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In [1]: # =====  
# LEVEL 2 - ALL TASKS  
# =====
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In [2]: import pandas as pd  
import matplotlib.pyplot as plt
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In [3]: df = pd.read_csv("C:/Users/jadha/Downloads/Dataset .csv")  
df['Cuisines'] = df['Cuisines'].fillna("Not Specified")
```

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In [4]: # Task 1: Table Booking & Online Delivery
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In [5]: print("Table Booking %:\n", df['Has Table booking'].value_counts(normalize=True))
```

```
Table Booking %:  
Has Table booking  
No      87.875615  
Yes     12.124385  
Name: proportion, dtype: float64
```

```
In [6]: print("Online Delivery %:\n", df['Has Online delivery'].value_counts(normalize=True))
```

```
Online Delivery %:  
Has Online delivery  
No      74.337766  
Yes     25.662234  
Name: proportion, dtype: float64
```

```
In [7]: print("Average Rating by Booking:\n", df.groupby('Has Table booking')['Aggregate rating'].mean())
```

```
Average Rating by Booking:  
Has Table booking  
No      2.559359  
Yes     3.441969  
Name: Aggregate rating, dtype: float64
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In [8]: # Task 2: Price Range Analysis
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In [9]: print("Most Common Price Range:\n", df['Price range'].value_counts())
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Most Common Price Range:  
Price range  
1      4444  
2      3113  
3      1408  
4       586  
Name: count, dtype: int64
```

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In [10]: avg_price = df.groupby('Price range')['Aggregate rating'].mean()  
print("Average Rating per Price Range:\n", avg_price)
```

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Average Rating per Price Range:  
Price range  
1      1.999887  
2      2.941054  
3      3.683381  
4      3.817918  
Name: Aggregate rating, dtype: float64
```

```
In [11]: plt.figure()
avg_price.plot(kind='bar')
plt.title("Average Rating by Price Range")
plt.xlabel("Price Range")
plt.ylabel("Average Rating")
plt.show()
```



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In [12]: # Task 3: Feature Engineering
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In [13]: df['Name_Length'] = df['Restaurant Name'].apply(len)
df['Has_Table_Booking'] = df['Has Table booking'].map({'Yes':1, 'No':0})
df['Has_Online_Delivery'] = df['Has Online delivery'].map({'Yes':1, 'No':0})

print(df[['Name_Length', 'Has_Table_Booking', 'Has_Online_Delivery']].head())
```

	Name_Length	Has_Table_Booking	Has_Online_Delivery
0	16	1	0
1	16	1	0
2	22	1	0
3	4	0	0
4	11	1	0

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