**Assignment 2: Develop and Test a Coded Solution**

### Objective:

### To take someone else’s coded solution and get it to a successful working state. This will involve resolving any syntax issues as well as logical programming issues.

### Instructions:

### This assignment can be completed individually or in a group (there is no size limit for the group).

### The final deliverables will be a report and the corrected code that are submitted to the corresponding Brightspace assignment submission folder. Details on the expectations of this report are provided later in this assignment document.

* You have been given the following pieces of information to work with:
  + A flowchart of what the program must do.
  + Scripts to create the table set structure for this problem as well as initial data for these tables.
  + A copy of what the data looks like before running the program, using the provided data.
  + A copy of what the data should look like after the program has executed, using the provided data.
  + A copy of the coded solution you must test and correct.

### Suggestions:

* Make sure to refresh the tables and data between each execution of the source code when correcting logic errors.
* Correct and document any syntax errors.
* Correct and document any logic errors.
* The solution is correct when the provided expected data results are achieved from the execution of your coded solution.
* Code change restrictions:
  + Cannot hard code any values that are not already hard coded.
  + Cannot rewrite/recreate the entire solution from scratch; must fix the provided code.

**Assignment Components:**

1. Syntax Error Identification, Explanation, and Correction (for each syntax error – there are five):
   * Include in the report (for each syntax error):
     + A screenshot of the code section that contains the syntax error.
     + A screenshot of the error message received from this syntax error.
     + Written explanation identifying the reason for the syntax error (1 – 2 sentences).
     + Written explanation identifying the correction to fix this syntax error (1 – 2 sentences).
     + A screenshot of the code section that contains the corrected code.
   * An example of what this entry would look like for each syntax error is provided in ***Appendix A*** at the end of this document.

Code Section in Error:

1. Logic Error Identification, Explanation, and Correction (for each logic error – there are five):
   * Include in the report (for each logic error):
     + The expected result.
     + The actual result.
     + A screenshot of the code section that contains the logic error.
     + Written explanation identifying the reason for the logic error (1 – 2 sentences).
     + Written explanation identifying the correction to fix this logic error (1 – 2 sentences).
     + A screenshot of the code section that contains the corrected code.
   * An example of what this entry would look like for each logic error is provided in ***Appendix B*** at the end of this document.
2. Additional Recommendations:
   * Include in the report:
     + Provide additional recommendations on what you believe still needs to be improved with this code (think about good programming form).
     + Identify two additional recommendations.
     + Should be half to one-and-a-half pages.
3. Final Coded Solution:
   * Provide your final coded solution with all the corrections.
   * Submit as a separate SQL (text) file.

**Deliverables:**

* A report in PDF format that includes:
  + Cover page that includes:
    - The name of each group member who participated.
  + Syntax Error Identification, Explanation, and Correction.
  + Logic Error Identification, Explanation, and Correction
  + Additional Recommendations.
* SQL (text) file containing the final corrected code.

**Report Format:**

* The report should use Times New Roman 11-pt font; double-spaced
* The report should be logically organized and cleanly formatted showing all requested information.
* Make sure to review **Appendices A and B** for examples of how to document syntax and logic error information.

**Submission:**

* Submit your report as a PDF document and the SQL file to the corresponding assignment submission folder.
* If working in a group of more than one person, only one person in the group needs to submit.

**Marking Rubric:**

| **Criteria** | **2 (Complete)** | **1 (Incomplete)** |
| --- | --- | --- |
| **Syntax Error Identification, Explanation, and Correction** | Syntax errors are identified, explained, and corrected showing this information as requested in this document (See *Appendix A* for an example). | Requested documentation is incomplete as not all requested information is provided. |
| **Logic Error Identification, Explanation, and Correction** | Logic errors are identified, explained, and corrected showing this information as requested in this document (See *Appendix B* for an example). | Requested documentation is incomplete as not all requested information is provided. |
| **Additional Recommendations** | Provides at least two additional recommendations for this coded solution regarding good programming form. | Provides one additional recommendation for this coded solution regarding good programming form. |
| **Overall Presentation** | Well-organized, clear, and free of grammatical errors. | Somewhat organized, with several grammatical errors. |
| **Corrected Coded Solution Provided** | SQL file submitted contains the corrected solution. | **There are no part marks for this criterion.** |

**Total Score Calculation**

* **Syntax Error Identification, Explanation, and Correction**: \_\_\_\_ / 10
* **Logical Error Identification, Explanation, and Correction**: \_\_\_\_ / 10
* **Additional Recommendations**: \_\_\_\_ / 2
* **Overall Presentation**: \_\_\_\_ / 2
* **Corrected Coded Solution Provided**: \_\_\_\_ / 2

**Total Score**: \_\_\_\_ / 26

Note: If a section is missing, this section will receive a zero (0) mark.

Note: If a syntax or logic error is not identified or misidentified, no marks will be received for this error (each error has a maximum value of 2 marks).

**Appendix A (Syntax Error Documentation Example):**

Syntax Error 1

Code Section in Error:

A close-up of a computer code

Description automatically generated

Error Message Received:

A screenshot of a computer code

Description automatically generated

Reason for Error:

* + The SELECT…INTO is trying to access a column called SAL, but the database does not recognize this column.

Correction:

* + The column name is SALARY, not SAL.

A close-up of a computer code

Description automatically generated

**Appendix B (Logical Error Documentation Example):**

Logical Error 1

Expected Result:

* + Should output to the screen: 2084.885

Actual Result:

* + What is being outputted to the screen: 1925.6

Code Section in Error:

A close-up of a number

Description automatically generated

Reason for Error:

* + From the value that is expected, it looks like the average salary is being calculated for all departments except for number 40.

Correction:

* + Add a WHERE clause excluding department 40.

A white screen with black text

Description automatically generated