



# CPSC203 – Introduction to Problem Solving and Using Application Software

Winter 2010

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# Introduction

- Quiz #2 notice
- Course project notice
- Assignment #2 notice
- Query analysis example

# Quiz #2

- Tuesday, March 16, 17:00 – 17:50.
- You will submit a Microsoft Access database file (with the extension .accdb).
- Make sure Microsoft Access is closed before trying to upload to the Blackboard.
- Make sure you occasionally save your database during the quiz.

# Course Project

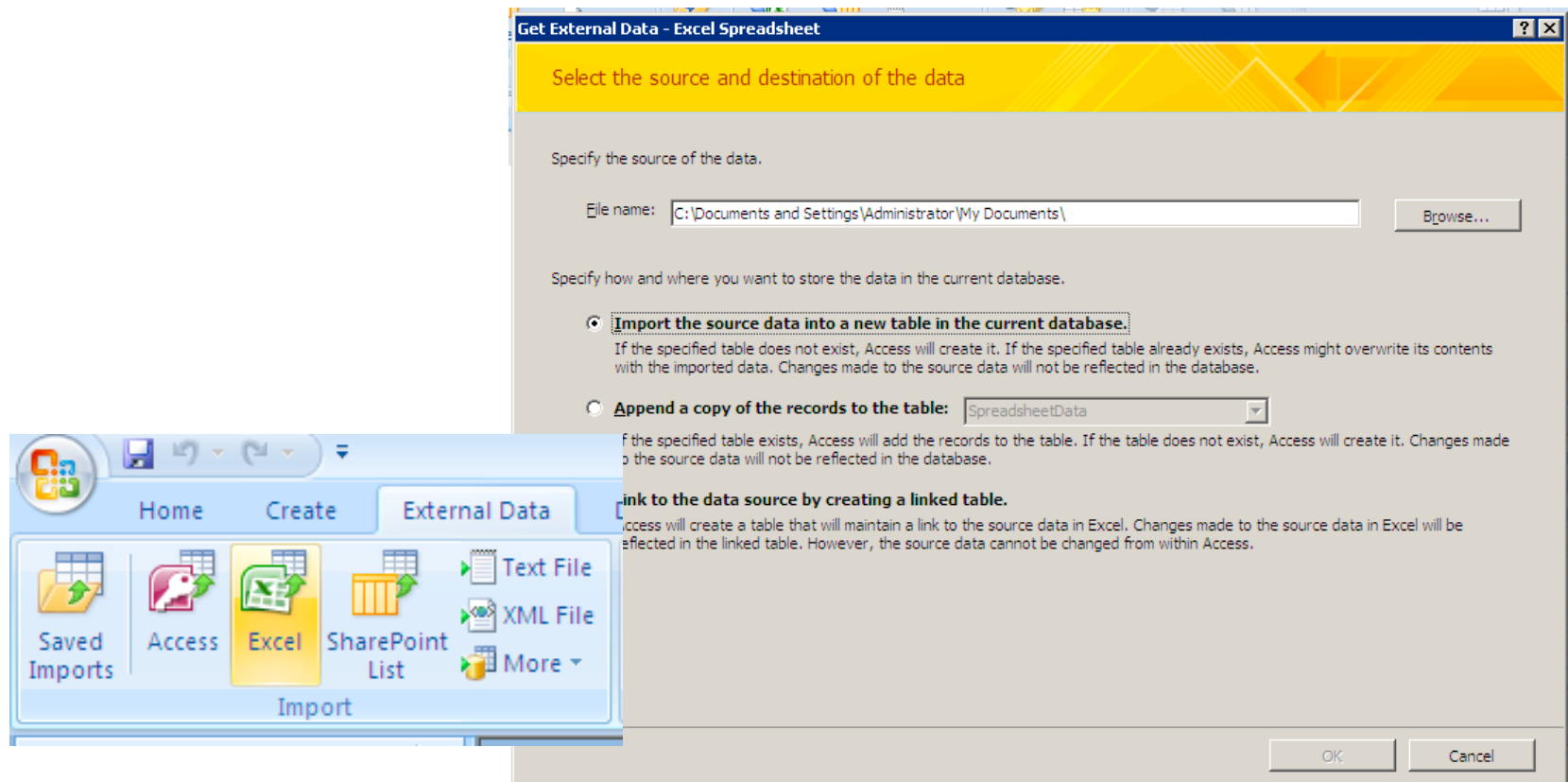
- Project description is not published yet.
- Project is an assignment designed for the final component of the lab (Programming).
- Project is worth 10% (quizzes and assignments are each worth 7.5%).
- Project is done in teams of size TWO.
- Pair up with another student in this tutorial by the end of this week.
- Project is due Friday, 16 April.

# Assignment #2

- Assignment #2 is due Tuesday, 23 March.
- Assignment has two parts each is worth 50%.
- For Part 1, the submission will include:
  - An ERD diagram and a database schema (in a .doc or .ppt file).
  - A database file (.accdb).
- For Part 2, the submission will include:
  - A database file (.accdb).

# Query Analysis Example: Step 1

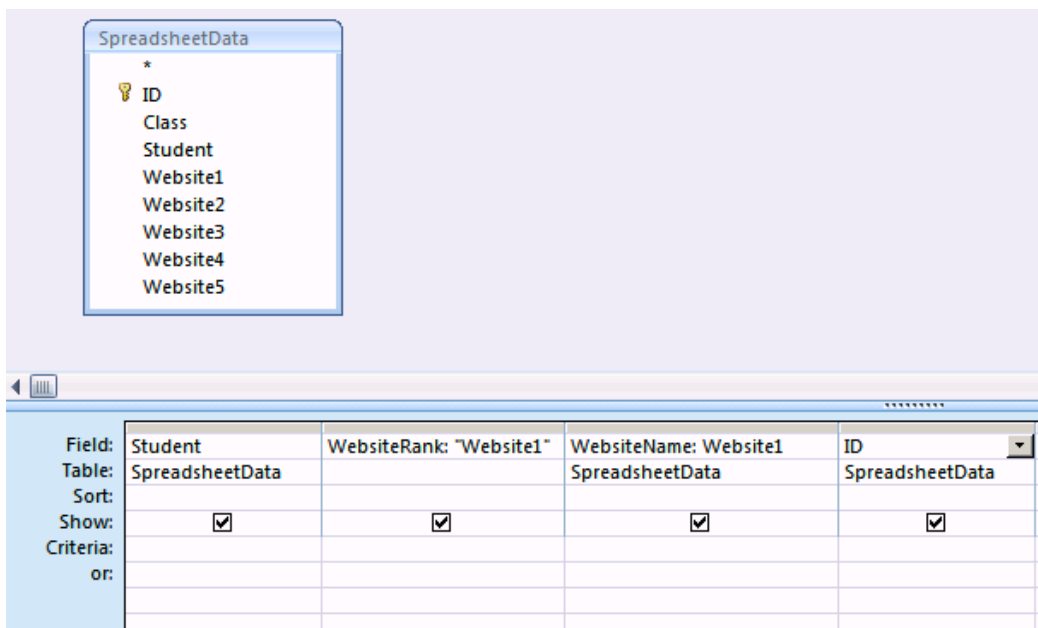
Import data from the Excel file into a table called **SurveyData**.



# Query Analysis Example: Step 2

Create 5 queries from the imported **SurveyData** as follows:

- One query selects websites of Rank1 (called **loadqry3a\_selWebsite1**)
- One query selects websites of Rank2 (called **loadqry3a\_selWebsite2**)
- One query selects websites of Rank3 (called **loadqry3a\_selWebsite3**)
- One query selects websites of Rank4 (called **loadqry3a\_selWebsite4**)
- One query selects websites of Rank5 (called **loadqry3a\_selWebsite5**)



| Student | WebsiteRank | WebsiteName | 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 |

# Query Analysis Example: Step 3

Create a union query that groups data from the 5 queries created in step 2 (called **loadqry3f\_unionWebsiteInformation**).

The screenshot displays the Microsoft Access interface. The top ribbon includes 'Home', 'Create', 'External Data', 'Database Tools', and 'Design'. The 'Design' ribbon is active, showing options like 'Union', 'Pass-Through', and 'Data Definition'. The 'Query Type' dropdown is set to 'Union'. The 'Tables' pane on the left shows a list of tables: 'SpreadsheetData', 'queryWebsite1', 'queryWebsite2', 'queryWebsite3', 'queryWebsite4', 'queryWebsite5', and 'Union\_websiteQueries'. The 'Query Design View' for 'Union\_websiteQueries' shows the following SQL:

```
Select queryWebsite1.* from queryWebsite1
UNION
Select queryWebsite2.* from queryWebsite2
UNION
Select queryWebsite3.* from queryWebsite3
UNION
Select queryWebsite4.* from queryWebsite4
UNION
Select queryWebsite5.* from queryWebsite5
```

The 'Results' pane on the right shows the data returned by the query. The table has four columns: 'Student', 'WebsiteRan', 'WebsiteName', and 'ID'. The data is as follows:

| 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  |



# Query Analysis Example: Step 4

Create a new table called **WebsiteRankings** and keep it empty.

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

# Query Analysis Example: Step 5

Create an append query that would use the data from the union query (in step 3) to populate that table. (called **loadqry3i\_loadWebsiteRankings**).

The screenshot shows two views of the Microsoft Access interface. The left view shows the 'Append' dialog box with 'Current Database' selected and 'WebsiteRankings' chosen in the table list. The right view shows the 'Append To' table design grid for 'Union\_websiteQueries'.

**Append Dialog Box (Left View):**

- Append To:
- Table Name: [ ]
- Current Database:  Current Database
- Another Database:  Another Database: [ ]
- File Name: [ ]
- Browse: [ ]

**Append To Table Design Grid (Right View):**

| Field:     | Student              | WebsiteRank          | WebsiteName          | ID                   |
|------------|----------------------|----------------------|----------------------|----------------------|
| Table:     | Union_websiteQueries | Union_websiteQueries | Union_websiteQueries | Union_websiteQueries |
| Sort:      |                      |                      |                      |                      |
| Append To: | Student              | WebsiteRank          | WebsiteName          | ID                   |
| Criteria:  |                      |                      |                      |                      |
| or:        |                      |                      |                      |                      |

# Query Analysis Example: Step 6

Create a query to calculate the scores for the different websites (called **analysisqry1\_calcWebsiteScore**).

The screenshot displays the Microsoft Access interface during the creation of a query. The **Expression Builder** window is open, showing the following formula for the **WebsiteScore** field:

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

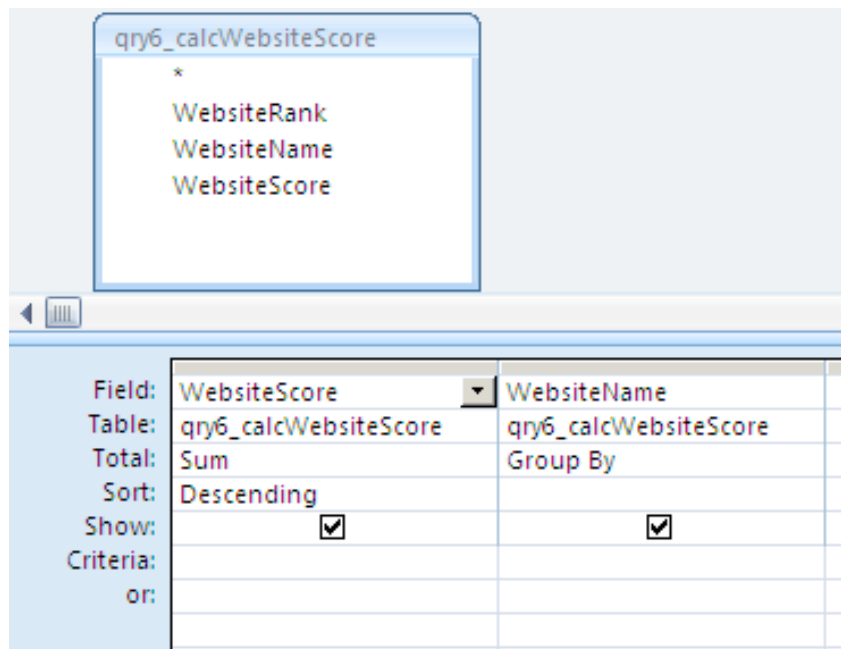
The background shows a table with the following columns: **WebsiteRank**, **WebsiteName**, and **WebsiteScore**. The table contains 25 rows of data, including entries like Website1 (Hotmail, 5), Website2 (Google, 4), Website3 (Facebook, 3), Website4 (Facebook, 2), Website5 (Calgary Herald, 1), Website1 (Google, 5), Website2 (Google, 4), Website2 (Hotmail, 4), Website3 (Hotmail, 3), Website3 (Nordstrom, 3), Website4 (Hotmail, 2), Website4 (Nordstrom, 2), Website5 (Facebook, 1), Website5 (Sympatico, 1), Website1 (Facebook, 5), Website1 (StockWatch, 5), Website2 (MSN, 4), Website2 (StockHouse, 4), Website3 (Kitco, 3), and Website4 (UofC, 2).

The **Field List** at the bottom left shows the following fields for the **tblWebsiteRankings** table:

| Field:    | WebsiteRank                         | WebsiteName                         | WebsiteScore: IIf([WebsiteRank]="Website1",5,IIf([WebsiteRank]="Website2",4,IIf([WebsiteRank]="Website3",3,IIf([WebsiteRank]="Website4",2,1)))) |
|-----------|-------------------------------------|-------------------------------------|---|
| Table:    | tblWebsiteRankings                  | tblWebsiteRankings                  |   |
| Sort:     |                                     |                                     |   |
| Show:     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>   |
| Criteria: |                                     |                                     |   |
| or:       |                                     |                                     |   |

# Query Analysis Example: Step 7

Create a query to summarize the calculated website scores (called **analysisqry2\_summarizeWebsiteScores**).



The screenshot shows the data view of the query `qry6_calcWebsiteScore`. The data is sorted by `WebsiteScore` in descending order. The data is as follows:

| SumOfWebsiteScore | WebsiteName     |
|-------------------|-----------------|
| 167               | Facebook        |
| 165               | Google          |
| 108               | Hotmail         |
| 93                | UofC            |
| 51                | Yahoo           |
| 35                | MSN             |
| 33                | Wikipedia       |
| 28                | Youtube         |
| 20                | Null            |
| 13                | Gmail           |
| 9                 | Webmail         |
| 9                 | NHL.com         |
| 6                 | Bank            |
| 5                 | Download.com    |
| 5                 | BlackBoard      |
| 5                 | Calgaryplus.com |
| 5                 | Men             |
| 5                 | 4Wheeler        |
| 5                 | Mininova.com    |
| 5                 | MySpace         |
| 5                 | Nordstrom       |
| 5                 | Kitco           |
| 5                 | Space.com       |
| 5                 | Xangha          |
| 5                 | Weather Network |
| 5                 | Doracities      |