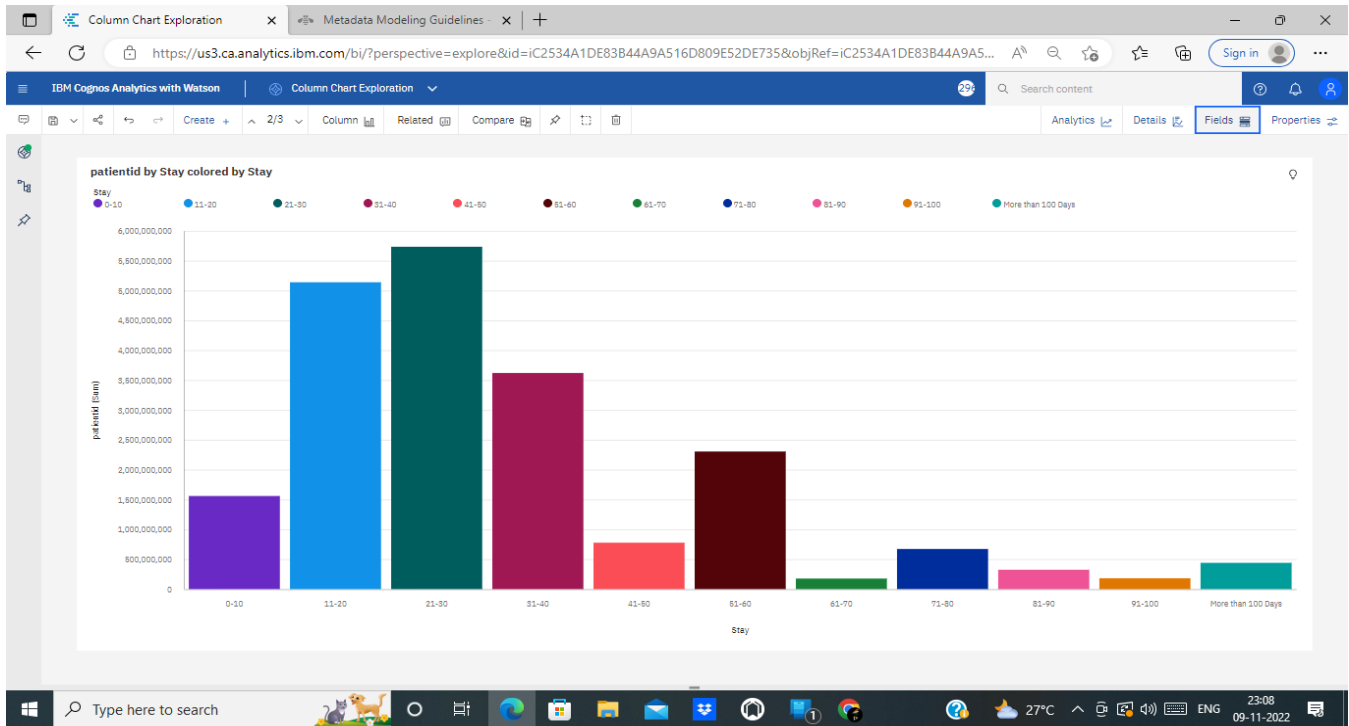9. Available Extra Rooms in Hospital

10. Ward_Facility_Code
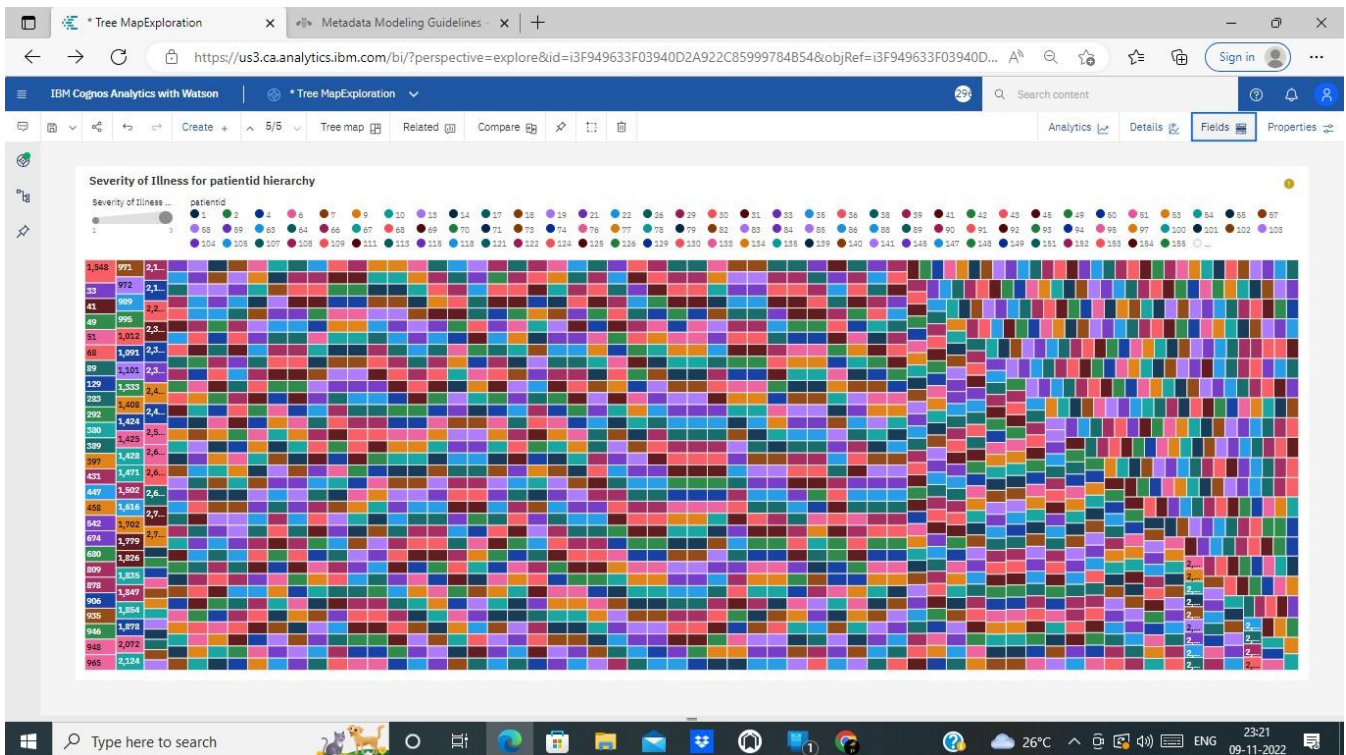
Exploratory Dara Analysis

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
	TB & Chest disease	48,066,959
	anesthesia	263,201,600
71-80	gynecology	1,645,164,854
	radiotherapy	388,325,417
	surgery	13,980,869
Summary		2,358,739,679
	TB & Chest disease	8,054,654
	anesthesia	60,835,877
81-90	gynecology	343,364,818
	radiotherapy	110,047,064
	surgery	3,976,917
Summary		523,279,330
	TB & Chest disease	2,492,225
	anesthesia	13,490,888
91-100	gynecology	45,305,369
	radiotherapy	21,111,187
	surgery	510,857
Summary		82,910,496
Summary		20,936,527,712

5. Room Availability by Pie Chart
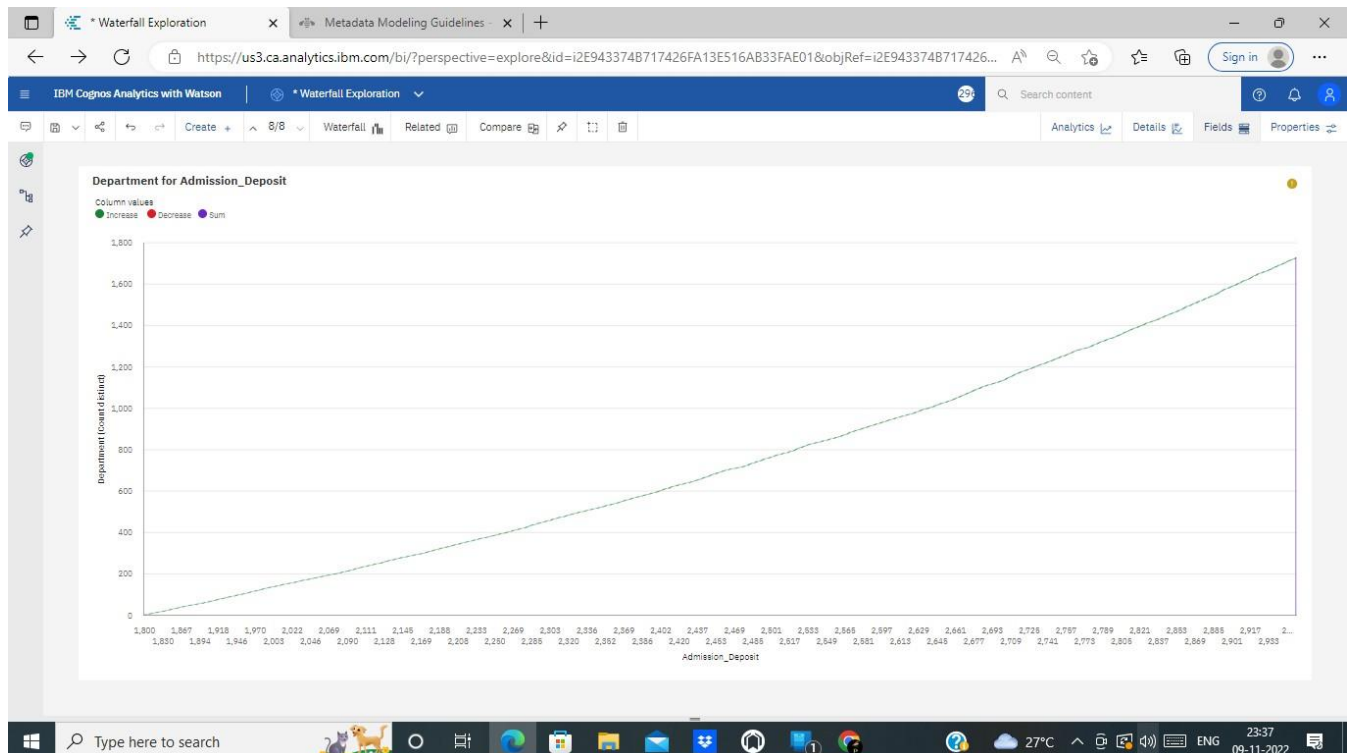

Available Extra Rooms in Hospital by Available Extra Rooms in Hospital
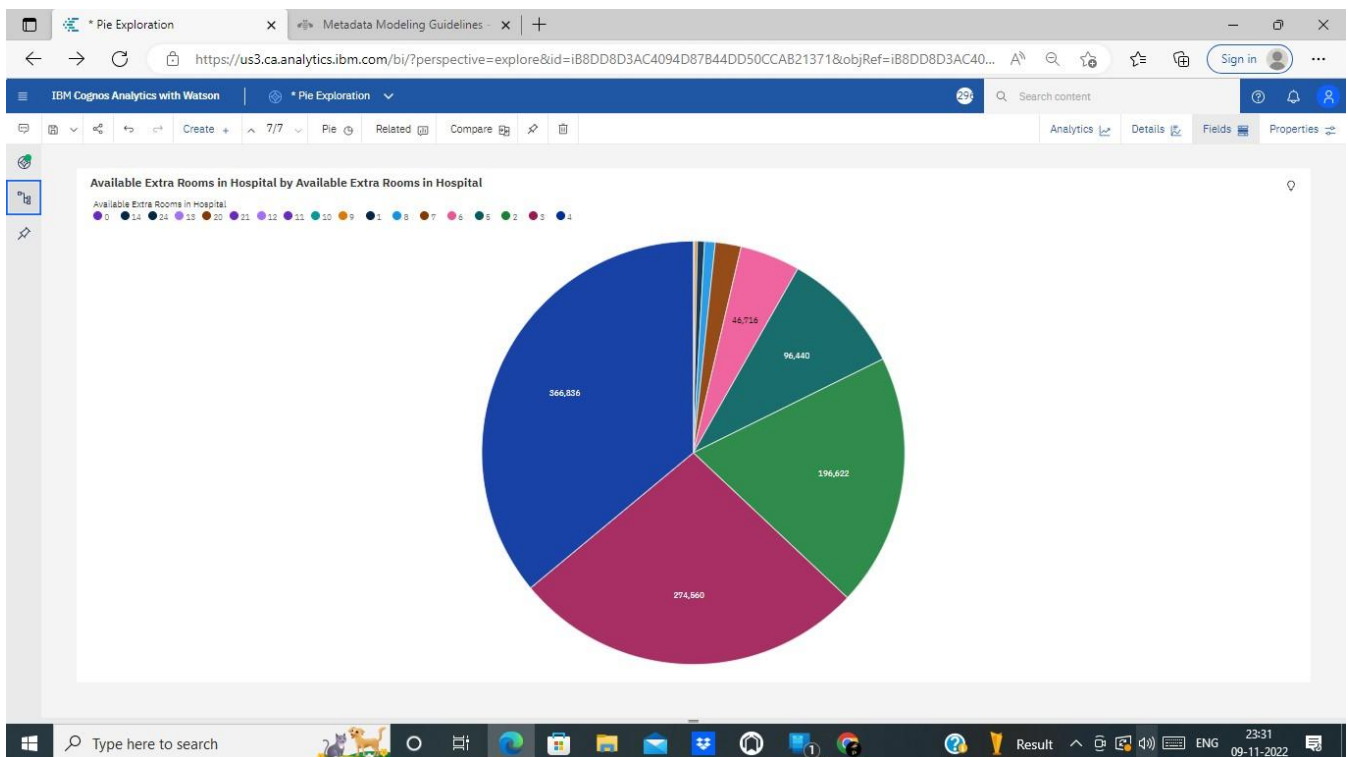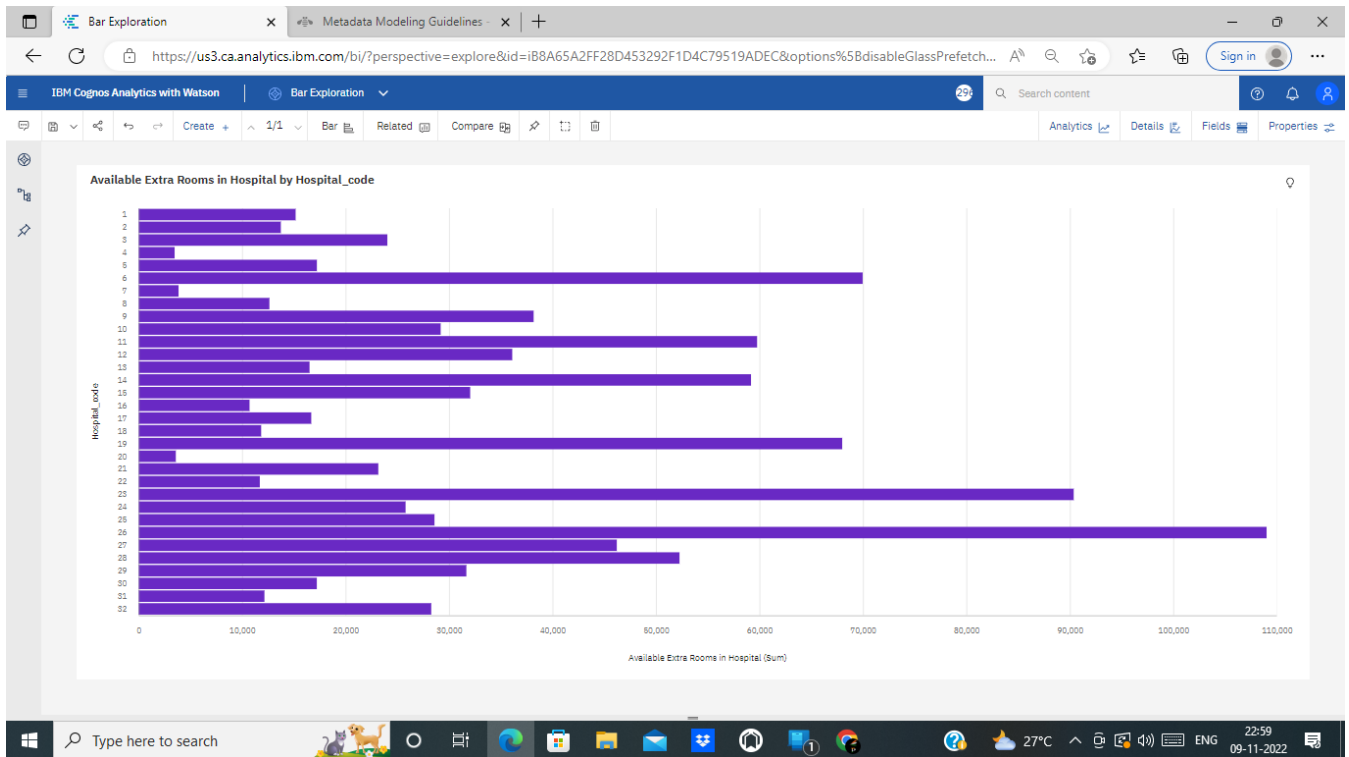
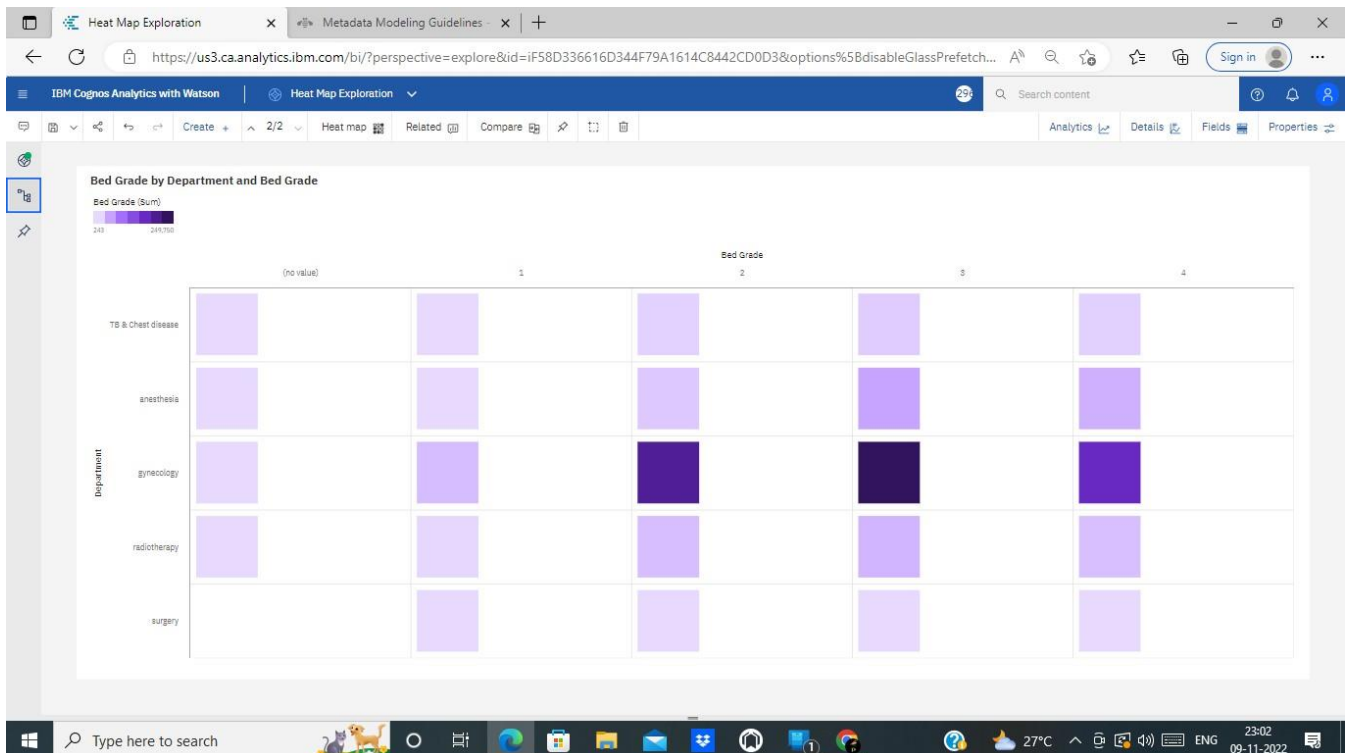**6.** Department wise number of Admissions by Waterfall Chart
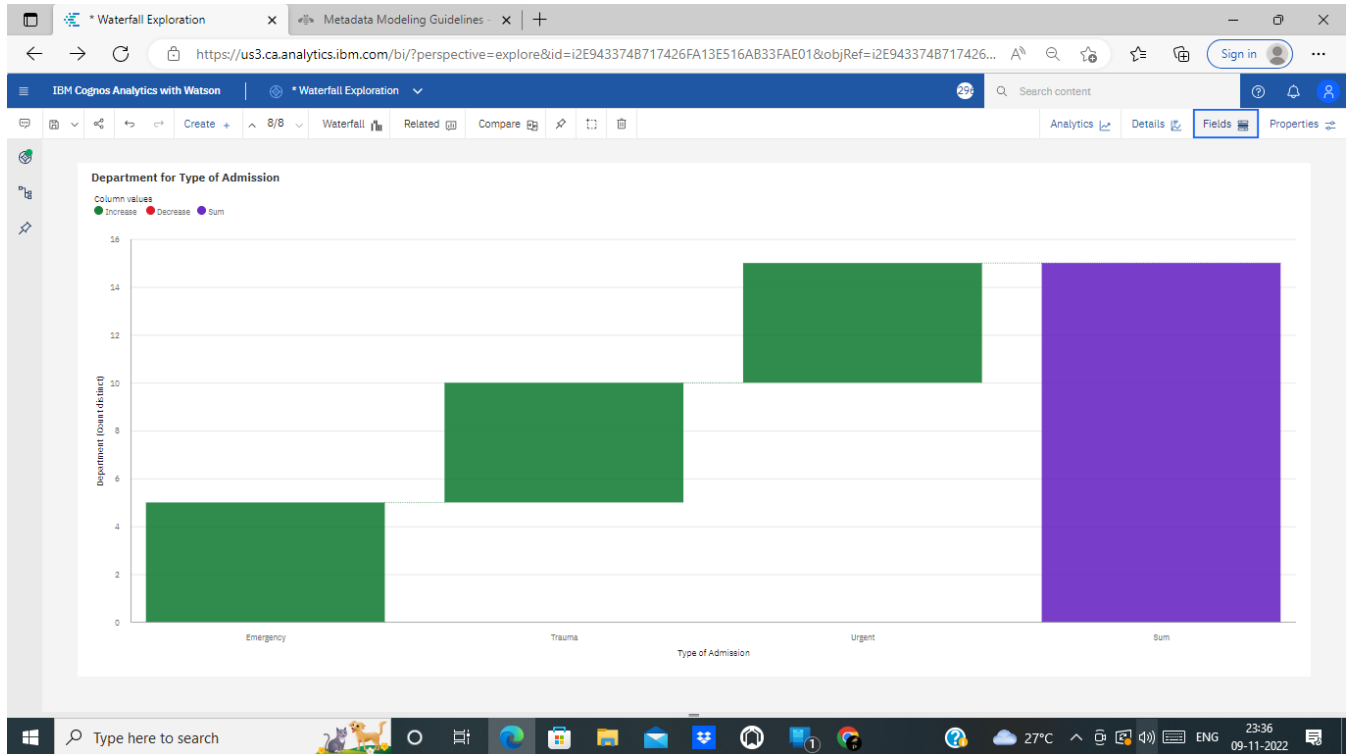
7. Admission_Deposit for Department

8. Available Extra Rooms in Hospital

9. Bed Grade by Department

10. Age, Department and ward_Type

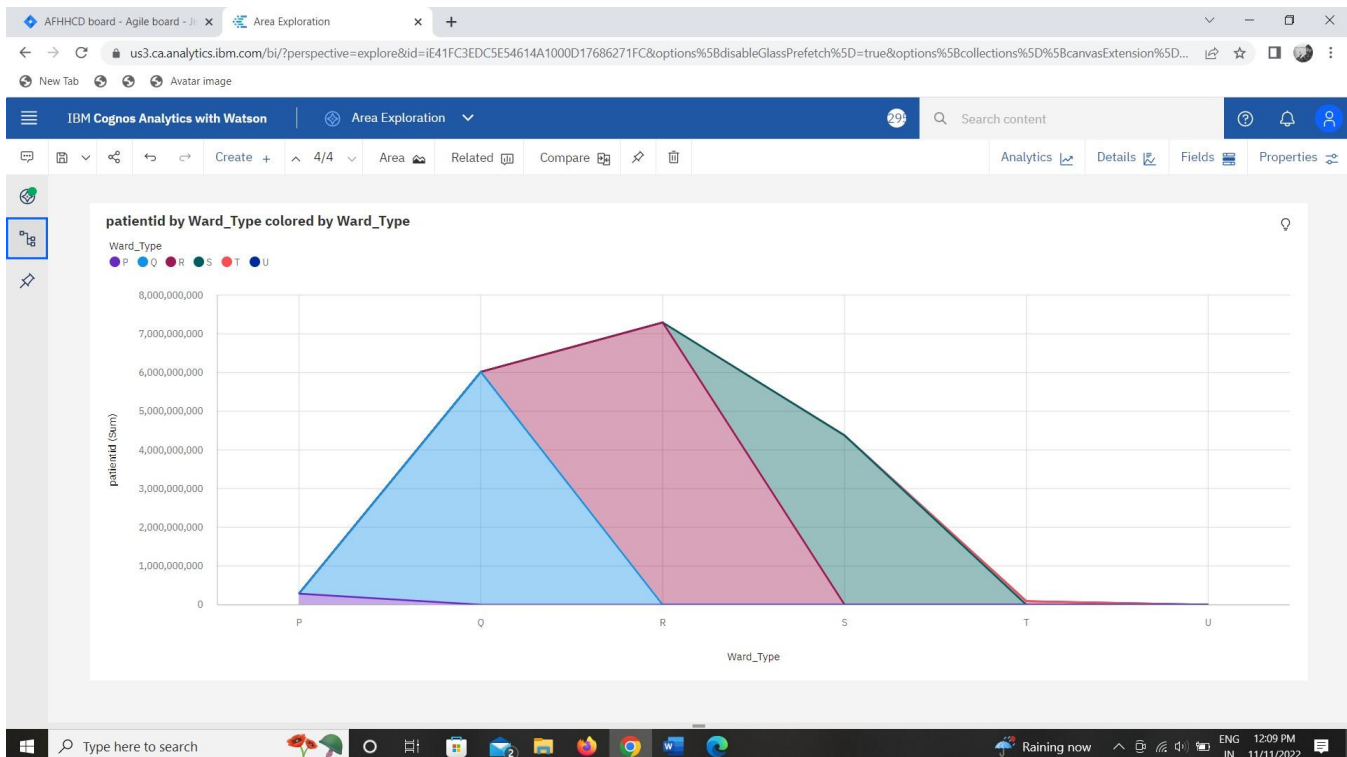**11.** Number of Patient by Ward_Types

12. Age wise Patients with Department and Severity Filter