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Course: Data Science

MAJOR PROJECT: ONLINE RECOMMENDATION SYSTEM

```
import pandas as pd
data = pd.read_csv('OnlineRetail.csv')
data.dropna()
required_data = data[['Description', 'Quantity', 'Country']]
uni = data['StockCode'].unique()
data1 = data.loc[data['Quantity'] > 0]



while True:
    print()
    print("Recommendations for online retail market system: ")
    print("1.Global recommendations")
    print("2.Country-wise recommendations")
    print("3.Month-wise recommendations")
    print("0. To Exit")
    i=int(input("Enter the choice : "))
    if i==1:
        grouped_sc = data1.groupby('StockCode')['Quantity'].sum()
        x = grouped_sc.sort_values(ascending=False)
        top_values = x.head()
        print("Sorted Values are:")
        print(top_values)
        filtered_data = data1[data1['StockCode'].isin(top_values.index)]
        filtered_data = filtered_data.drop_duplicates(subset='StockCode',
keep='first')
        print(filtered_data[['Description', 'StockCode', 'Country']])
    elif i==2:
        grouped_country = data1.groupby(['Country',
'StockCode'])['Quantity'].sum().reset_index(name='TotalQuantity')
        print(grouped_country)
```

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        y = grouped_country.sort_values(by=['Country', 'TotalQuantity'],
ascending=[True, False])
        user_input_country = input("Enter the country name: ")
        filtered_by_country = y[y['Country'] == user_input_country]
        top_values_for_country = filtered_by_country.head()
        print(top_values_for_country)
        selected_stock_codes = top_values_for_country['StockCode'].tolist()
        filtered_records = data1[(data1['Country'] == user_input_country) &
(data1['StockCode'].isin(selected_stock_codes))]
        filtered_records = filtered_records.drop_duplicates(subset='StockCode',
keep='first')
        print(filtered_records[['Description', 'StockCode', 'Country']])


    elif i==3:
        data1 = data1.copy()
        data1['InvoiceDate'] = pd.to_datetime(data1['InvoiceDate'])
        data1['Month'] = data1['InvoiceDate'].dt.strftime('%B')  # Convert the month
to a full month name
        grouped_date = data1.groupby(['Month',
'StockCode'])['Quantity'].sum().reset_index(name='Quantity_date')
        print(grouped_date)
        sorted_grouped_date = grouped_date.sort_values(by=['Month',
'Quantity_date'], ascending=[True, False])
        user_input_month = input("Enter the Month (e.g., January): ")
        filtered_by_month = sorted_grouped_date[sorted_grouped_date['Month'] ==
user_input_month]
        top_values_for_month = filtered_by_month.head()
        print(top_values_for_month)
        selected_stock_codes_month = top_values_for_month['StockCode'].tolist()
        filtered_records_month = data1[(data1['Month'] == user_input_month) &
(data1['StockCode'].isin(selected_stock_codes_month))]
        filtered_records_month =
filtered_records_month.drop_duplicates(subset='StockCode', keep='first')
        print(filtered_records_month[['Description', 'StockCode', 'InvoiceDate']])
    elif i==0:
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        break
    else:
        print("Enter Correct Choice.")
```

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