

## Run Library

In [4]: `import pandas as pd`

## Run Data

In [5]: `Df = pd.read_csv("Final_Results.csv")`

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

Out[7]:

	AWB Code	Order ID	Charged Weight	Warehouse Pincode	Customer Pincode	Zone	Type of Shipment	Billing Amount (Rs.)	Char Billed Cou Comp (l
0	1091117222124	2001806232	1.30	121003	507101	d	Forward charges	135.0	113!
1	1091117222194	2001806273	1.00	121003	486886	d	Forward charges	90.2	113!
2	1091117222931	2001806408	2.50	121003	532484	d	Forward charges	224.6	113!
3	1091117223244	2001806458	1.00	121003	143001	b	Forward charges	61.3	190
4	1091117229345	2001807012	0.15	121003	515591	d	Forward charges	45.4	113!

## Find Out Correctly Charged Amount, Over Charged And Under Charged

In [54]: `# Correctly Charged Orders`  
`correctly_charged = Df[(Df['Billing Amount (Rs.)'] >= 71) & (Df['Billing Amount (Rs.)'] < 100)]`  
`correctly_charged_count = correctly_charged.shape[0]`  
`correctly_charged_amount = correctly_charged['Billing Amount (Rs.)'].sum()`

In [55]: `correctly_charged_count`

Out[55]: 70

In [56]: `correctly_charged_amount`

Out[56]: 6804.8

```
In [39]: # Over Charged Orders
Over_charged = Df[(Df['Billing Amount (Rs.)'] >= 151) & (Df['Billing Amount (Rs.)'] < 300)]
Over_charged_count = Over_charged.shape[0]
Over_charged_amount = Over_charged['Billing Amount (Rs.)'].sum()
```

```
In [40]: Over_charged_count
```

```
Out[40]: 25
```

```
In [41]: Over_charged_amount
```

```
Out[41]: 5405.0
```

```
In [48]: # Under Charged Orders
Under_charged = Df[(Df['Billing Amount (Rs.)'] >= 0) & (Df['Billing Amount (Rs.)'] < 151)]
Under_charged_count = Under_charged.shape[0]
Under_charged_amount = Under_charged['Billing Amount (Rs.)'].sum()
```

```
In [49]: Under_charged_count
```

```
Out[49]: 29
```

```
In [50]: Under_charged_amount
```

```
Out[50]: 1438.4
```

## Final DataFrame Results

```
In [58]: # Summary Table Creation
summary_data = {
    'Category': ['Total orders where X has been correctly charged', 'Total Orders where X has been overcharged', 'Total Orders where X has been undercharged'],
    'Count_Of_Orders': [correctly_charged_count, Over_charged_count, Under_charged_count],
    'Amount (Rs.)': [correctly_charged_amount, Over_charged_amount, Under_charged_amount]
}

Summary_Data = pd.DataFrame(summary_data)
```

```
In [59]: Summary_Data
```

```
Out[59]:
```

	Category	Count_Of_Orders	Amount (Rs.)
0	Total orders where X has been correctly charged	70	6804.8
1	Total Orders where X has been overcharged	25	5405.0
2	Total Orders where X has been undercharged	29	1438.4

## Results to CSV File

```
In [60]: Summary_Data.to_csv('Final_Assignment_Results.csv', index=False)
```

```
In [ ]:
```