

Week 8 - Lab 1: Query Analysis Examples (Union Append queries)

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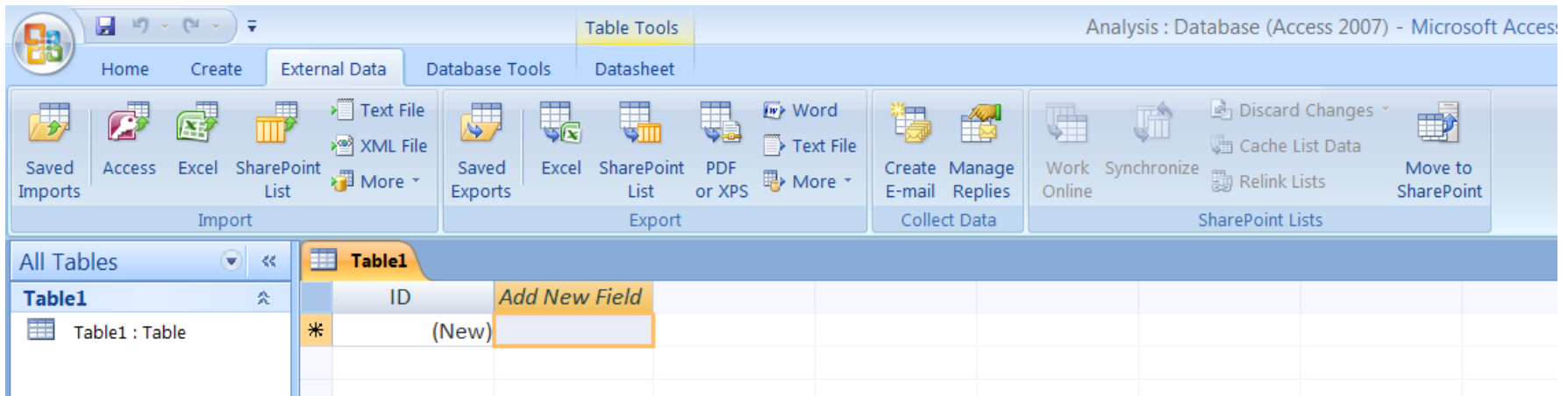


Overview

- In this tutorial, we will learn how to:
 - How to import Excel Data into an Access DB

Importing Excel Data

- Example Excel file: Excel data to use: [Websites Ranking](#)



Importing Excel Data

Get External Data - Excel Spreadsheet

Select the source and destination of the data

Specify the source of the data.

File name:

Specify how and where you want to store the data in the current database.

Import the source data into a new table in the current database.
If the specified table does not exist, Access will create it. If the specified table already exists, Access might overwrite its contents with the imported data. Changes made to the source data will not be reflected in the database.

Append a copy of the records to the table:
If the specified table exists, Access will add the records to the table. If the table does not exist, Access will create it. Changes made to the source data will not be reflected in the database.

Link to the data source by creating a linked table.
Access will create a table that will maintain a link to the source data in Excel. Changes made to the source data in Excel will be reflected in the linked table. However, the source data cannot be changed from within Access.

Importing Excel Data

Import Spreadsheet Wizard

Your spreadsheet file contains more than one worksheet or range. Which worksheet or range would you like?

Show Worksheets

Show Named Ranges

Data

Sample data for worksheet 'Data'.

	Class	Student	Website1	Website2	Website3	Website4	Website5
1	Su07	1	Hotmail	Yahoo	Facebook	Bank	Youtube
2	Su07	2	UofC	Google	Hotmail	Bank	Facebook
3	Su07	3	StockWatch	StockHouse	Kitco	Canucks.com	Arsenal.com
4	Su07	4	UofC	Google	Bank	Null	Null
5	Su07	5	Google	TheLottery	NHL.com	Wikipedia	Funnyjunk.com
6	Su07	6	Yahoo	MySpace	Google	MSN	Null
7	Su07	7	Hotmail	Facebook	Youtube	UofC	MySpace
8	Su07	8	Yahoo	Facebook	Youtube	Hi5	Null
9	Su07	9	Google	Youtube	Wikipedia	NFL.com	Horoscope
10	Su07	10	Google	Youtube	Wikipedia	NHL.com	Hotmail
11	Su07	11	Google	Facebook	Shawlife.com	Calgaryplanet	Hotmail
12	Su07	12	Google	Hotmail	Facebook	Lonelyplanet	Youtube
13	Su07	13	TSN.ca	NHL.com	Google	Gmail	Facebook
14	Su07	14	MSN	Google	Calgaryplanet	MSN	Facebook

Cancel < Back Next > Finish

Importing Excel Data

Import Spreadsheet Wizard

Microsoft Access can use your column headings as field names for your table. Does the first row specified contain column headings?

First Row Contains Column Headings

	Class	Student	Website1	Website2	Website3	Website4	Website5
1	Su07	1	Hotmail	Yahoo	Facebook	Bank	Youtube
2	Su07	2	UofC	Google	Hotmail	Bank	Facebook
3	Su07	3	StockWatch	StockHouse	Kitco	Canucks.com	Arsenal.com
4	Su07	4	UofC	Google	Bank	Null	Null
5	Su07	5	Google	TheLottery	NHL.com	Wikipedia	Funnyjunk.com
6	Su07	6	Yahoo	MySpace	Google	MSN	Null
7	Su07	7	Hotmail	Facebook	Youtube	UofC	MySpace
8	Su07	8	Yahoo	Facebook	Youtube	Hi5	Null
9	Su07	9	Google	Youtube	Wikipedia	NFL.com	Horoscope
10	Su07	10	Google	Youtube	Wikipedia	NHL.com	Hotmail
11	Su07	11	Google	Facebook	Shawlife.com	Calgaryplanet	Hotmail
12	Su07	12	Google	Hotmail	Facebook	Lonelyplanet	Youtube
13	Su07	13	TSN.ca	NHL.com	Google	Gmail	Facebook
14	Su07	14	MSN	Google	Calgaryplus.com	MSNB.com	Facebook
15	Su07	15	Yahoo	Google	Facebook	Friendster	Calgary Weather

Cancel < Back Next > Finish

Importing Excel Data

Import Spreadsheet Wizard

You can specify information about each of the fields you are importing. Select fields in the area below. You can then modify field information in the 'Field Options' area.

Field Options

Field Name: Data Type:

Indexed: Do not import field (Skip)

	Class	Student	Website1	Website2	Website3	Website4	Website5
1	Su07	1	Hotmail	Yahoo	Facebook	Bank	Youtube
2	Su07	2	UofC	Google	Hotmail	Bank	Facebook
3	Su07	3	StockWatch	StockHouse	Kitco	Canucks.com	Arsenal.com
4	Su07	4	UofC	Google	Bank	Null	Null
5	Su07	5	Google	TheLottery	NHL.com	Wikipedia	Funnyjunk.com
6	Su07	6	Yahoo	MySpace	Google	MSN	Null
7	Su07	7	Hotmail	Facebook	Youtube	UofC	MySpace
8	Su07	8	Yahoo	Facebook	Youtube	Hi5	Null
9	Su07	9	Google	Youtube	Wikipedia	NFL.com	Horoscope
10	Su07	10	Google	Youtube	Wikipedia	NHL.com	Hotmail
11	Su07	11	Google	Facebook	Shawlife.com	Calgaryplanet	Hotmail
12	Su07	12	Google	Hotmail	Facebook	Lonelyplanet	Youtube
13	Su07	13	TSN.ca	NHL.com	Google	Gmail	Facebook
14	Su07	14	MSN	Google	Calgaryplus.com	MSNB.com	Facebook
15	Su07	15	Yahoo	Google	Facebook	Friendster	Calgaryplanet

Cancel < Back Next > Finish

Importing Excel Data

Import Spreadsheet Wizard

Microsoft Access recommends that you define a primary key for your new table. A primary key is used to uniquely identify each record in your table. It allows you to retrieve data more quickly.

Let Access add primary key.

Choose my own primary key.

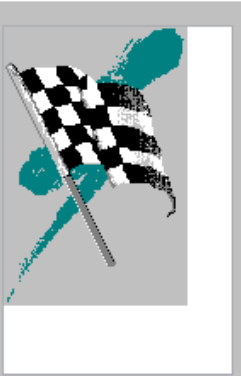
No primary key.

ID	Class	Student	Website1	Website2	Website3	Website4	Website5
1	Su07	1	Hotmail	Yahoo	Facebook	Bank	Youtube
2	Su07	2	UofC	Google	Hotmail	Bank	Facebook
3	Su07	3	StockWatch	StockHouse	Kitco	Canucks.com	Arsenal.com
4	Su07	4	UofC	Google	Bank	Null	Null
5	Su07	5	Google	TheLottery	NHL.com	Wikipedia	Funnyjunk.com
6	Su07	6	Yahoo	MySpace	Google	MSN	Null
7	Su07	7	Hotmail	Facebook	Youtube	UofC	MySpace
8	Su07	8	Yahoo	Facebook	Youtube	Hi5	Null
9	Su07	9	Google	Youtube	Wikipedia	NFL.com	Horoscope
10	Su07	10	Google	Youtube	Wikipedia	NHL.com	Hotmail
11	Su07	11	Google	Facebook	Shawlife.com	Calgaryplanet	Hotmail
12	Su07	12	Google	Hotmail	Facebook	Lonelyplanet	Youtube
13	Su07	13	TSN.ca	NHL.com	Google	Gmail	Facebook
14	Su07	14	MSN	Google	Calgaryplus.com	MSNB.com	Facebook
15	Su07	15	Yahoo	Google	Facebook	Wikipedia	Calgaryplanet

Cancel < Back Next > Finish

Importing Excel Data

Import Spreadsheet Wizard



That's all the information the wizard needs to import your data.

Import to Table:
SpreadSheetData

I would like a wizard to analyze my table after importing the data.

Cancel < Back Next > Finish

Importing Excel Data

ID	Class	Student	Website1	Website2	Website3	Website4	Website5	Add New Field
1	Su07		Hotmail	Yahoo	Facebook	Bank	Youtube	
2	Su07		UofC	Google	Hotmail	Bank	Facebook	
3	Su07		StockWatch	StockHouse	Kitco	Canucks.com	Arsenal.com	
4	Su07		UofC	Google	Bank	Null	Null	
5	Su07		Google	TheLottery	NHL.com	Wikipedia	Funnyjunk.com	
6	Su07		Yahoo	MySpace	Google	MSN	Null	
7	Su07		Hotmail	Facebook	Youtube	UofC	MySpace	
8	Su07		Yahoo	Facebook	Youtube	Hi5	Null	
9	Su07		Google	Youtube	Wikipedia	NFL.com	Horoscope	
10	Su07		Google	Youtube	Wikipedia	NHL.com	Hotmail	
11	Su07		Google	Facebook	Shawlife.com	Calgaryplanet	Hotmail	
12	Su07		Google	Hotmail	Facebook	Lonelyplanet	Youtube	
13	Su07		TSN.ca	NHL.com	Google	Gmail	Facebook	
14	Su07		MSN	Google	Calgaryplus.com	MSNB.com	Facebook	
15	Su07		Yahoo	Google	Facebook	Friendster	Calgary Weather	
16	Su07		Facebook	Hotmail	Youtube	Google	imdb.com	
17	Su07		Google	Hotmail	UofC	Facebook	ATB	
18	Su07		Hotmail	Facebook	UofC	Google	Bank	
19	Su07		Facebook	Google	Hotmail	Null	Null	
20	Su07		Facebook	Hotmail	Google	Penny-arcade	Foodtv	
21	Su07		Hotmail	Gmail	Webmail	Google	MSN	
22	Su07		Hotmail	MSN	UofC	Facebook	freeonlinegame	
23	Su07		Yahoo	Google	UofC	Null	Null	
24	Su07		Facebook	Yahoo	Xangha	Webmail	Google	
25	Su07		Wikipedia	Google	RBC	AirMiles	Facebook	
26	Su07		Yahoo	Google	UofC	SENNA.ca	Teraden	
27	Su07		Space.com	Hotmail	Facebook	Blackboard	Youtube	
28	Su07		MSN	Gmail	Hotmail	Youtube	imdb.com	
29	Fa07	1	Men	Google	UofC	Yahoo	Calgary Herald	
30	Fa07	2	Google	Hotmail	Nordstrom	MTV	Sympatico	
31	Fa07	3	Facebook	MSN	UofC	Sit Diary	Youtube	

Analysis Queries

- Analysis steps:
 - Create five queries for the five different website rankings.
 - One query will hold the websites that have the rank "Website1", another query will hold the websites that have the rank "Website2", ... etc.
 - Create a query that will include a new field called "WebsiteRank" to reflect the rank of the selected websites.

Analysis Queries

The screenshot displays the Microsoft Access interface for a query named "Query1". A "Save As" dialog box is open, allowing the user to save the query with a new name. The "Query Name:" field contains "Query_Website1".

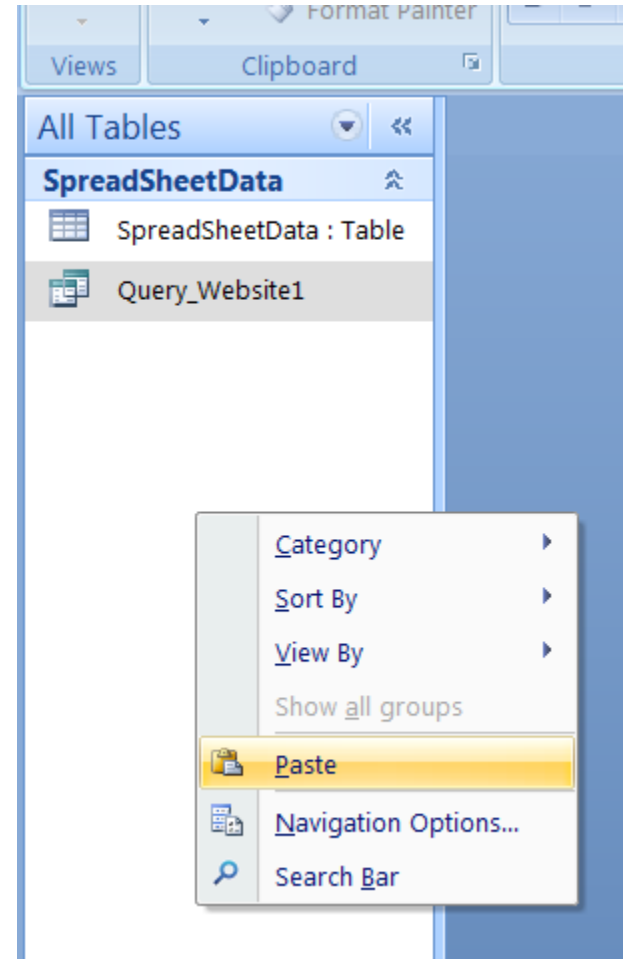
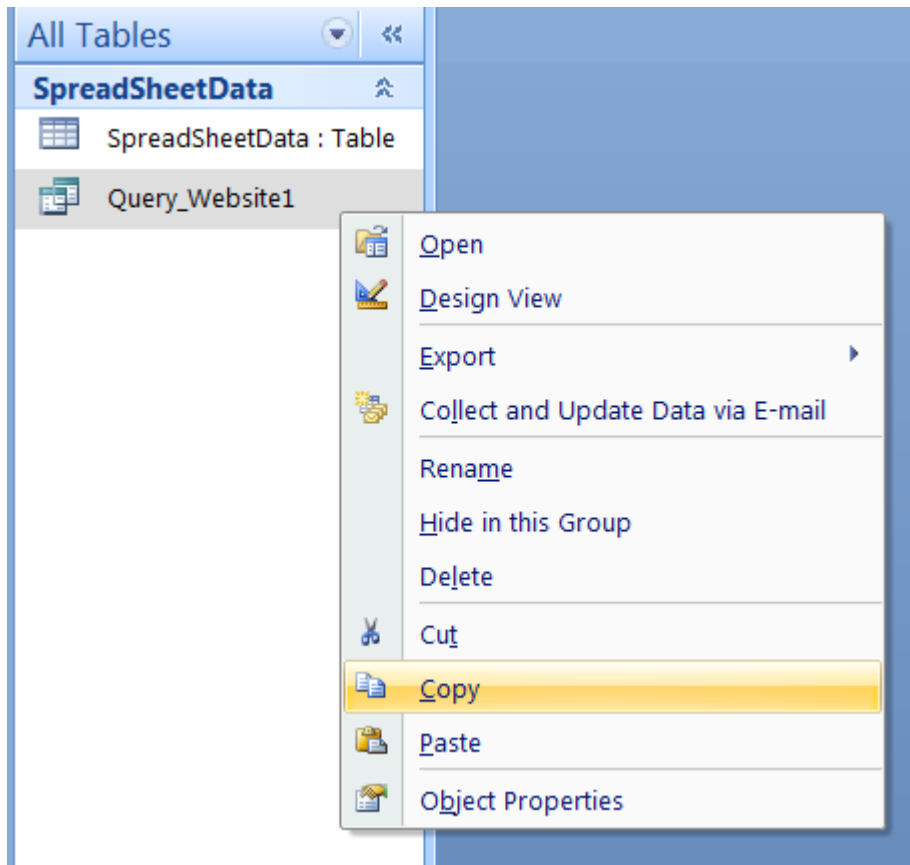
The query design grid shows the following fields and their sources:

Field:	Student	WebsiteRank: "Website1"	WebsiteName: Website1	ID
Table:	SpreadSheetData		SpreadSheetData	SpreadSheetData
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

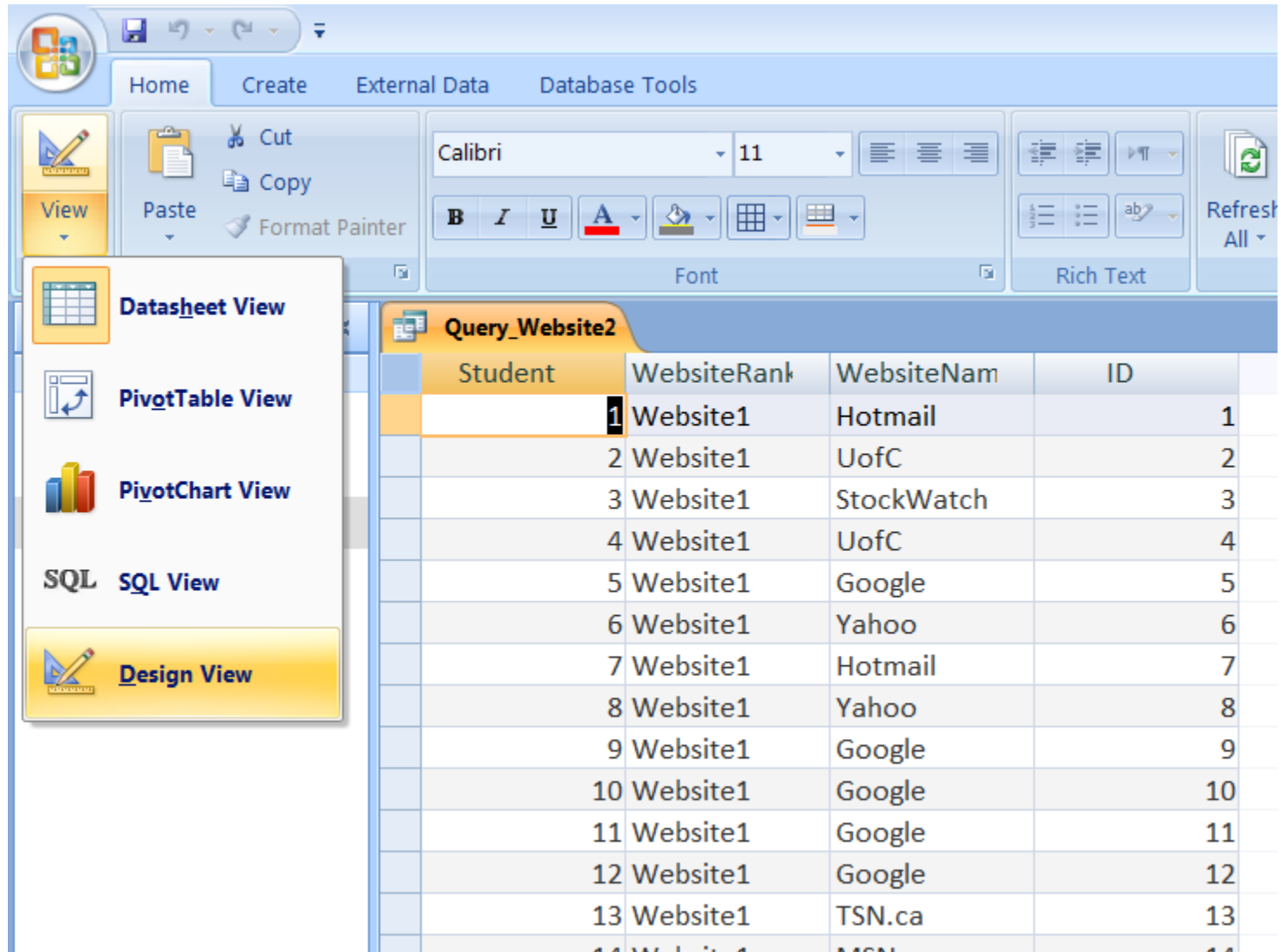
Analysis Queries

Query_Website1				
Student	WebsiteRank	WebsiteNam	ID	
	1	Website1	Hotmail	1
	2	Website1	UofC	2
	3	Website1	StockWatch	3
	4	Website1	UofC	4
	5	Website1	Google	5
	6	Website1	Yahoo	6
	7	Website1	Hotmail	7
	8	Website1	Yahoo	8
	9	Website1	Google	9
	10	Website1	Google	10
	11	Website1	Google	11
	12	Website1	Google	12
	13	Website1	TSN.ca	13
	14	Website1	MSN	14
	15	Website1	Yahoo	15
	16	Website1	Facebook	16
	17	Website1	Google	17
	18	Website1	Hotmail	18
	19	Website1	Facebook	19
	20	Website1	Facebook	20
	21	Website1	Hotmail	21
	22	Website1	Hotmail	22
	23	Website1	Yahoo	23
	24	Website1	Facebook	24
	25	Website1	Wikipedia	25
	26	Website1	Yahoo	26

Analysis Queries



Analysis Queries



The screenshot shows the Microsoft Access interface with the 'Query_Website2' table open in Datasheet View. The ribbon includes 'Home', 'Create', 'External Data', and 'Database Tools'. The 'View' dropdown menu is open, showing options: Datasheet View, PivotTable View, PivotChart View, SQL View, and Design View. The table data is as follows:

Student	WebsiteRank	WebsiteNam	ID	
	1	Website1	Hotmail	1
	2	Website1	UofC	2
	3	Website1	StockWatch	3
	4	Website1	UofC	4
	5	Website1	Google	5
	6	Website1	Yahoo	6
	7	Website1	Hotmail	7
	8	Website1	Yahoo	8
	9	Website1	Google	9
	10	Website1	Google	10
	11	Website1	Google	11
	12	Website1	Google	12
	13	Website1	TSN.ca	13
	14	Website1	MSN	14

Analysis Queries

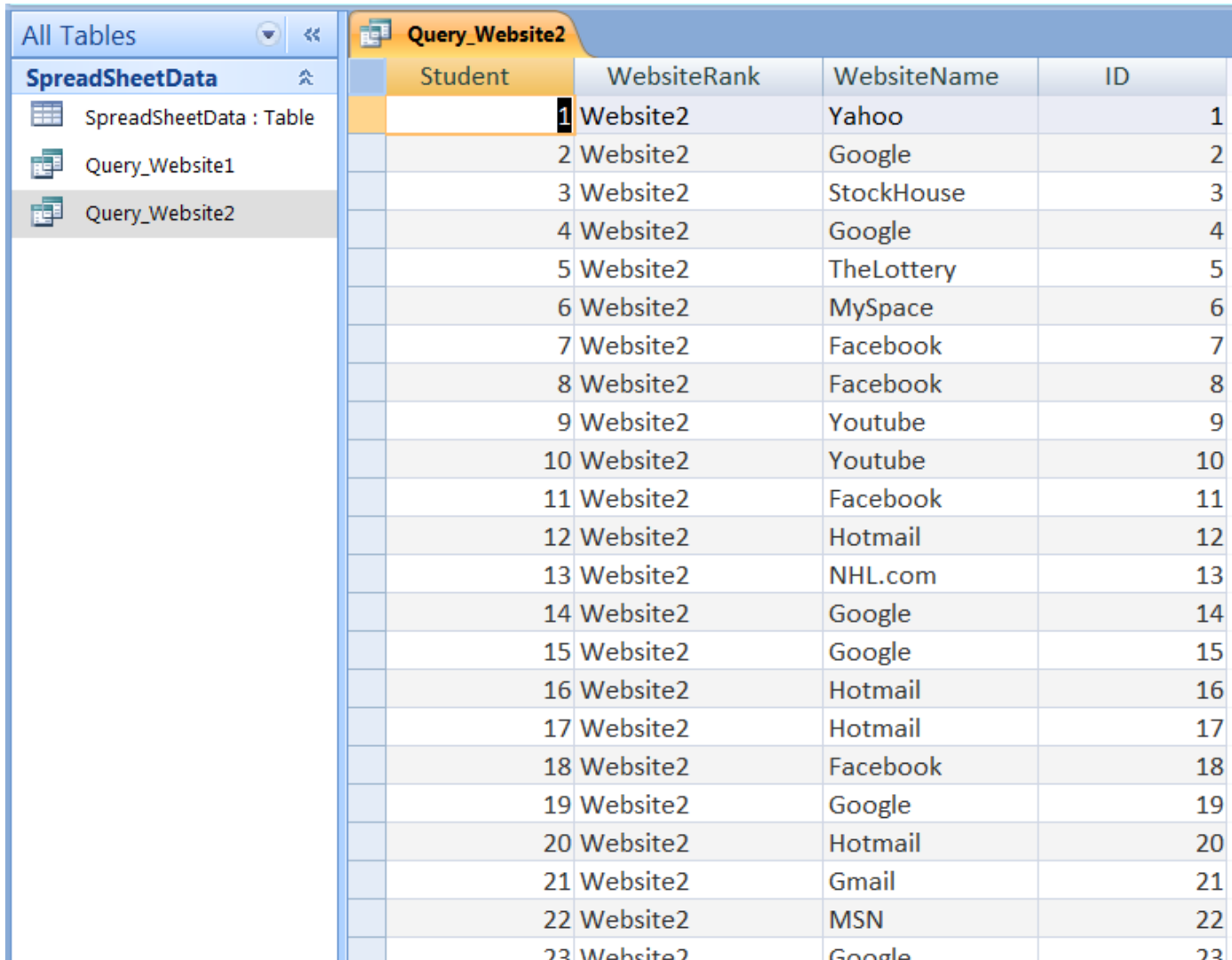
Query_Website2

SpreadSheetData

- *
- ID
- Class
- Student
- Website1
- Website2
- Website3
- Website4
- Website5

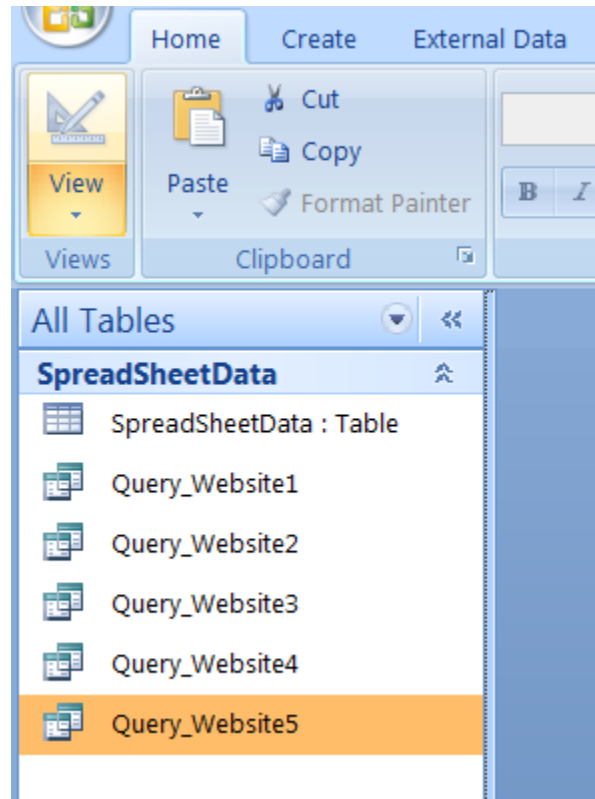
	Student	WebsiteRank: "Website2"	WebsiteName: Website2	ID
Field:	Student	WebsiteRank: "Website2"	WebsiteName: Website2	ID
Table:	SpreadSheetData		SpreadSheetData	SpreadSheetData
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				
or:				

Analysis Queries



Student	WebsiteRank	WebsiteName	ID	
	1	Website2	Yahoo	1
	2	Website2	Google	2
	3	Website2	StockHouse	3
	4	Website2	Google	4
	5	Website2	TheLottery	5
	6	Website2	MySpace	6
	7	Website2	Facebook	7
	8	Website2	Facebook	8
	9	Website2	Youtube	9
	10	Website2	Youtube	10
	11	Website2	Facebook	11
	12	Website2	Hotmail	12
	13	Website2	NHL.com	13
	14	Website2	Google	14
	15	Website2	Google	15
	16	Website2	Hotmail	16
	17	Website2	Hotmail	17
	18	Website2	Facebook	18
	19	Website2	Google	19
	20	Website2	Hotmail	20
	21	Website2	Gmail	21
	22	Website2	MSN	22
	23	Website2	Google	23

Analysis Queries



Union Query

The screenshot displays the Microsoft Access Design view for a query named 'Union_WebsiteQueries'. The ribbon at the top includes 'Home', 'Create', 'External Data', 'Database Tools', and 'Design'. The 'Design' ribbon is active, showing options like 'View', 'Run', 'Select', 'Make Table', 'Append', 'Update', 'Crosstab', 'Delete', 'Union', 'Pass-Through', and 'Data Definition'. The 'Query Type' section is set to 'Union'. The left pane shows the 'All Tables' list with 'SpreadSheetData' and 'Unrelated Objects' sections. The 'Unrelated Objects' section contains 'Union_WebsiteQueries'. The main design grid shows the SQL code for the query:

```
SELECT Query_Website1.* FROM Query_Website1
UNION
SELECT Query_Website2.* FROM Query_Website2
UNION
SELECT Query_Website3.* FROM Query_Website3
UNION
SELECT Query_Website4.* FROM Query_Website4
UNION
SELECT Query_Website5.* FROM Query_Website5;
```

Union Query

Union_websiteQueries				
Student	WebsiteRan	WebsiteName	ID	
1	Website1	Facebook	59	
1	Website1	Hotmail	1	
1	Website1	Men	29	
1	Website2	Google	29	
1	Website2	Yahoo	1	
1	Website2	Youtube	59	
1	Website3	Beyond	59	
1	Website3	Facebook	1	
1	Website3	UofC	29	
1	Website4	Bank	1	
1	Website4	NFL.com	59	
1	Website4	Yahoo	29	
1	Website5	Calgary Herald	29	
1	Website5	Hypebeast	59	
1	Website5	Youtube	1	

Append Query

We will use it to append the results of the union query to a new table “WebsiteRankings”.

Field Name	Data Type
WebsiteRankID	AutoNumber
Student	Number
WebsiteRank	Text
WebsiteName	Text
ID	Number

Append Query

The screenshot displays the Microsoft Access Query Design view. The ribbon is set to 'Query Tools' > 'Design'. The 'Query Type' group contains several options, with 'Append' highlighted in yellow. A tooltip for 'Append' is visible, stating: 'Query Type: Append. Make the query add records to an existing table.'

The left-hand pane shows the 'All Tables' list with the following items:

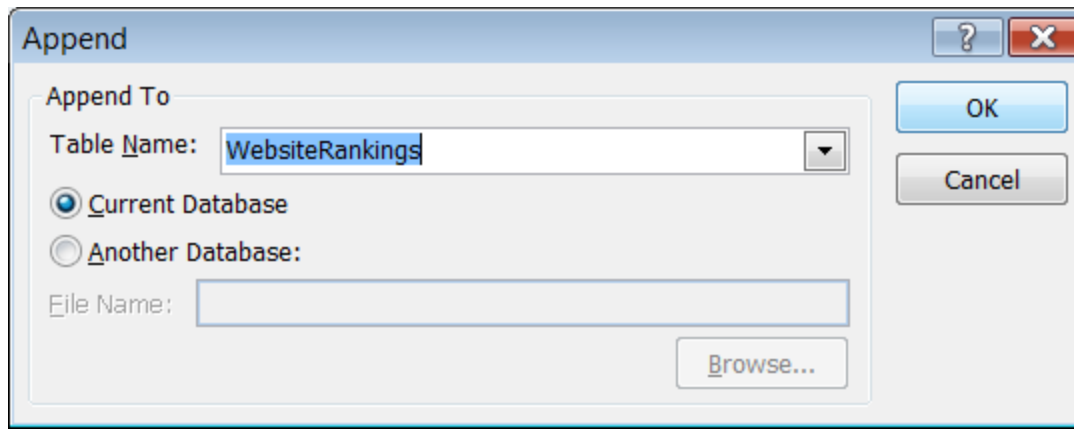
- SpreadSheetData
 - SpreadSheetData : Table
 - Query_Website1
 - Query_Website2
 - Query_Website3
 - Query_Website4
 - Query_Website5
- WebsiteRankings
 - WebsiteRankings : Table
- Unrelated Objects
 - Union_WebsiteQueries

The main design area shows a table named 'Union_WebsiteQueries' with the following fields:

*
Student
WebsiteRank
WebsiteName
ID

At the bottom, the 'Field:' label is visible above a dropdown menu.

Append Query



The image shows a dialog box titled "Append" with a standard Windows-style title bar containing a question mark and a close button. The dialog is divided into two main sections. The top section, labeled "Append To", contains a "Table Name:" label followed by a text box containing "WebsiteRankings" and a dropdown arrow. Below this are two radio buttons: the first is selected and labeled "Current Database", and the second is unselected and labeled "Another Database:". The "Another Database:" section includes an empty "File Name:" text box and a "Browse..." button. On the right side of the dialog, there are two buttons: "OK" (highlighted in blue) and "Cancel".

Append

Append To

Table Name: WebsiteRankings

Current Database

Another Database:

File Name:

Browse...

OK

Cancel

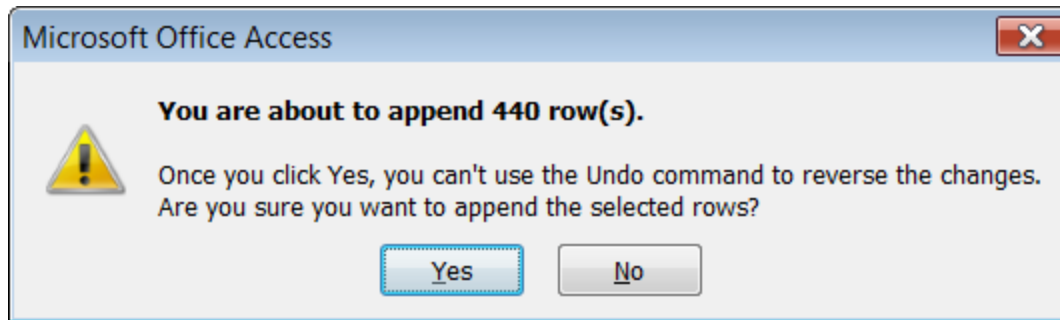
Append Query

The screenshot shows the Microsoft Access Query Design view for an Append Query. The ribbon includes 'Query Type' (Append, Update, Crosstab, Delete) and 'Query Setup' (Insert Rows, Insert Columns, Delete Rows, Delete Columns, Show Table, Builder, Return: All). The design grid is as follows:

Field:	Student	WebsiteRank	WebsiteName	ID
Table:	Union_WebsiteQueries	Union_WebsiteQueries	Union_WebsiteQueries	Union_WebsiteQueries
Sort:				
Append To:	Student	WebsiteRank	WebsiteName	ID
Criteria:				
or:				

Append Query

The Append query will now append the data from the union query to the empty table WebsiteRankings.



Append Query

AppendQuery		WebsiteRankings				
WebsiteRank	Student	WebsiteRank	WebsiteName	ID	Add New Field	
1	1	1 Website1	Facebook	59		
2	1	1 Website1	Hotmail	1		
3	1	1 Website1	Men	29		
4	1	1 Website2	Google	29		
5	1	1 Website2	Yahoo	1		
6	1	1 Website2	Youtube	59		
7	1	1 Website3	Beyond	59		
8	1	1 Website3	Facebook	1		
9	1	1 Website3	UofC	29		
10	1	1 Website4	Bank	1		
11	1	1 Website4	NFL.com	59		
12	1	1 Website4	Yahoo	29		
13	1	1 Website5	Calgary Herald	29		
14	1	1 Website5	Hypebeast	59		
15	1	1 Website5	Youtube	1		
16	2	2 Website1	Facebook	60		
17	2	2 Website1	Google	30		
18	2	2 Website1	UofC	2		
19	2	2 Website2	Google	2		
20	2	2 Website2	Hotmail	30		
21	2	2 Website2	Hotmail	60		
22	2	2 Website3	Hotmail	2		
23	2	2 Website3	Nordstrom	30		
24	2	2 Website3	UofC	60		

Analyze the data

- Extract the website data from the “WebsiteRankings” table, and put into “long” form: WebsiteRank WebsiteName 1
FaceBook 2 Hotmail 3 ...
- Create a query that will calculate the website ranking using a custom formula like this:

```
IIf([WebsiteRank]="Website1", 5,  
  IIf([WebsiteRank]="Website2", 4,  
    IIf([WebsiteRank]="Website3", 3,  
      IIf([WebsiteRank]="Website4", 2,  
        1))))
```

Analyze the data

The screenshot displays the Microsoft Access interface. On the left, a query design grid is visible with the following fields:

Field:	WebsiteRank	WebsiteName	WebsiteScore: IIf
Table:	WebsiteRankings	WebsiteRankings	
Sort:			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Criteria:			
or:			

On the right, the Expression Builder dialog box is open, showing the following expression for the WebsiteScore field:

```
WebsiteScore:  
IIf([WebsiteRank]="Website1",5,IIf([WebsiteRank]="Website2",  
4,IIf([WebsiteRank]="Website3",3,IIf([WebsiteRank]="Website4",  
2,1))))
```

The Expression Builder dialog also includes a field list on the left with the following items:

- Query1
- Tables
- Queries
- Forms
- Reports
- Functions
- Constants
- Operators
- Common Expressions

Buttons for OK, Cancel, Undo, and Help are visible on the right side of the dialog box.

Analyze the data

CalculateWebsiteScore		
WebsiteRank	WebsiteName	WebsiteScore
Website1	Facebook	5
Website1	Hotmail	5
Website1	Men	5
Website2	Google	4
Website2	Yahoo	4
Website2	Youtube	4
Website3	Beyond	3
Website3	Facebook	3
Website3	UofC	3
Website4	Bank	2
Website4	NFL.com	2
Website4	Yahoo	2
Website5	Calgary Herald	1
Website5	Hypebeast	1
Website5	Youtube	1
Website1	Facebook	5
Website1	Google	5
Website1	UofC	5
Website2	Google	4
Website2	Hotmail	4
Website2	Hotmail	4
Website3	Hotmail	3

Analyze the data

Create another query based off this previous query that will do a summation of all the scores for each website

The screenshot displays the Microsoft Access interface for a query named 'CalculateWebsiteScore'. The left-hand pane shows the 'All Tables' list, which includes 'SpreadSheetData', 'Query_Website1' through 'Query_Website5', 'WebsiteRankings', and 'CalculateWebsiteScore'. The 'WebsiteRankings' table is currently selected. The main workspace shows the query's design grid, which is as follows:

Field:	WebsiteScore	WebsiteName
Table:	CalculateWebsiteScore	CalculateWebsiteScore
Total:	Sum	Group By
Sort:	Descending	
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		
or:		

Analyze the data

The screenshot displays the Microsoft SQL Server Enterprise Manager interface. On the left, the 'All Tables' folder is expanded to show a hierarchy of objects: 'SpreadSheetData' (containing 'SpreadSheetData : Table' and five 'Query_Website' objects), 'WebsiteRankings' (containing 'WebsiteRankings : Table', 'AnalysisQuery', and 'CalculateWebsiteScore'), and 'Unrelated Objects' (containing 'AppendQuery' and 'Union_WebsiteQueries'). The 'AnalysisQuery' table is selected and its data is displayed in the main pane. The table has two columns: 'SumOfWebsi' and 'WebsiteName'. The data is sorted by 'SumOfWebsi' in descending order, with Facebook at the top (264) and Perez Hilton at the bottom (5).

SumOfWebsi	WebsiteName
264	Facebook
221	Google
162	Hotmail
114	UofC
54	Yahoo
48	Youtube
47	MSN
39	Wikipedia
34	Null
27	NHL.com
19	Gmail
16	Bank
12	BlackBoard
9	Webmail
9	NBA.com
7	Dictionary.com
6	NFL.com
6	RBC
6	CBC
5	Space.com
5	Perez Hilton