**Project Title: Career Database Analysis**

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**Executive Summary**

This project focuses on analyzing career data to identify optimal cities for employment based on various criteria such as salary, cost of living, weather, crime rates, and demographics. The SQL queries developed provide actionable insights that can assist graduates in making informed decisions regarding their post-graduation employment options.

**Objective**

The primary objectives of this assignment are to engage students in:

1. **GAP Analysis**: Identify gaps in data or skills relevant to career opportunities.

2. **Root Cause Analysis**: Understand underlying factors influencing job preferences.

3. **Risk Management**: Evaluate potential risks associated with job selection.

4. **Network Infrastructure Evaluation**: Assess the reliability of the Career Database for real-world applications.

**Course and Unit Outcomes**

Through the execution and completion of this deliverable, students will achieve the following outcomes:

1. **ETL Skills**: Interpret and transform data into usable knowledge.

2. **Database Management**: Create relational databases and execute complex SQL queries.

3. **Data Analysis**: Perform administrative tasks and manipulate data across various tables.

**Scenario**

Students are tasked with answering key questions to determine their preferred cities and job positions upon graduation, using the class-developed Career Database. This includes analyzing salary expectations, job titles, industries, and living conditions.

**Deliverables**

The main deliverable is a comprehensive SQL query that addresses the specified questions, executed against the Career Database. The query adheres to best practices as taught in the course.

**SQL Query**

Please refer the file query.txt for the query.  
  
**How to Use**

1. **Prerequisites**: Ensure you have access to SQL Server or any SQL-compatible environment where the Career Database is set up.

2. **Running the Query**: Copy and paste the SQL code into your SQL editor and execute it against the Career Database.

3. **Understanding Outputs**: The query returns cities that meet the specified criteria, along with the most common required skills for each city.

**Future Improvements**

• **Additional Data Sources**: Consider incorporating data from other job portals to expand the analysis.

• **Visualization**: Develop visual dashboards using tools like Tableau or Power BI to present findings more interactively.

• **Predictive Analysis**: Implement machine learning techniques to predict future job trends based on historical data.

**Conclusion**

This project successfully analyzes the Career Database to provide insights into potential employment opportunities for graduates. The SQL queries developed not only meet the assignment’s objectives but also serve as a foundation for future analysis and decision-making.