



# Queries IV

## WV Senate Problem

### Topics

- Use results from another query in a new query
- Copy an existing query
- Use wildcards in query criteria
- Display unique values in query results
- Use a parameter query
- Create a query to update records
- Create a query to delete records

### Background Information

This project includes information on West Virginia Senate elections from 2000 to 2014.

### Instructions

**IMPORTANT:** This assignment requires the Windows version of Microsoft 365. macOS users can access a ready-to-use version through Windows Virtual Desktop by following the instructions at <https://cs101.wvu.edu/wvd>.

**IMPORTANT:** Complete the steps below in the order they are given. Completing the steps out of order may complicate the assignment or result in an incorrect result.

1. Download and extract the provided Data Files ZIP file. It contains the following file for use in this assignment:
  - a. **senate\_ppq4\_wvsp.accdb** – Information on West Virginia Senate elections [1]–[5].

Table: <i>Candidates</i>		
Field Name	Type	Description
<b>CandidateID</b>	AutoNumber	Primary key. Unique identifier for the candidate.
<b>CandidateFirst</b>	Short Text	First name of candidate.
<b>CandidateLast</b>	Short Text	Last name of candidate.
<b>ServedInHouse</b>	Yes/No	If yes, the candidate has served in the West Virginia House of Delegates.



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Table: <i>Districts</i>		
Field Name	Type	Description
<b>District</b>	Number	Part of composite key. Number of State Senate district.
<b>RedistrictingCycle</b>	Number	Part of composite key. Census data year used for redistricting.
<b>Counties</b>	Short Text	List of counties or parts of counties in the district.
<b>Population</b>	Number	Population of district.

Table: <i>ElectionCandidates</i>		
Field Name	Type	Description
<b>ElectionCandidateID</b>	AutoNumber	Primary key.
<b>Seat</b>	Short Text	Seat up for election.
<b>Year</b>	Number	Year of election.
<b>CandidateID</b>	Number	Unique identifier for the candidate.
<b>PartyAbbrv</b>	Short Text	Abbreviation of party name.
<b>Contributions</b>	Currency	Amount of money contributed to the candidate's campaign.
<b>Expenditures</b>	Currency	Amount of money spent by the candidate's campaign.
<b>VotesReceived</b>	Number	Number of votes received by the candidate.
<b>Incumbent</b>	Yes/No	If yes, candidate was an incumbent in the election.

Table: <i>Elections</i>		
Field Name	Type	Description
<b>Seat</b>	Short Text	Part of composite key. Seat up for election.
<b>Year</b>	Number	Part of composite key. Year of election.
<b>District</b>	Number	Number of State Senate district.
<b>RedistrictingCycle</b>	Number	Redistricting cycle this election used.
<b>WinnerPctg</b>	Percentage	Percentage of the total received by the winning candidate.
<b>IncumbentRetired</b>	Yes/No	If yes, incumbent did not run for re-election.

Table: <i>Parties</i>		
Field Name	Type	Description
<b>PartyAbbrv</b>	Short Text	Primary key. Abbreviation of party name.
<b>PartyName</b>	Short Text	Full text of political party name.

Table: <i>AnalysisQuestions</i>		
Field Name	Type	Description
<b>QuestionNumber</b>	Short Text	Primary key. Question being answered.
<b>Response</b>	Long Text	Response to the analysis question prompt.



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2. Open the **senate\_ppq4\_wvsp.accdb** database in Microsoft Access.
3. We must add additional records to the *Elections* table.
  - a. Enter records for all elections below.

**HINT:** The *Elections* table will contain 138 records.

Redist	Dist	Year	Inc First	Inc Last	Inc Ret	Win First	Win Last	Win Pctg
1990	1	1999	Ed	Bowman	N	Ed	Bowman	63.99%
1990	2	1999	Don	MacNaughtan	Y	Larry	Edgell	56.42%

4. There is nothing to do for this step. Please proceed to the next step.
5. There is nothing to do for this step. Please proceed to the next step.
6. Create separate queries to provide the information requested below. Name each query after the step in which it appears (e.g., the name the query in Step 6a as *Query6A*).

**HINT:** Run your queries to test them. Make sure that they display all and only the records that you would expect to appear.

### Use results from another query in a new query

- a. Expanding upon the results from the *Query3C* query, we would like to display races where incumbents retired. All data for this query will come from *Query3C*.

Create a query listing each district, year, and the incumbent's first name and last name.

Only display records where the incumbent retired. Do not show the incumbent retired field in the results.

**HINT:** This query will show 17 records and 4 fields.

### Copy an existing query

- b. We wish to view elections where the incumbent did not retire. Copy the *Query6A* query and save it as a new query.

Modify the query to only display records where the incumbent did not retire. Do not show the incumbent retired field in the results.

**HINT:** This query will show 121 records and 4 fields.



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#### Use wildcards in query criteria

- c. We wish to create a new query to list counties which are split between districts. Create a new query listing the redistricting cycle, district, and counties in the district.

Only display records for districts which contain only part of at least one county.

**NOTE:** When selecting the records to include, use a wildcard and the text "(P)" in your criteria.

**HINT:** This query will show 43 records and 3 fields.

#### Display unique values in query results

- d. We wish to list all candidates who have actually won an election. Create a new query that lists the winners' first name, last name, and district.

Only display unique values. Sort by last name and then by first name, both in ascending order.

**HINT:** This query will show 73 records and 3 fields.

#### Use a parameter query

- e. Parameter queries are a type of query which asks for criteria when they are run. This allows the same query to be used repeatedly without having to manually edit the query criteria in Design View.

We want to create a query to view elections by year. Create a query listing the year, district, and the winner's first name and last name.

The query must prompt the user for the year to use. Only display records where the year matches the entered value.

**IMPORTANT:** Do not include a period (.) or exclamation point (!) in the message to be displayed when prompting the user for their desired criteria.

**HINT:** This query will show 17 records with 4 fields when year 2012 is entered.



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### Create a query to update records

- f. We want to correct elections records. Create a query to update the *Elections* table. Set the year to 1998 on records where the year is currently 1999.

**HINT:** This query will update 2 records.

### Create a query to delete records

- g. Create a query to delete elections records. Delete records where the year is 1998.

**HINT:** This query will delete 2 records.

7. In the *AnalysisQuestions* table, answer the analysis question below. Respond to one question per record.
- b. Most incumbents win reelection. Why do you think this is the case?
8. Run the Compact and Repair Database utility on your database. Ignore any errors you receive when running the utility.

## Grading Rubric

This assignment is worth 8 points. It will be graded by your instructor using this rubric:

Standard	Meets Requirements (8 points)	Does Not Meet Requirements (0 points)
Student made reasonable effort in correctly completing assignment.	Assignment is at least 70% complete and correct, or student contacted instructor for help on incorrect or incomplete items.	Assignment is less than 70% complete and correct, and student did not contact instructor for assistance on incorrect or incomplete items.

This rubric will be used for peer evaluation of this assignment:

Standard	Excellent	Satisfactory	Needs Improvement
Assignment is correct and complete.	Assignment is at least 90% complete and correct.	Assignment is 70%-89% complete and correct.	Assignment is less than 70% complete and correct.



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The analysis question in Step 7b will be evaluated using this rubric:

Standard	Meets Requirements	Does Not Meet Requirements
Answer is reasonable.	Answer addresses the question prompt and is factually correct or a reasonable interpretation of available data.	Answer does not address the question prompt, is factually incorrect, or is an unreasonable interpretation of available data.
Answer is supported.	Logical rationale is provided to support the given answer.	Logical rationale is not provided to support the given answer.

## References

- [1] "Historical Election Results and Turnout," *West Virginia Secretary of State*. Available: <https://sos.wv.gov/elections/Pages/HistElecResults.aspx>.
- [2] "Campaign Finance Reporting System," *West Virginia Secretary of State*. Available: <http://cfrs.wvsos.com/#/home>.
- [3] "West Virginia Senate Contributions," *FollowTheMoney.org*. Available: <https://www.followthemoney.org/show-me?dt=1&c-exi=1&c-r-ot=S%2CH&s=WV&c-r-ot=S>.
- [4] "Candidate Listing and Finance Reports," *West Virginia Secretary of State*. Available: <http://services.sos.wv.gov/apps/elections/candidate-search/>.
- [5] "West Virginia: 2000 Population and Housing Unit Counts," U.S. Census Bureau, Washington, DC, Oct. 2003. Available: <https://www.census.gov/prod/cen2000/phc-3-50.pdf>.