Goal:  
  
Transform the columnar, current employee data into a row-based, historical versioning format that may be stored in a database.

Approach:

* Python programming and the pandas data manipulation package are used to implement the transformation.
* A pandas DataFrame is filled with data that is loaded from the input CSV file.  
  'Employee Code' and 'Date of Joining' are used to sort the DataFrame in order to guarantee chronological order.
* The appropriate output columns are initialized in a new DataFrame called "output\_df."
* Every employee's data is iterated through, and pertinent fields are extracted and modified for every record.
* The "Date of Joining" and "Date of Exit" are used to calculate the "Effective Date" and "End Date."
* Missing values in particular fields are carried over from the employee's most recent historical record.
* The transformed records are gradually added to the result DataFrame.
* A new CSV file containing the generated DataFrame is stored.

Assumptions:

* It is expected that the data types in the input CSV file are correct and consistent.
* 'YYYY-MM-DD' format is expected for the dates in the 'Date of Joining' and 'Date of Exit' columns.
* It is assumed that engagement scores, performance ratings, and compensation are all numerical values.
* The script treats missing values in the appropriate fields as NULL or NaN, assuming they are absent.
* The 'Last Pay Raise Date' is assumed by the script to be represented by the 'Compensation 2 date' field.
* To prevent overlap, a 'End Date' of '2100-01-01' is applied to the employee's most recent record.

Observations:

* Iterative changes have been made to the code to fix problems found during testing and user feedback.
* Modifications include reworking the transformation algorithm overall, handling NaN values appropriately, and calculating tenure correctly.

In conclusion:

* The employee data input is properly converted by the transformation script into a row-based historical versioning format that may be kept in a data warehouse.
* The generated CSV file serves as a basis for additional analysis and conforms to the designated output format.