**Designing Choices:**

**\***Utilized two **HashMap** structures (**shortToLongMap** and **longToShortMap**) to efficiently store bidirectional mappings between short and long URLs. This design facilitates quick lookup and retrieval.

**\***Ensured the uniqueness of short URLs by checking if a long URL is already in the mapping. Employed bidirectional mapping for both shortening and expanding operations.

**Features:**

**\***Implemented methods (**shortenUrl** and **expandUrl**) to support both shortening long URLs and expanding short URLs to their original form.

**\***Included error handling by providing a default message ("URL not found") when attempting to expand a short URL that doesn't exist in the mapping.

**\***Utilized separate maps for short-to-long and long-to-short mappings. Optionally, data persistence could be introduced to maintain link mappings between sessions.

**\***Chose a random alphanumeric string as the basis for short URLs. This simple approach ensures uniqueness and reduces the likelihood of collisions