

Choosing the right mapping for Elasticsearch in Exercise A is crucial for accurate data representation and efficient querying. Here's a justification for the mapping choices:

1. Salary Field:

- Type: Chosen as 'float'.
- Justification: Salary is a numerical value, and using a float allows for accurate representation of decimal values. This is important for precise salary calculations and aggregations.

2. Timestamp Field:

- Type: Chosen as 'date'.
- Justification: Timestamps are date-time values, and using a date type ensures that Elasticsearch can handle them appropriately. This enables effective date-based queries and aggregations.

3. Industry Field:

- Type: Chosen as 'keyword'.
- Justification: Industry names are typically short, discrete values. Using a keyword type allows for efficient exact-match filtering and sorting without text analysis.

4. Job Title Field:

- Type: Chosen as 'text'.
- Justification: Job titles can be longer text entries. Using a text type allows for full-text search capabilities, making it easier to find records based on job titles.

5. Location Field:

- Type: Chosen as 'keyword'.
- Justification: Location names are generally short and discrete. Using a keyword type enables exact-match filtering and sorting without text analysis.

6. Years of Experience Field:

- Type: Chosen as 'text'.
- Justification: Years of experience may be represented as text ranges (e.g., "5-7 years"). Using a text type allows for efficient filtering and full-text search capabilities.

7. Additional Context and Other Fields:

- Type: Chosen as 'text'.
- Justification: Both "Additional Context" and "Other" fields may contain longer, descriptive text. Using a text type allows for full-text search capabilities.

8. Currency Field:

- Type: Chosen as 'text'.
- Justification: Currency values may be represented as text (e.g., "USD"). Using a text type enables exact-match filtering and sorting without text analysis.

Overall Justification:

The chosen mapping types are tailored to the nature of each field. This mapping strategy balances the need for precise numeric representation, efficient exact-match filtering, and full-text search capabilities. It ensures that Elasticsearch can handle the data effectively for a wide range of queries and aggregations.