

Uber Supply Demand Gap

Assignment by Brajeshwar Thakur

This is the pre-processing

The screenshot shows a Jupyter Notebook running in a web browser. The browser tabs include 'upGrad | Learning Platform', 'EDA and Inferential Stats.ipynb', 'PYTHON PROJECT/project 7 (U...', and 'Uber - Jupyter Notebook'. The address bar shows 'localhost:8888/notebooks/PYTHON PROJECT/project 7 (UBER)/Uber.ipynb#Observations'. The Jupyter interface has a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help) and a toolbar with icons for file operations, running cells, and code execution. The notebook title is 'Uber Last Checkpoint: 14 hours ago (autosaved)'.

The code in the notebook is as follows:

```
warnings.filterwarnings('ignore')

In [2]: df = pd.read_csv('Uber Request data.csv')
df.head() # first few records/rows of the dataframe

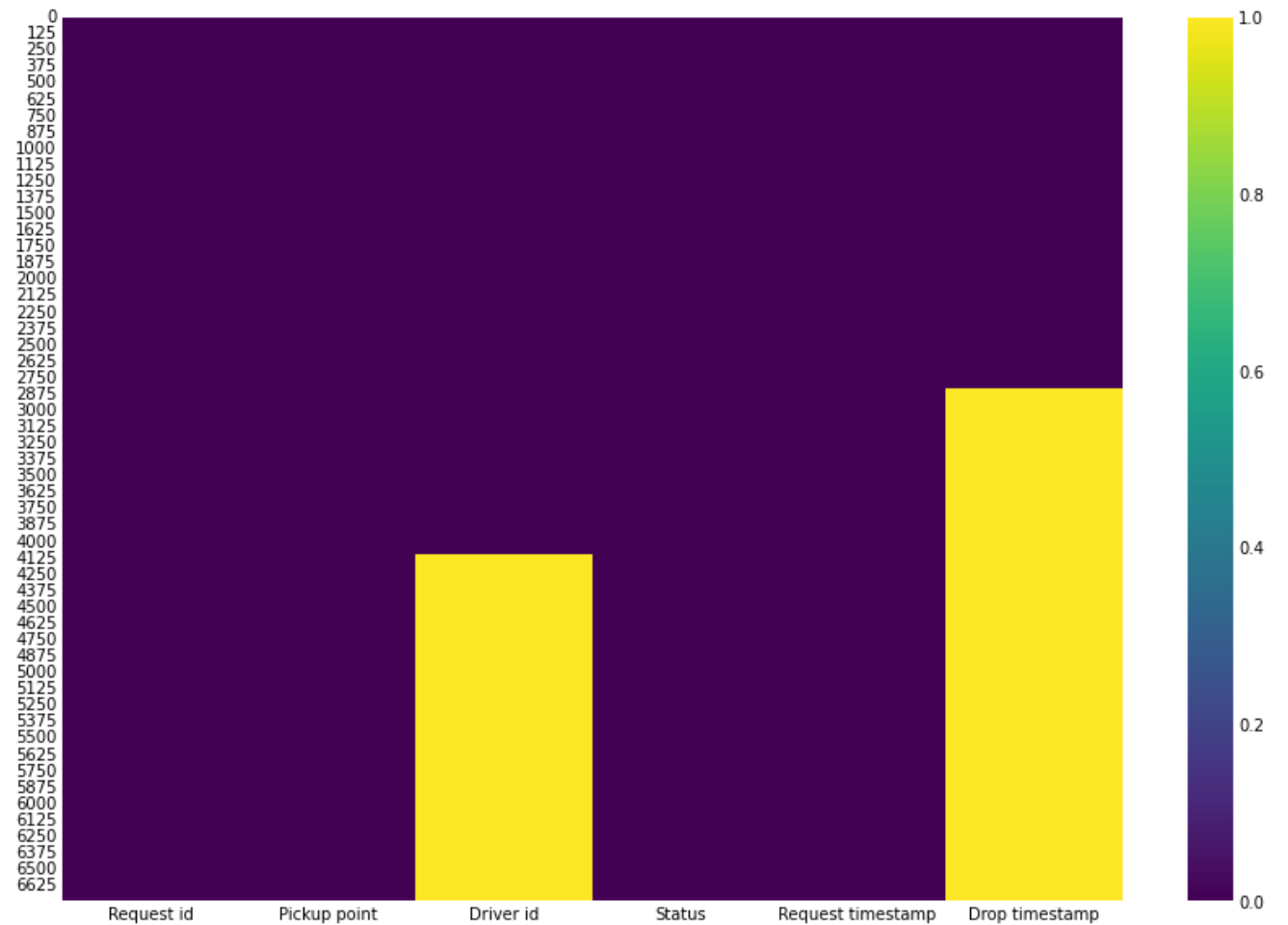
Out[2]:
```

	Request id	Pickup point	Driver id	Status	Request timestamp	Drop timestamp
0	619	Airport	1.0	Trip Completed	11/7/2016 11:51	11/7/2016 13:00
1	867	Airport	1.0	Trip Completed	11/7/2016 17:57	11/7/2016 18:47
2	1807	City	1.0	Trip Completed	12/7/2016 9:17	12/7/2016 9:58
3	2532	Airport	1.0	Trip Completed	12/7/2016 21:08	12/7/2016 22:03
4	3112	City	1.0	Trip Completed	13-07-2016 08:33:16	13-07-2016 09:25:47

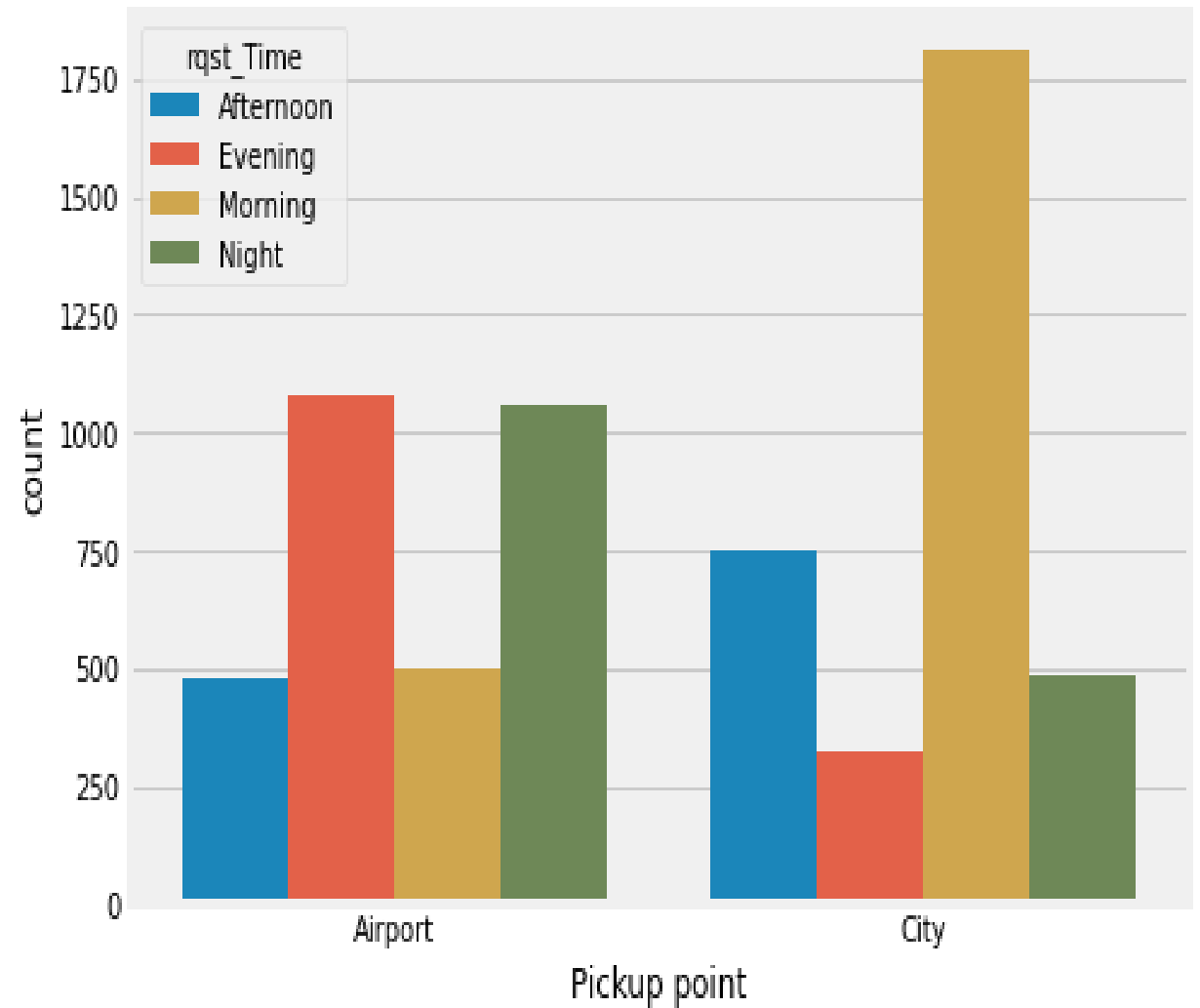
```
In [3]: df.info() # information about our data frame like the shape (rows, columns), the data type of our features, and the memc
<
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 6745 entries, 0 to 6744
Data columns (total 6 columns):
#   Column                Non-Null Count  Dtype
---  ---                ---
0   Request id            6745 non-null   int64
1   Pickup point          6745 non-null   object
2   Driver id             4095 non-null   float64
3   Status                6745 non-null   object
4   Request timestamp     6745 non-null   object
5   Drop timestamp        2831 non-null   object
dtypes: float64(1), int64(1), object(4)
memory usage: 316.3+ KB
```

The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system tray on the right shows the temperature (31°C), network status, and the date and time (12:44, 26-04-2022).

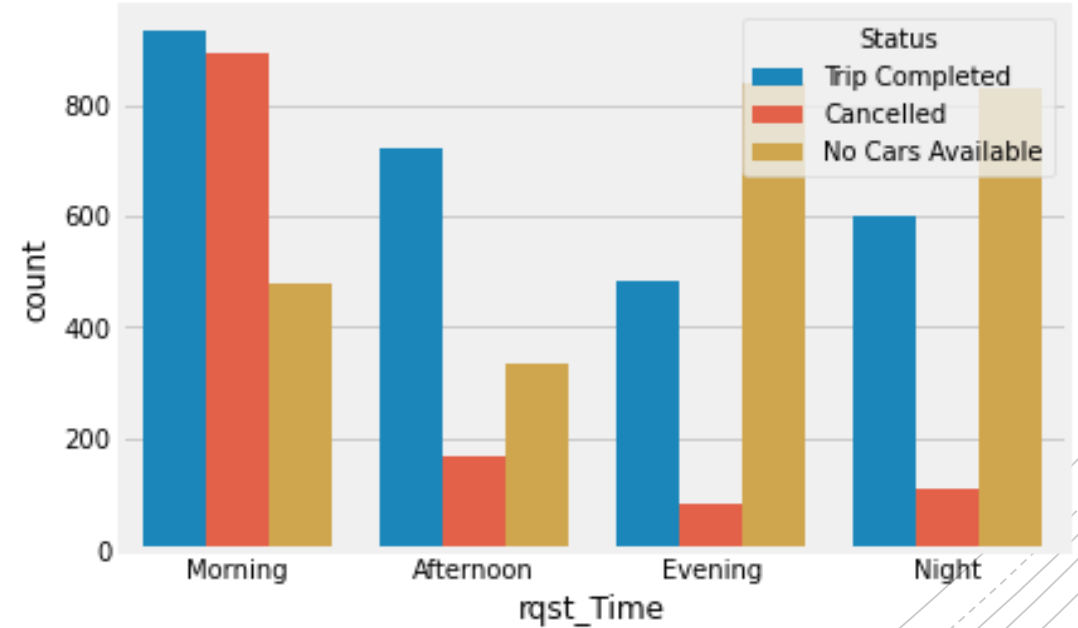
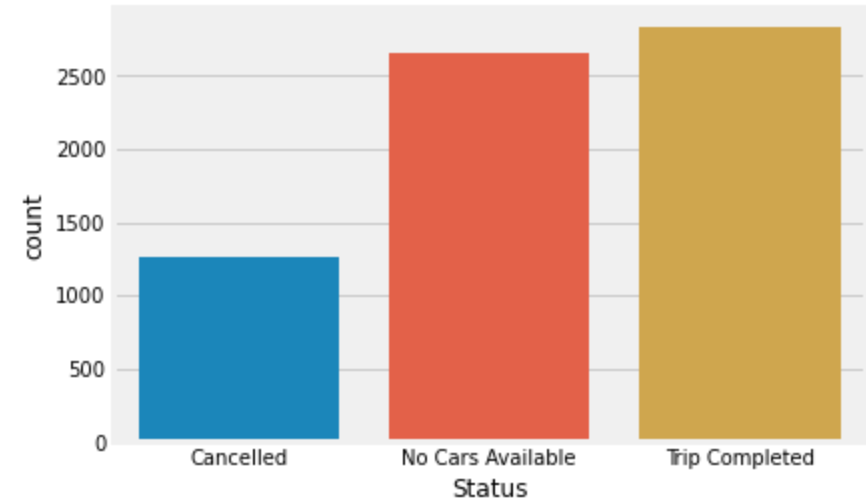
This shows the missing values that need to be cleaned



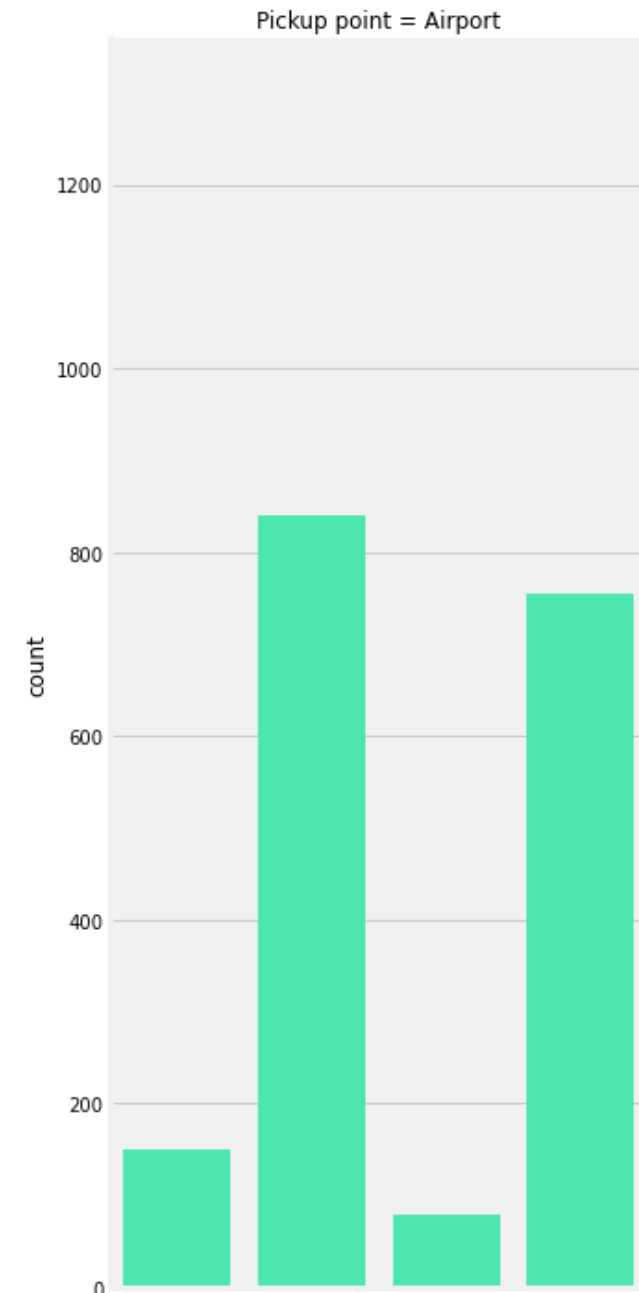
This shows the amount of requests w.r.t time and pickup position. There's a high demand in the morning



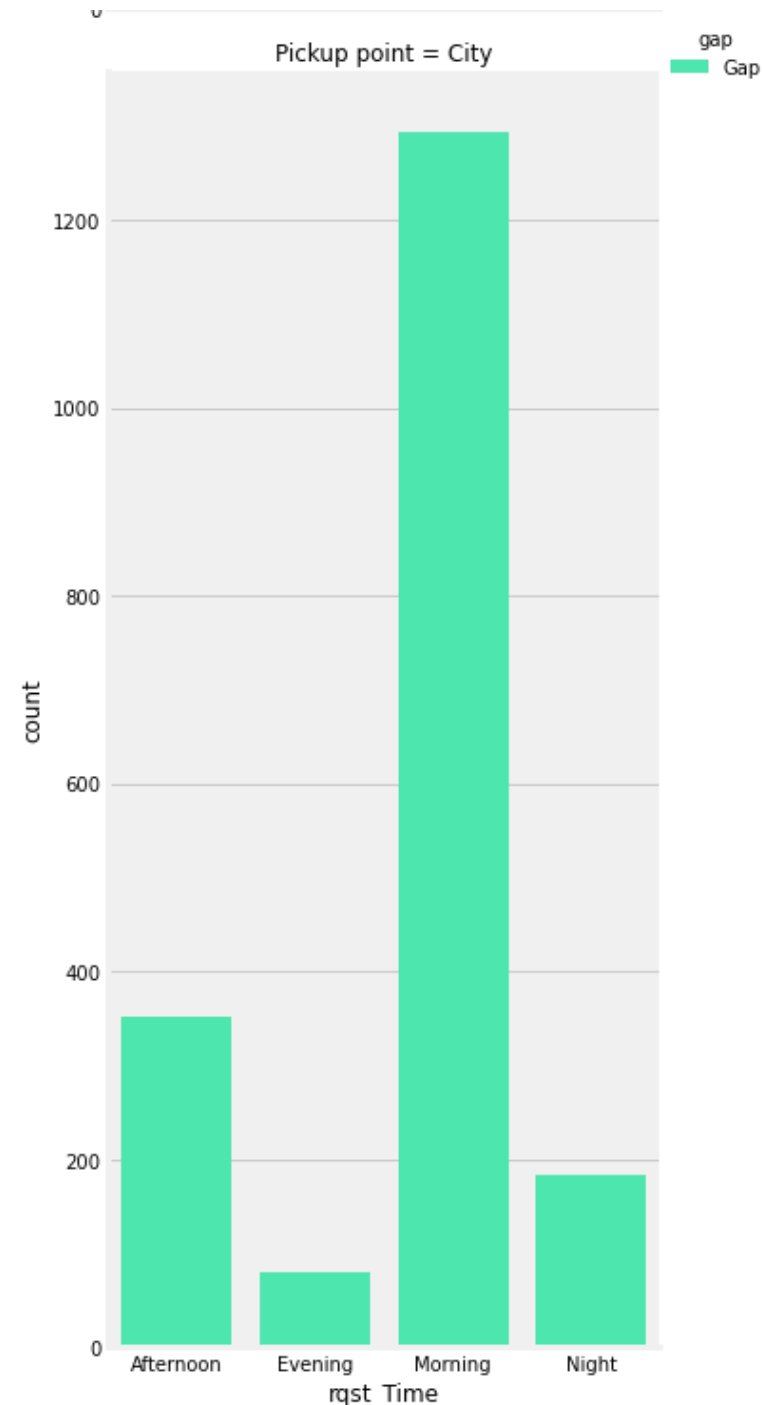
In morning the
cancellation is
greater whereas
during evening and
night the availability
is less



At the airport ,during evening and night shifts there is increase in demand but decrease in supply (end of shifts as drivers go home)

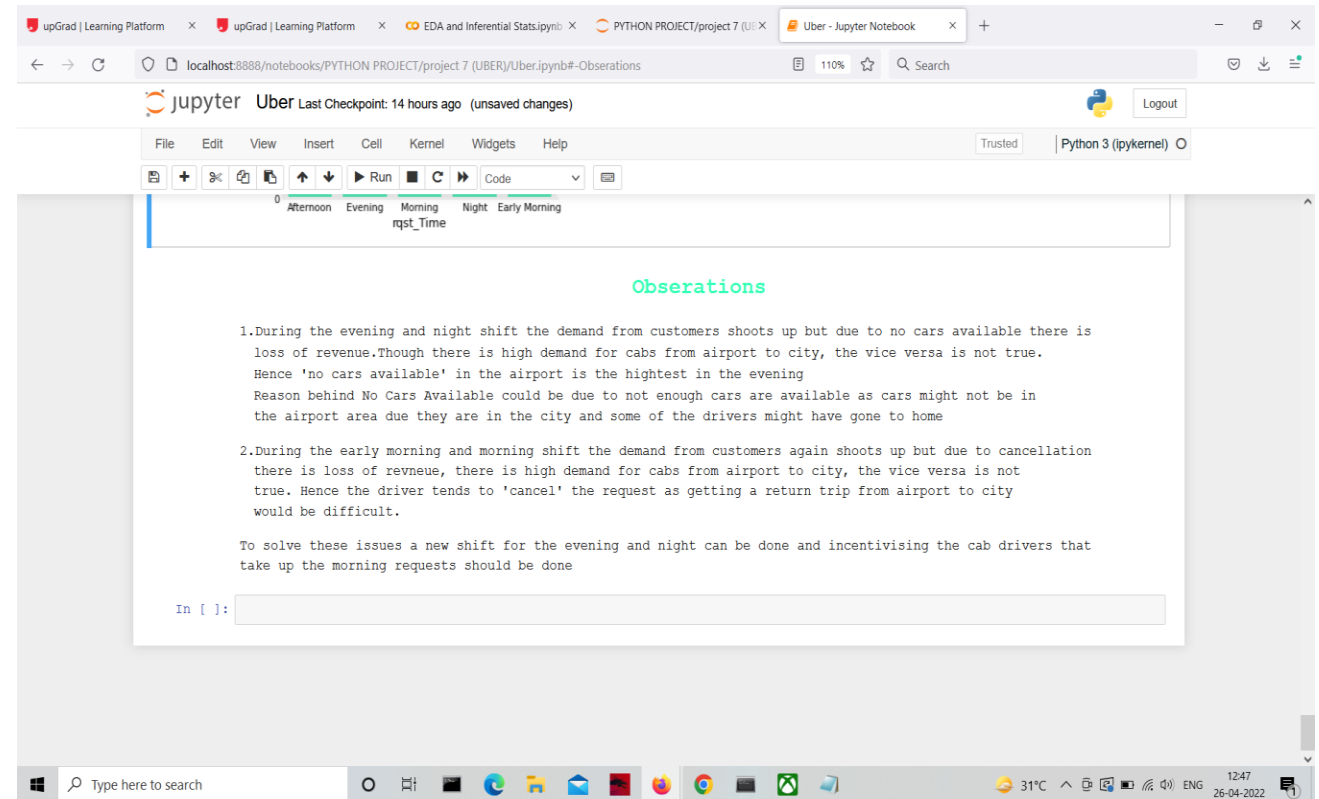


In city ,during morning
the demand increases
but supply decreases
(cancellation by drivers)



Conclusion :

A new shift in the evening and night can be proposed and incentivizing the cab drivers that take up the morning requests should be done



The screenshot displays a Jupyter Notebook titled "Uber Last Checkpoint: 14 hours ago (unsaved changes)" running on a local host. The notebook contains a text area with the following content:

Observations

1. During the evening and night shift the demand from customers shoots up but due to no cars available there is loss of revenue. Though there is high demand for cabs from airport to city, the vice versa is not true. Hence 'no cars available' in the airport is the highest in the evening. Reason behind No Cars Available could be due to not enough cars are available as cars might not be in the airport area due they are in the city and some of the drivers might have gone to home.
2. During the early morning and morning shift the demand from customers again shoots up but due to cancellation there is loss of revenue, there is high demand for cabs from airport to city, the vice versa is not true. Hence the driver tends to 'cancel' the request as getting a return trip from airport to city would be difficult.

To solve these issues a new shift for the evening and night can be done and incentivizing the cab drivers that take up the morning requests should be done

The interface includes a menu bar (File, Edit, View, Insert, Cell, Kernel, Widgets, Help), a toolbar with icons for file operations and execution, and a status bar at the bottom showing the system clock (12:47) and date (26-04-2022).

Made by :
Brajeshwar Thakur

Section : K20CH

12018241

RK20CHB71