```python
In [64]:    from kafka import KafkaConsumer
            import json
            import pandas as pd
```

```python
In [65]:    consumer=KafkaConsumer('test-topic',bootstrap_servers={'localhost:9092'},api_version=(0,10))
```

```python
In [66]:    clustering_df=pd.read_csv(r"C:\Users\briju\Desktop\Mtech\Assignment\cluster_df.csv")
            customer_data_df=pd.read_csv(r"C:\Users\briju\Desktop\Mtech\Assignment\customer_data.csv")
```

```python
In [67]:    customer_data_df
```

Out[67]:

	Unnamed: 0	CustomerID	Mobile_no
0	0	1	4228850922
1	1	2	3015121903
2	2	3	2359973139
3	3	4	4199814046
4	4	5	8158752393
...	...	...	...
195	195	196	8296638539
196	196	197	2692547530
197	197	198	2729118437
198	198	199	1388567256
199	199	200	4108062435

200 rows × 3 columns

```python
In [68]:    clustering_df
```

Out[68]:

	Unnamed: 0	CustomerID	Gender	Age	Annual Income (k$)	Spending Score (1-100)	cluster
0	0	1	Male	19	15	39	C3
1	1	2	Male	21	15	81	C3
2	2	3	Female	20	16	6	C5
3	3	4	Female	23	16	77	C3
4	4	5	Female	31	17	40	C3
...	...	...	...	...	...	...	...
195	195	196	Female	35	113	79	C4
196	196	197	Female	45	113	28	C1
197	197	198	Male	32	113	74	C4
198	198	199	Male	32	113	18	C1
199	199	200	Male	30	113	83	C4

200 rows × 7 columns

```python
In [ ]:    for message in consumer:
               a=json.loads(message.value)
               #print(message.value)
               ID=int(a['id'])
               direc=a['dir']


               #print(int(a))
               #print(type(a))
               c_mob_no=(customer_data_df[(customer_data_df['CustomerID']==ID)].Mobile_no).values
               c_cluster=(clustering_df[(clustering_df['CustomerID']==ID)].cluster).values
               Generate_offer(c_cluster,direc,c_mob_no)
```

```
offer sent on this Mobile no [2078826480]
Buy 1 get Coke free
offer sent on this Mobile no [2078826480]
Buy 1 get Coke free+5%off
offer sent on this Mobile no [8425088473]
Extra Cheese free on any Pizza
offer sent on this Mobile no [6512407645]
Buy 1 get Coke free
offer sent on this Mobile no [6512407645]
Buy 1 get Coke free+5%off
offer sent on this Mobile no [9580767606]
Extra Cheese free on any Pizza
offer sent on this Mobile no [9580767606]
Extra Cheese free on any Pizza+5%off
offer sent on this Mobile no [4725990051]
Buy 1 get Coke free
offer sent on this Mobile no [4725990051]
Buy 1 get Coke free+5%off
offer sent on this Mobile no [295113030]
Extra Cheese free on any Pizza
offer sent on this Mobile no [295113030]
Extra Cheese free on any Pizza+5%off
offer sent on this Mobile no [4064469517]
Buy 1 get Coke free
offer sent on this Mobile no [4064469517]
Buy 1 get Coke free+5%off
offer sent on this Mobile no [7297687058]
Extra Cheese free on any Pizza
offer sent on this Mobile no [7862966399]
Extra Cheese free on any Pizza
offer sent on this Mobile no [7862966399]
Extra Cheese free on any Pizza+5%off
offer sent on this Mobile no [1706259461]
25% discount on large pizza
offer sent on this Mobile no [1706259461]
25% discount on large pizza+5%off
```

```python
In [ ]:
```

```python
In [ ]:    def Generate_offer(cluster,direc,mob_no):
               if cluster=="C1":
                   offer="Buy 2 get 1 free on any pizza"
               elif cluster=="C2":
                   offer="25% discount on large pizza"

               elif cluster=="C3":
                   offer="Buy 1 get Coke free"
               elif cluster=="C4":
                   offer="Extra Cheese free on any Pizza"
               elif cluster=="C5":
                   offer="20% off on any pizza"
               if direc=="F":
                   offer=offer+"+5%off"
                   print("offer sent on this Mobile no",mob_no)
                   print(offer)
               else:
                   print("offer sent on this Mobile no",mob_no)
                   print(offer)
```

```python
In [ ]:
```