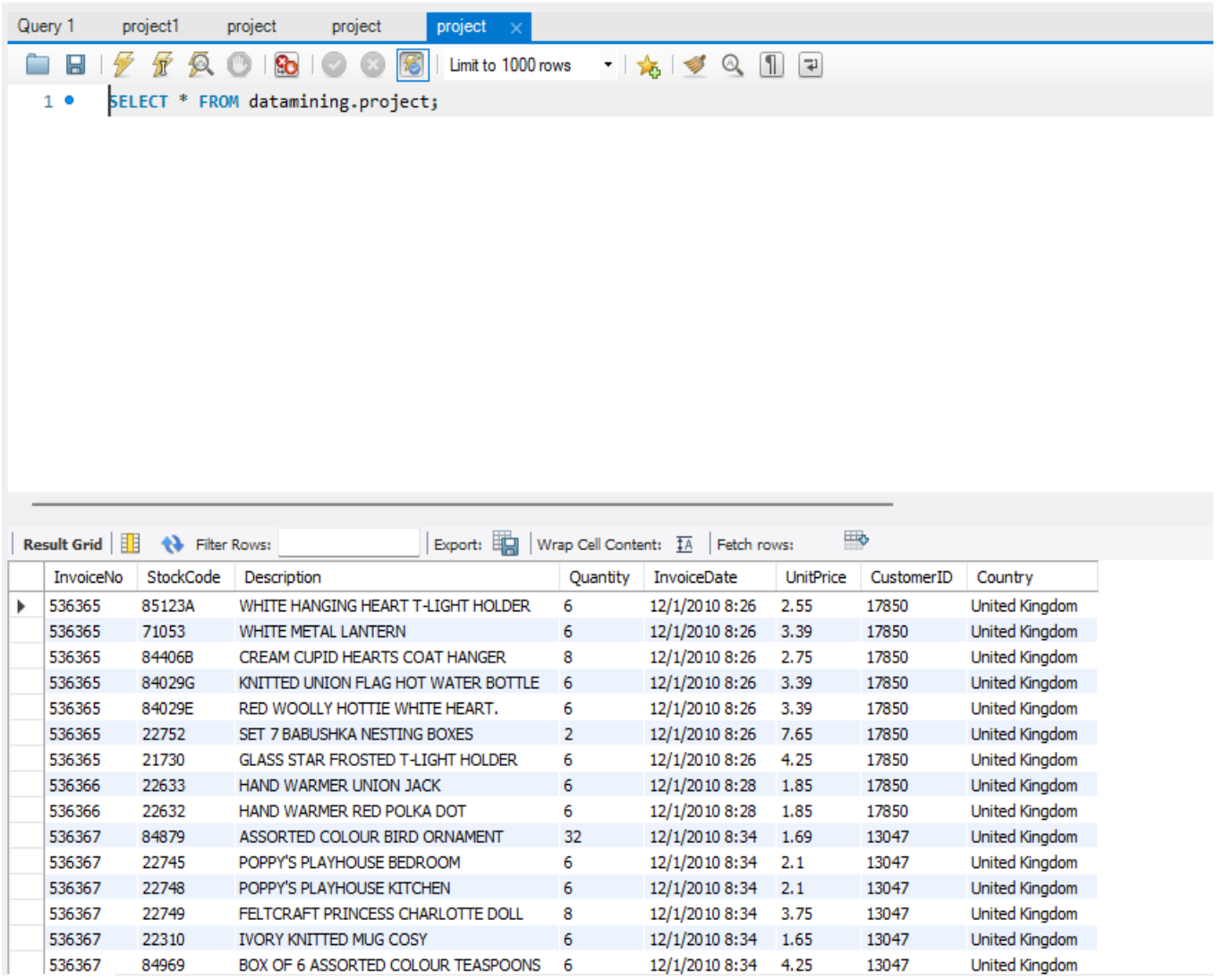
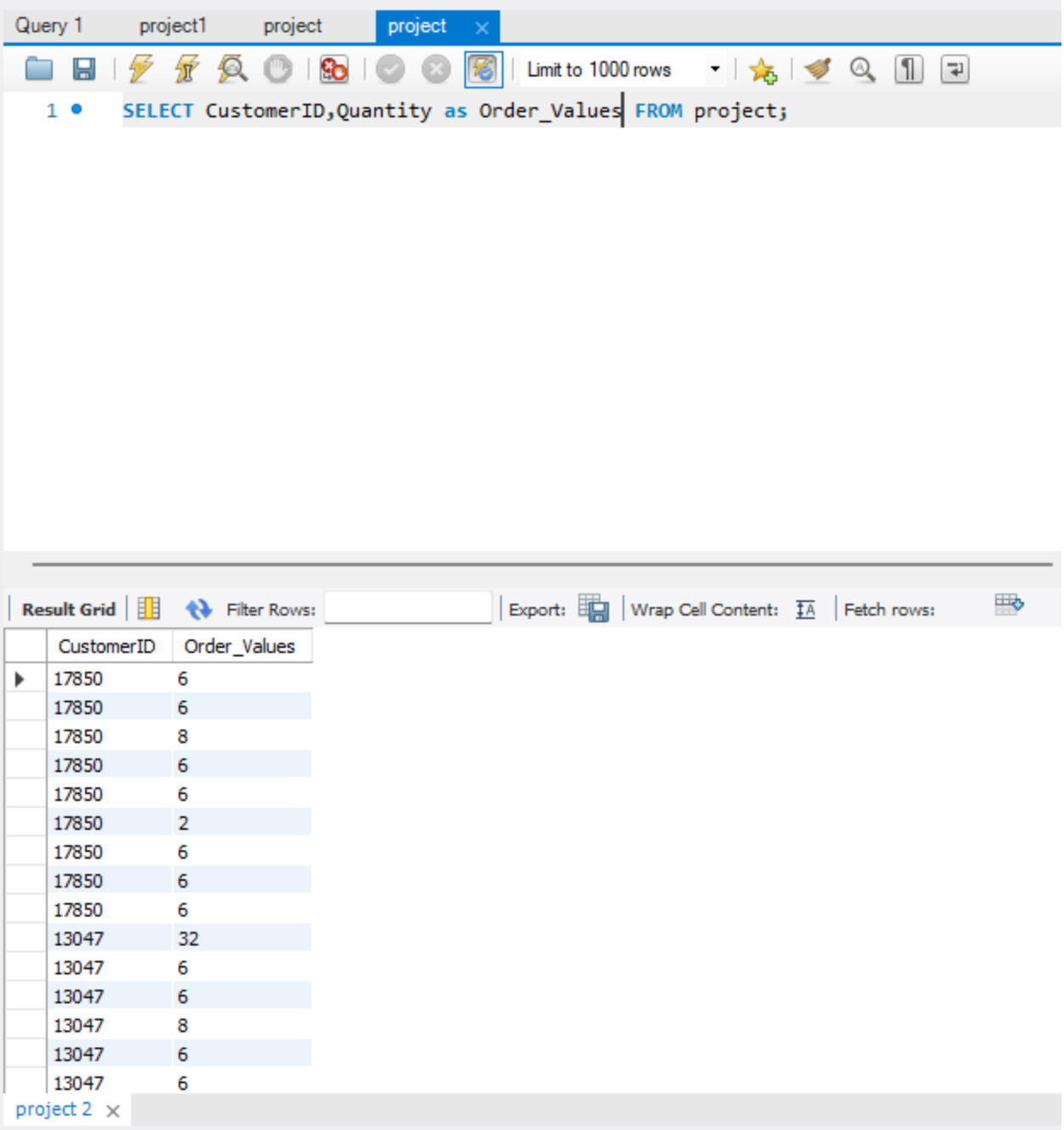
Project Datamining



InvoiceNo	StockCode	Description	Quantity	InvoiceDate	UnitPrice	CustomerID	Country
536365	85123A	WHITE HANGING HEART T-LIGHT HOLDER	6	12/1/2010 8:26	2.55	17850	United Kingdom
536365	71053	WHITE METAL LANTERN	6	12/1/2010 8:26	3.39	17850	United Kingdom
536365	84406B	CREAM CUPID HEARTS COAT HANGER	8	12/1/2010 8:26	2.75	17850	United Kingdom
536365	84029G	KNITTED UNION FLAG HOT WATER BOTTLE	6	12/1/2010 8:26	3.39	17850	United Kingdom
536365	84029E	RED WOOLLY HOTTIE WHITE HEART.	6	12/1/2010 8:26	3.39	17850	United Kingdom
536365	22752	SET 7 BABUSHKA NESTING BOXES	2	12/1/2010 8:26	7.65	17850	United Kingdom
536365	21730	GLASS STAR FROSTED T-LIGHT HOLDER	6	12/1/2010 8:26	4.25	17850	United Kingdom
536366	22633	HAND WARMER UNION JACK	6	12/1/2010 8:28	1.85	17850	United Kingdom
536366	22632	HAND WARMER RED POLKA DOT	6	12/1/2010 8:28	1.85	17850	United Kingdom
536367	84879	ASSORTED COLOUR BIRD ORNAMENT	32	12/1/2010 8:34	1.69	13047	United Kingdom
536367	22745	POPPY'S PLAYHOUSE BEDROOM	6	12/1/2010 8:34	2.1	13047	United Kingdom
536367	22748	POPPY'S PLAYHOUSE KITCHEN	6	12/1/2010 8:34	2.1	13047	United Kingdom
536367	22749	FELTCRAFT PRINCESS CHARLOTTE DOLL	8	12/1/2010 8:34	3.75	13047	United Kingdom
536367	22310	IVORY KNITTED MUG COSY	6	12/1/2010 8:34	1.65	13047	United Kingdom
536367	84969	BOX OF 6 ASSORTED COLOUR TEASPOONS	6	12/1/2010 8:34	4.25	13047	United Kingdom

1. In above picture the meta data of the customer is shown.

Project Datamining



2.In this picture the number of orders made by a customer is shown.

Project Datamining

Query 1 project project project project project

Limit to 1000 rows

```
1  SELECT customerid, COUNT(DISTINCT stockcode) AS num_unique_products
2  FROM datamining.project
3  GROUP BY customerid
4  ORDER BY num_unique_products DESC;
```

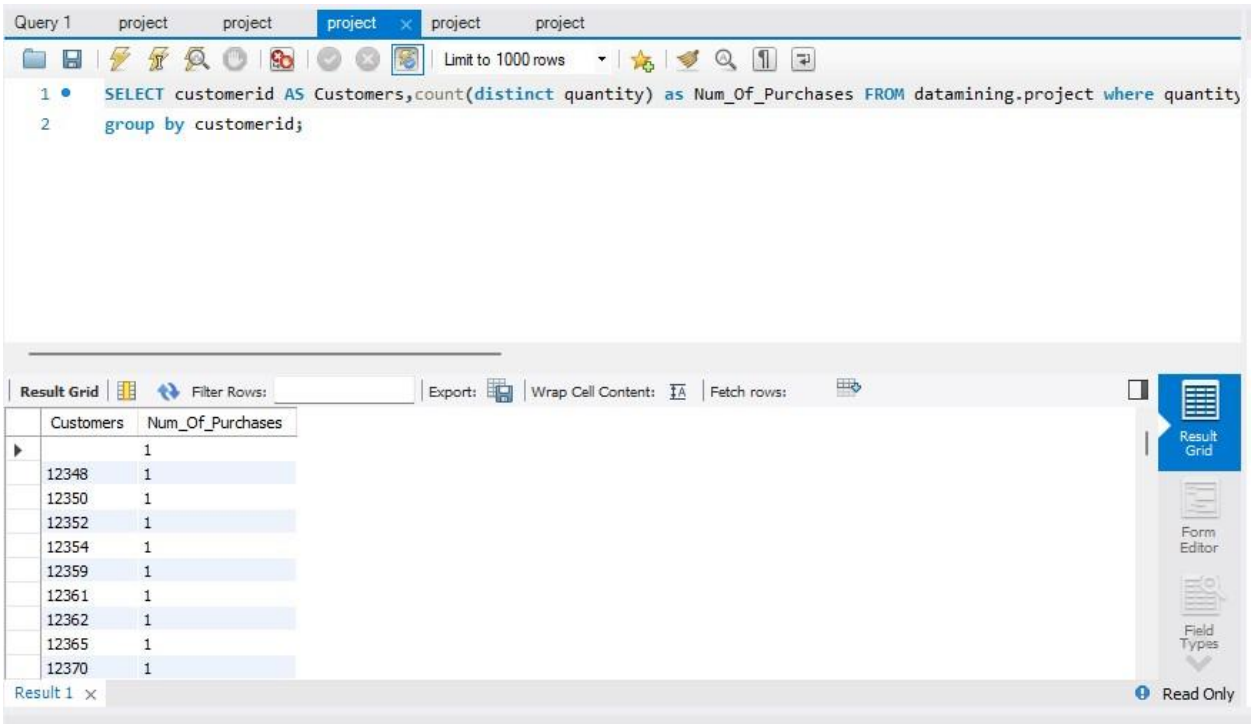
Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

customerid	num_unique_products
	3323
14911	1131
12748	1081
17841	973
14606	683
14298	661
13089	484
14156	478
14769	477
15311	445

Result 1

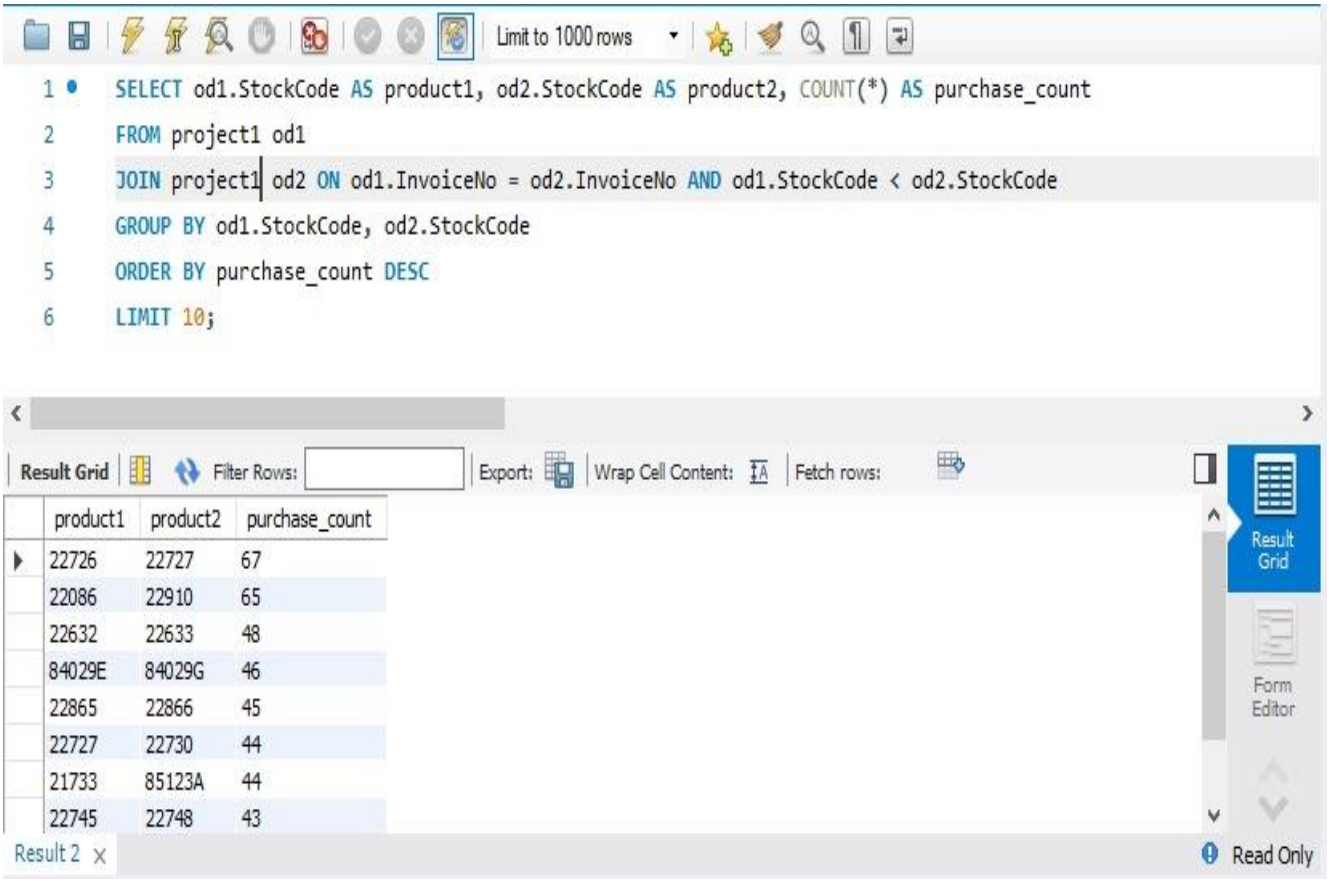
3.In above picture the number of unique products purchased by a customer is shown.

Project Datamining



4.In this picture the number of cutomers who made a single purchase.

Project Datamining



5.In this picture the products that are most commonly purchased together by customers are shown.

Project Datamining

Query 1 | project1

Limit to 1000 rows

```
1  SELECT CustomerID,
2      CASE
3          WHEN purchase_count <= 1 THEN 'Low Frequency'
4          WHEN purchase_count <= 5 THEN 'Medium Frequency'
5          ELSE 'High Frequency'
6      END AS purchase_frequency
7  FROM (
8      SELECT CustomerID, COUNT(DISTINCT invoiceno) AS Purchase_Count
9      FROM project
10     GROUP BY CustomerID
11 ) AS purchase_counts;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

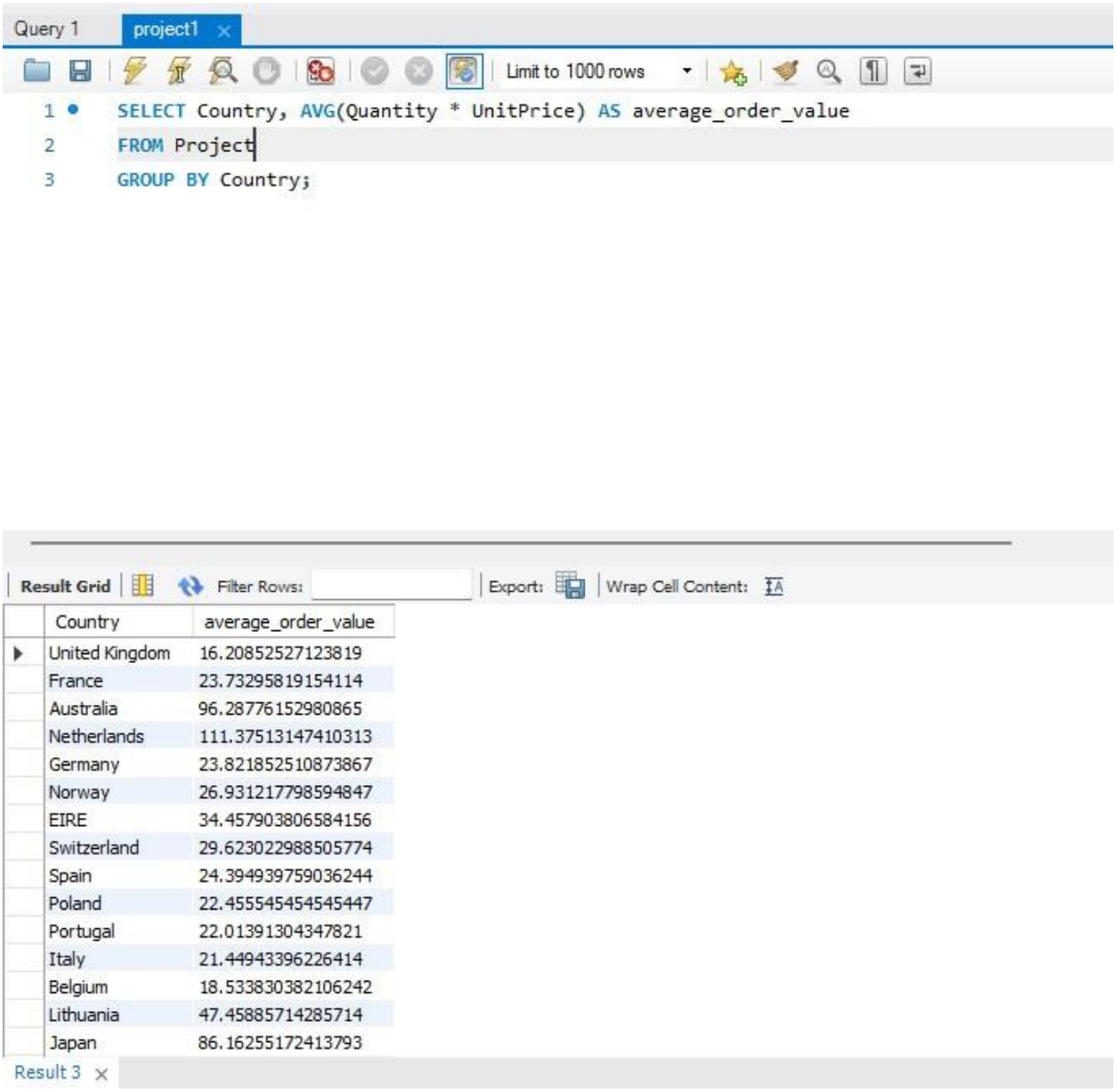
CustomerID	purchase_frequency
	High Frequency
12346	Medium Frequency
12347	Medium Frequency
12348	Medium Frequency
12350	Low Frequency
12352	High Frequency
12353	Low Frequency
12354	Low Frequency
12355	Low Frequency
12356	Medium Frequency
12358	Low Frequency
12359	Medium Frequency
12360	Low Frequency
12361	Low Frequency
12362	Medium Frequency

Result 2

Customer Segmentation by Purchase Frequency

1.In this picture customers are grouped based on their purchase frequency.

Project Datamining

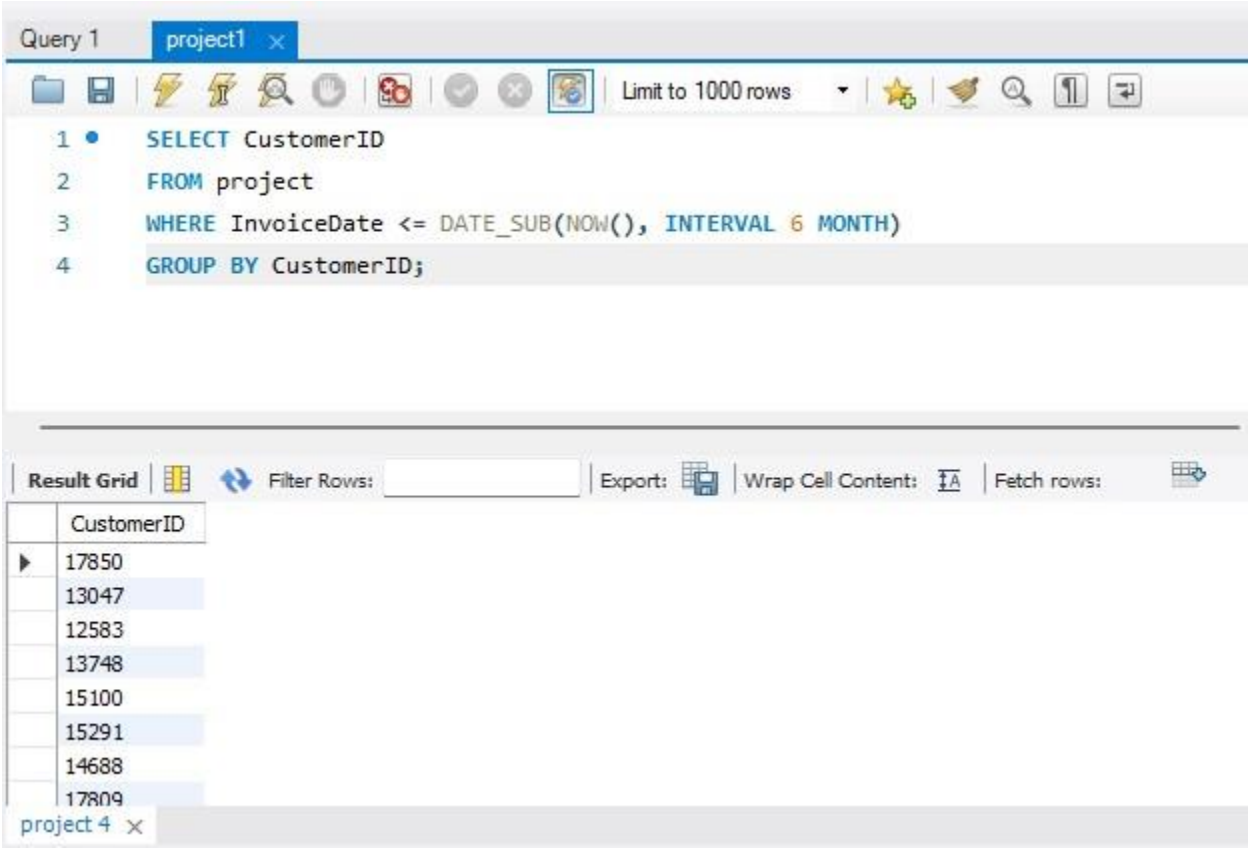


Country	average_order_value
United Kingdom	16.20852527123819
France	23.73295819154114
Australia	96.28776152980865
Netherlands	111.37513147410313
Germany	23.821852510873867
Norway	26.931217798594847
EIRE	34.457903806584156
Switzerland	29.623022988505774
Spain	24.394939759036244
Poland	22.455545454545447
Portugal	22.01391304347821
Italy	21.44943396226414
Belgium	18.533830382106242
Lithuania	47.45885714285714
Japan	86.16255172413793

Average Order Value by Country

2.In this picture the avg for purchase is shown for each country.

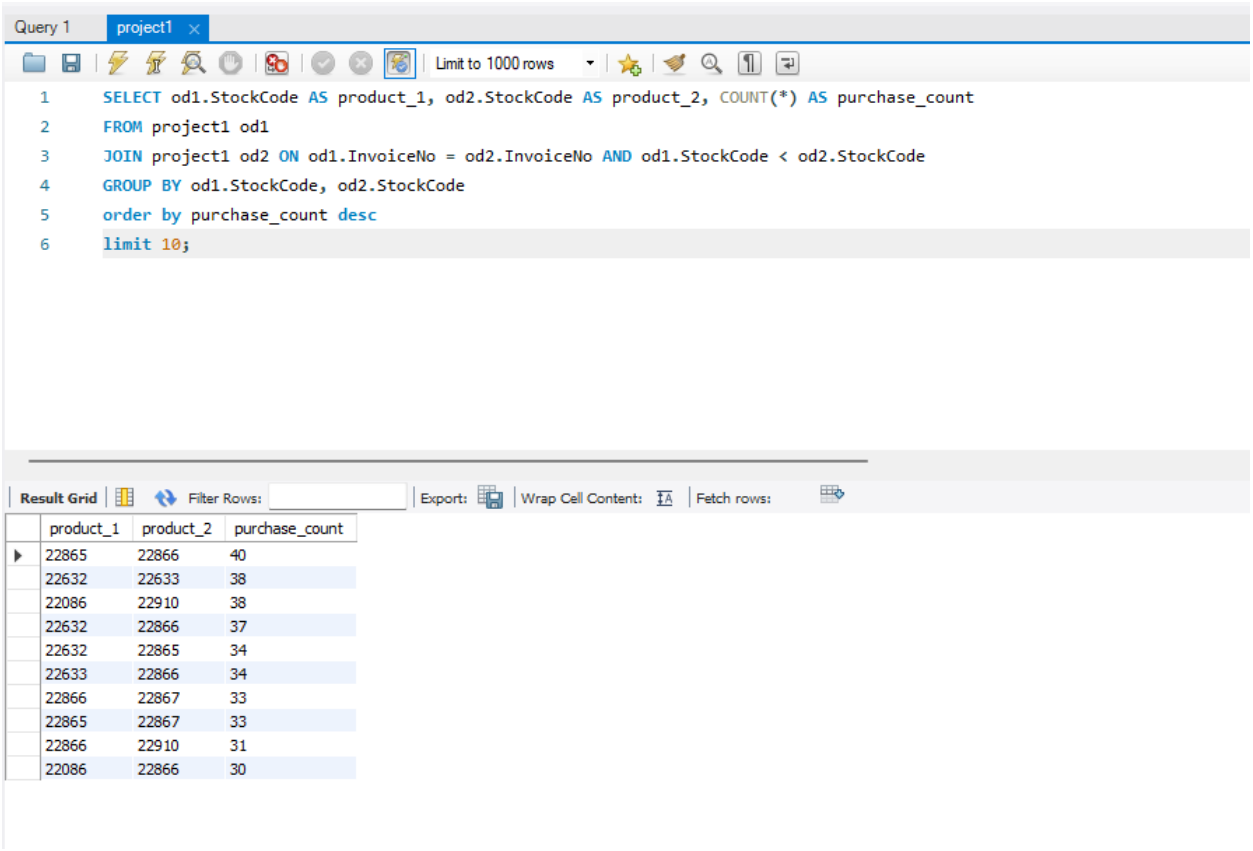
Project Datamining



Customer Churn Analysis

3.In this picture the customer who havn’t made any purchase till last 6 months.

Project Datamining

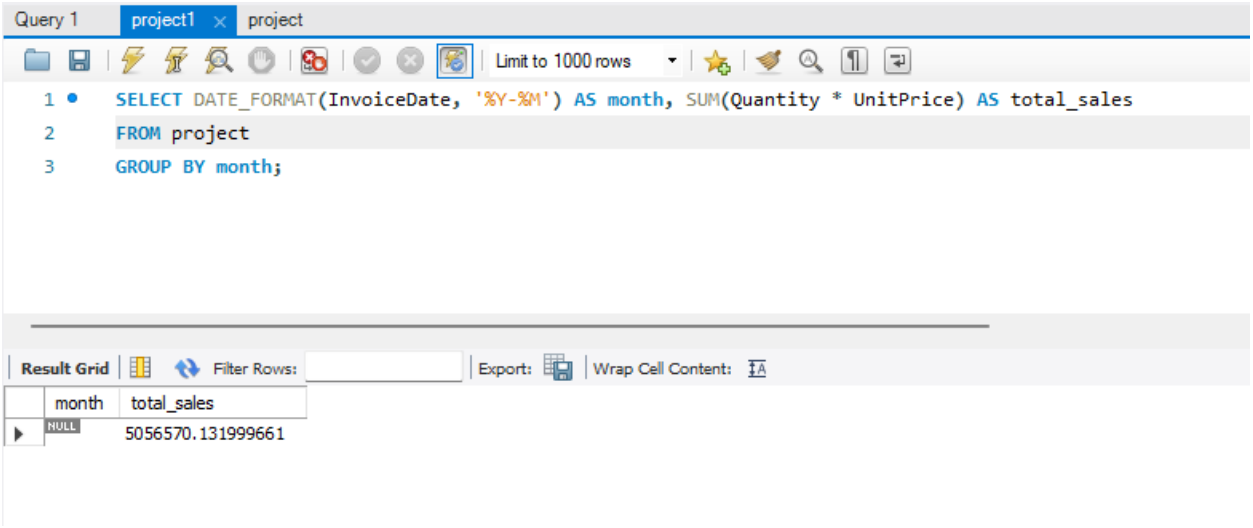


product_1	product_2	purchase_count
22865	22866	40
22632	22633	38
22086	22910	38
22632	22866	37
22632	22865	34
22633	22866	34
22866	22867	33
22865	22867	33
22866	22910	31
22086	22866	30

Product Affinity Analysis

4.In this picture which products are often purchased together by the correlation between product purchases is shown.

Project Datamining



Time-based Analysis

5.In this picture the trends in customer behavior over time, such as monthly or quarterly sales patterns is shown.