

Project Development Phase

Delivery of Sprint-1

Date	02 NOV 2022
Team ID	PNT2022TMID04514
Project Name	Analytics for Hospitals' Health-Care Data

Project Development Phase:

Sprint-1:

- Data Collection
- Data Preparation

Sprint-2:

- Data Exploration

Sprint-3:

- Dashboard Creation
- ### Sprint-4:
- Report Creation
 - Story Creation

SPRINT-1

Data Preprocessing:

Using Jupyter notebook to remove the null values:

```
In [1]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [5]: train = pd.read_csv(r'C:\Users\mohan\OneDrive\Documents\IBM_Project\Healthcare_Data\train_data.csv')
```

```
In [7]: train.head()
```

```
Out[7]:
```

	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Available Extra Rooms in Hospital	Department	Ward_Type	Ward_Facility_Code	Bed Grade	patient
0	1	8	c	3	Z	3	radiotherapy	R	F	2.0	313
1	2	2	c	5	Z	2	radiotherapy	S	F	2.0	313
2	3	10	a	1	X	2	anesthesia	S	E	2.0	313
3	4	26	b	2	Y	2	radiotherapy	R	D	2.0	313
4	5	26	b	2	Y	2	radiotherapy	S	D	2.0	313

```
In [8]: train.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 318438 entries, 0 to 318437
Data columns (total 12 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   case_id                               318438 non-null  int64
1   Hospital_code                         318438 non-null  int64
2   Hospital_type_code                   318438 non-null  object
3   City_Code_Hospital                   318438 non-null  int64
4   Hospital_region_code                 318438 non-null  object
5   Available Extra Rooms in Hospital    318438 non-null  int64
6   Department                           318438 non-null  object
```

```
In [17]: train.isnull().sum()
```

```
Out[17]: case_id          0
Hospital_code          0
Hospital_type_code      0
City_Code_Hospital      0
Hospital_region_code     0
Available Extra Rooms in Hospital  0
Department              0
Ward_Type               0
Ward_Facility_Code      0
Bed Grade               0
patientid               0
City_Code_Patient       0
Type of Admission       0
Severity of Illness      0
Visitors with Patient    0
Age                     0
Admission_Deposit        0
Stay                     0
dtype: int64
```

```
In [18]: train = train.to_csv('final_train_data.csv', index=False)
```

```
In [19]: test = pd.read_csv(r'C:\Users\mohan\OneDrive\Documents\IBM_Project\Healthcare_Data\test_data.csv')
```

```
In [20]: test.head()
```

```
Out[20]:
```

	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Available Extra Rooms in Hospital	Department	Ward_Type	Ward_Facility_Code	Bed Grade	patientid
0	318439	21	c	3	Z	3	gynecology	S	A	2.0	170
1	318440	29	a	4	X	2	gynecology	S	F	2.0	170

```

Stay                                0
dtype: int64

In [11]: train['Bed Grade'].value_counts()
Out[11]: 2.0    123671
         3.0    110583
         4.0     57566
         1.0     26505
         Name: Bed Grade, dtype: int64

In [12]: train['Bed Grade'].unique()
Out[12]: array([ 2.,  3.,  4.,  1., nan])

In [13]: train.shape
Out[13]: (318438, 18)

In [14]: train.dropna(inplace=True)


In [15]: train.shape
Out[15]: (313793, 18)

In [16]: train.head()
Out[16]:


```


	case_id	Hospital_code	Hospital_type_code	City_Code_Hospital	Hospital_region_code	Available Extra Rooms in Hospital	Department	Ward_Type	Ward_Facility_Code	Bed Grade	patien
0	1	8	c	3	Z	3	radiotherapy	R	F	2.0	313
1	2	2	c	5	Z	2	radiotherapy	S	F	2.0	313
2	3	10	e	1	X	2	anesthesia	S	E	2.0	313
3	4	26	b	2	Y	2	radiotherapy	R	D	2.0	313


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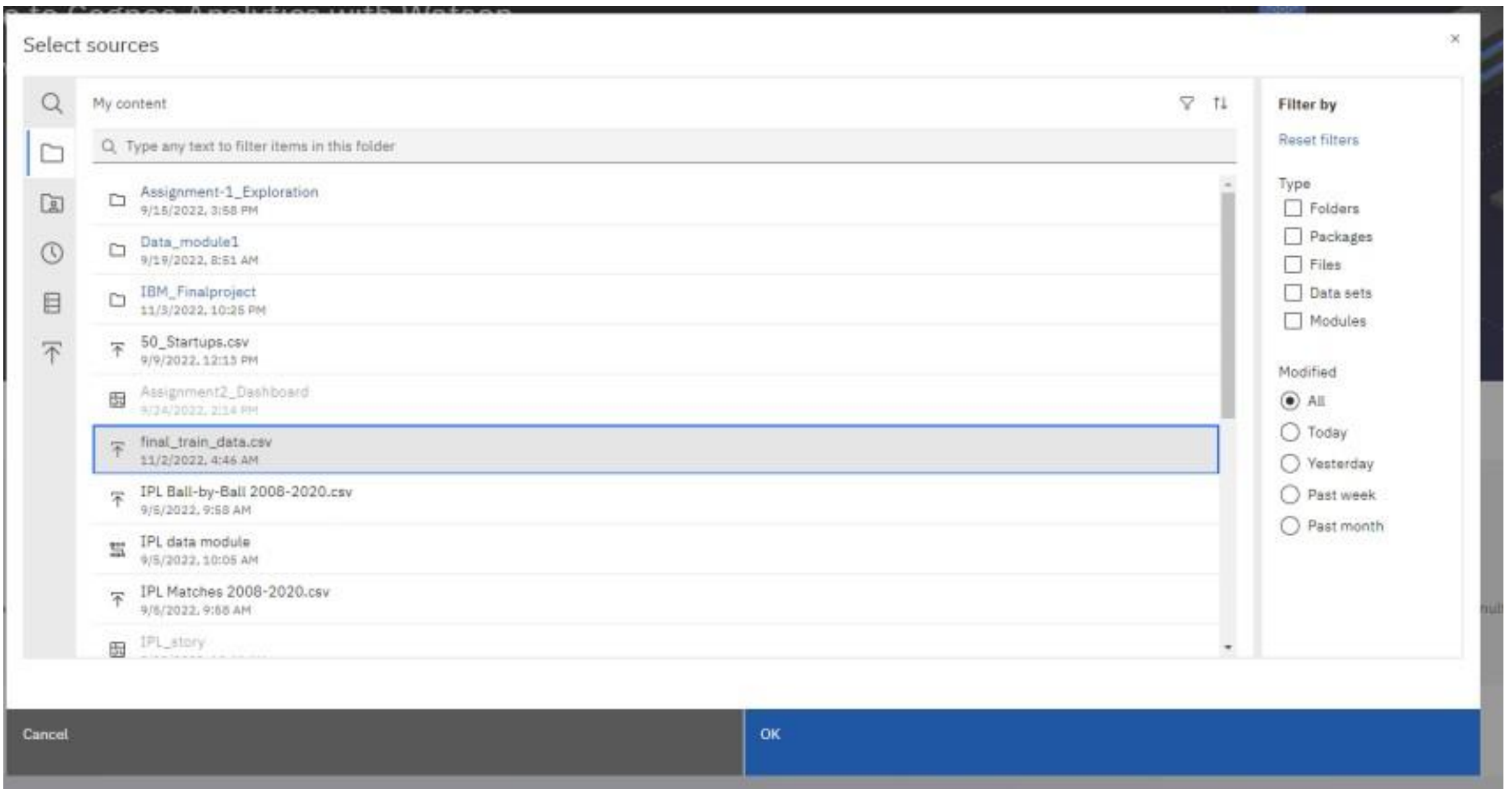
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