```python
import pandas as pd

order_data = pd.read_csv(r'C:\Users\91637\OneDrive\Desktop\sev\e commerce.csv')

order_data['order_date'] = pd.to_datetime(order_data['order_date'])

total_orders_per_customer = order_data.groupby('customer_id')['order_date'].count()

average_quantity_per_product = order_data.groupby('product_name')['order_quantity'].mean()

earliest_order_date = order_data['order_date'].min()
latest_order_date = order_data['order_date'].max()

print("\nTotal number of orders made by each customer:")
print(total_orders_per_customer)

print("\nAverage order quantity for each product:")
print(average_quantity_per_product)

print("\nEarliest order date in the dataset:", earliest_order_date)
print("Latest order date in the dataset:", latest_order_date)
```

OUTPUT

```
Total number of orders made by each customer:
customer_id
100     7
101    10
102     9
103     9
104    10
105     6
106     9
107    14
108    10
109     9
110     7
Name: order_date, dtype: int64

Average order quantity for each product:
product_name
Headphones    3.727273
Laptop        2.760000
Monitor       3.041667
Phone         2.928571
Tablet        3.000000
Name: order_quantity, dtype: float64

Earliest order date in the dataset: 2024-01-02 00:00:00
Latest order date in the dataset: 2024-12-25 00:00:00
```