Access Basics

WV Senate Problem

Topics

- Add, edit, and delete records
- Use Datasheet and Design views for tables
- Use Datasheet, Design, and SQL views for queries
- View query results
- View forms
- View reports
- Compact and repair the database

Background Information

This project includes information on West Virginia Senate elections from 2000 to 2020.

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_ppab_wvsp.accdb** – Information on West Virginia Senate elections [1]–[5].

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

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

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

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

Table: *Parties*		
Field Name	**Type**	**Description**
PartyAbbrv	Short Text	Primary key. Abbreviation of party name.
PartyName	Short Text	Full text of political party name.

Table: *AnalysisQuestions*		
Field Name	**Type**	**Description**
QuestionNumber	Short Text	Primary key. Question being answered.
Response	Long Text	Response to the analysis question prompt.

2. Open the **senate_ppab_wvsp.accdb** database in Microsoft Access.

Add, edit, and delete records / Use Datasheet and Design views for tables

3. We need to add some additional records to the *Parties* table.
   a. Enter records for all parties below.

      HINT: The *Parties* table will contain 11 records.

Party Abbreviation	Party Name
PRO	Prohibition Party
FUS	Fusion Party
SQD	Square Deal Party

4. We wish to modify records in the *Candidates* table.
   a. Change Shirley Love's first name to `Mr. Shirley` for the 2000 and 2004 elections.
   b. Change Jeff Kessler's party to Mountain Party for the 2008 election.
   c. Attempt to change Walter Bish's district to `100` for the 2000 election. You will be unable to complete the change because it would violate referential integrity.
5. We wish to delete records from the *Parties* table.
   a. Delete the record for the Square Deal Party.
   b. Attempt to delete the record for the Mountain Party. You will be unable to complete the deletion because it would violate referential integrity.
6. Each table contains several fields, each with its own properties. Open the following tables in Design View and look at the properties for each field:
   a. *AnalysisQuestions*
   b. *Candidates*
   c. *Districts*
   d. *Elections*
   e. *Parties*

Use Datasheet, Design, and SQL views for queries / View query results

7. Queries are used to extract information from a database. Open the following queries in Design View and look at how the queries are designed, then run each query to view its results:
   a. *CandidatesQuery*
   b. *WinnersQuery*
   c. *DistrictsQuery*
   d. *PluralityWinnersQuery*
   e. *SelfFundedWriteInQuery*
   f. *CandidatesFieldedQuery*

View forms

8. Forms provide a user-friendly way to edit data. Open the following forms, then look at them in Layout View:
   a. *PartyData*
   b. *PartyCandidateData*, a subform associated with *PartyData*

View reports

9. Reports provide a structured way to view the contents of tables or results of queries. Open the following report, then look at it in Layout View:
   a. SelfFundedCandidates

Compact and repair the database

10. 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.

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*.