<https://gemini.google.com/u/1/app/2c4ea8fa457b0abd?is_sa=1&android-min-version=301356232&ios-min-version=322.0&campaign_id=bkws&utm_source=google&utm_medium=cpc&utm_campaign=2024enUS_gemfeb&pt=9008&mt=8&ct=p-growth-sem-bkws>

## [**https://gemini.google.com/u/1/app/fd47ede3d905a3f2**](https://gemini.google.com/u/1/app/fd47ede3d905a3f2)

<https://gemini.google.com/u/1/app/4e4c57eff1c5afd3>

<https://gemini.google.com/u/1/app/440838222ac514d7>

Production-Ready Specification: public.translations Table

Version: 2.1 (Checklist V2-05-17-B Applied)

Date: 2025-05-17

1. Purpose & Primary Use-Cases

Mission Statement: To store and manage all translated textual content for specified fields from various tables across the platform, enabling a multilingual user experience, with audit trails for content and row modifications.

Key User-Story Touchpoints:

• Pilgrim (Anna): Sees platform content in her preferred language.

• Platform Administrator/Content Manager: Manages translated content and its lifecycle.

• System/Developer: Application queries this table for translations; relies on audit fields.

2. Schema

| column | data\_type | constraints | description |

| :---------------------------- | :------------------------ | :------------------------------------------------------------------------------------------------------------------ | :-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------- |

| id | bigint | Primary Key, Generated always as identity | 🟢 Unique identifier for the translation entry. |

| table\_identifier | text | Not Null, CHECK (`char\_length(table\_identifier)` > 0) | 🟢 Name of the source table containing the original text (e.g., 'user\_roles\_master'). |

| column\_identifier | text | Not Null, CHECK (`char\_length(column\_identifier)` > 0) | 🟢 Name of the column in the source table being translated (e.g., 'default\_display\_name'). |

| row\_foreign\_key | text | Not Null | 🟠 PK value of the source record as text. Accommodates various PK types. Integrity via parent table triggers. |

| language\_code | text | Not Null, Foreign Key to `public.languages\_master(language\_code)` ON UPDATE CASCADE ON DELETE RESTRICT | 🟢 The language of this translated text. |

| translated\_text | text | Not Null | 🟢 The actual translated content. Can store JSON array for conceptual arrays. |

| translation\_status | text | Nullable, CHECK (`translation\_status` IN ('draft', 'needs\_review', 'published\_live', 'needs\_update') OR `translation\_status` IS NULL) | 🟠 Workflow status of this translation. |

| translated\_by\_profile\_id | uuid | Nullable, Foreign Key to `public.profiles(id)` ON DELETE SET NULL | 🟢 Profile ID of the user/agent who provided/last updated the `translated\_text`. |

| translation\_last\_updated\_at | timestamp with time zone | Nullable | 🟢 Timestamp when `translated\_text` or `translation\_status` was last modified by a translator/editor. |

| created\_at | timestamp with time zone | Not Null, Default `now()` | Timestamp of when this translation row was created. |

| updated\_at | timestamp with time zone | Not Null, Default `now()` | Timestamp of when this translation row was last updated (auto-updated by trigger). |

| created\_by\_profile\_id | uuid | Nullable, Foreign Key to `public.profiles(id)` ON DELETE SET NULL | Profile ID of the user/process that created this translation row. |

| updated\_by\_profile\_id | uuid | Nullable, Foreign Key to `public.profiles(id)` ON DELETE SET NULL | Profile ID of the user/process that last updated this translation row's metadata (distinct from content updates tracked by `translated\_by\_profile\_id`). |

3. PostgreSQL DDL

-- Table Definition

CREATE TABLE public.translations (

id bigint NOT NULL GENERATED ALWAYS AS IDENTITY,

table\_identifier text NOT NULL CHECK (char\_length(table\_identifier) > 0),

column\_identifier text NOT NULL CHECK (char\_length(column\_identifier) > 0),

row\_foreign\_key text NOT NULL,

language\_code text NOT NULL,

translated\_text text NOT NULL,

translation\_status text NULL,

translated\_by\_profile\_id uuid NULL,

translation\_last\_updated\_at timestamp with time zone NULL,

created\_at timestamp with time zone NOT NULL DEFAULT now(),

updated\_at timestamp with time zone NOT NULL DEFAULT now(),

created\_by\_profile\_id uuid NULL REFERENCES public.profiles(id) ON DELETE SET NULL,

updated\_by\_profile\_id uuid NULL REFERENCES public.profiles(id) ON DELETE SET NULL,

CONSTRAINT translations\_pkey PRIMARY KEY (id),

CONSTRAINT translations\_language\_code\_fkey FOREIGN KEY (language\_code)

REFERENCES public.languages\_master (language\_code) ON UPDATE CASCADE ON DELETE RESTRICT,

CONSTRAINT translations\_translated\_by\_profile\_id\_fkey FOREIGN KEY (translated\_by\_profile\_id)

REFERENCES public.profiles (id) ON DELETE SET NULL,

CONSTRAINT uq\_translation\_entry UNIQUE (table\_identifier, column\_identifier, row\_foreign\_key, language\_code),

CONSTRAINT check\_translation\_status CHECK (translation\_status IN ('draft', 'needs\_review', 'published\_live', 'needs\_update') OR translation\_status IS NULL)

);

-- Indexes

CREATE INDEX idx\_translations\_lookup ON public.translations (table\_identifier, column\_identifier, row\_foreign\_key, language\_code, translation\_status);

CREATE INDEX idx\_translations\_language\_code ON public.translations (language\_code);

CREATE INDEX idx\_translations\_row\_foreign\_key ON public.translations (row\_foreign\_key);

CREATE INDEX idx\_translations\_status\_updated\_at ON public.translations (translation\_status, translation\_last\_updated\_at) WHERE translation\_status IS NOT NULL AND translation\_last\_updated\_at IS NOT NULL;

CREATE INDEX idx\_translations\_translated\_by\_profile\_id ON public.translations (translated\_by\_profile\_id) WHERE translated\_by\_profile\_id IS NOT NULL;

CREATE INDEX idx\_translations\_created\_by\_profile\_id ON public.translations (created\_by\_profile\_id) WHERE created\_by\_profile\_id IS NOT NULL;

CREATE INDEX idx\_translations\_updated\_by\_profile\_id ON public.translations (updated\_by\_profile\_id) WHERE updated\_by\_profile\_id IS NOT NULL;

-- Comments

COMMENT ON TABLE public.translations IS 'Stores all translated textual content for specified fields from various tables, enabling multilingual support and audit trails. Version 2.1.';

COMMENT ON COLUMN public.translations.row\_foreign\_key IS 'Stores the PK of the source record as text. Integrity handled by parent table DELETE triggers.';

COMMENT ON COLUMN public.translations.translated\_by\_profile\_id IS 'Profile ID of the user/agent who provided/last updated the translated\_text content.';

COMMENT ON COLUMN public.translations.translation\_last\_updated\_at IS 'Timestamp when translated\_text or translation\_status was last modified by a translator/editor.';

COMMENT ON COLUMN public.translations.created\_by\_profile\_id IS 'Profile ID of the user/process that created this translation row. FK to profiles.id. ON DELETE SET NULL.';

COMMENT ON COLUMN public.translations.updated\_by\_profile\_id IS 'Profile ID of the user/process that last updated this translation row metadata. FK to profiles.id. ON DELETE SET NULL.';

4. Triggers/Functions

-- Trigger for row updated\_at timestamp

CREATE TRIGGER handle\_translations\_updated\_at

BEFORE UPDATE ON public.translations

FOR EACH ROW

EXECUTE FUNCTION extensions.moddatetime('updated\_at'); -- Or a custom public.handle\_updated\_at()

-- Orphaned translation cleanup is handled by AFTER DELETE triggers on PARENT tables.

5. JSON Schema Mirror

{

"title": "translations",

"description": "Stores translated content for fields from various tables, with audit trails. Version 2.1.",

"type": "object",

"properties": {

"id": { "type": "integer", "format": "int64", "description": "PK.", "readOnly": true },

"table\_identifier": { "type": "string", "description": "Source table name." },

"column\_identifier": { "type": "string", "description": "Source column name." },

"row\_foreign\_key": { "type": "string", "description": "Source record PK as text." },

"language\_code": { "type": "string", "description": "FK to languages\_master." },

"translated\_text": { "type": "string", "description": "Translated content. Can be JSON array." },

"translation\_status": { "type": ["string", "null"], "enum": ["draft", "needs\_review", "published\_live", "needs\_update", null], "description": "Workflow status." },

"translated\_by\_profile\_id": { "type": ["string", "null"], "format": "uuid", "description": "Profile ID of translator/editor of content." },

"translation\_last\_updated\_at": { "type": ["string", "null"], "format": "date-time", "description": "Timestamp of last content/status change by translator." },

"created\_at": { "type": "string", "format": "date-time", "description": "Row creation timestamp.", "readOnly": true },

"updated\_at": { "type": "string", "format": "date-time", "description": "Row last update timestamp.", "readOnly": true },

"created\_by\_profile\_id": { "type": ["string", "null"], "format": "uuid", "description": "Profile ID of row creator." },

"updated\_by\_profile\_id": { "type": ["string", "null"], "format": "uuid", "description": "Profile ID of last row updater." }

},

"required": [ "table\_identifier", "column\_identifier", "row\_foreign\_key", "language\_code", "translated\_text" ],

"primary\_key": ["id"],

"unique\_constraints": [ { "columns": ["table\_identifier", "column\_identifier", "row\_foreign\_key", "language\_code"], "name": "uq\_translation\_entry" } ],

"foreign\_keys": [

{"columns": ["language\_code"], "references\_table": "public.languages\_master", "references\_columns": ["language\_code"], "on\_delete": "RESTRICT", "on\_update": "CASCADE"},

{"columns": ["translated\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"},

{"columns": ["created\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"},

{"columns": ["updated\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"}

]

}

6. Relationships & Integrity

Primary Key: `id` (bigint). `uq\_translation\_entry` ensures translation uniqueness per field/record/language.

Foreign Keys: `language\_code` (to `languages\_master`), `translated\_by\_profile\_id`, `created\_by\_profile\_id`, `updated\_by\_profile\_id` (to `profiles`).

`row\_foreign\_key` integrity managed by parent table triggers.

Mermaid ER Snippet:

erDiagram

languages\_master { text language\_code PK }

profiles { uuid id PK }

translations {

bigint id PK

text table\_identifier

text column\_identifier

text row\_foreign\_key

text language\_code FK

uuid translated\_by\_profile\_id FK

uuid created\_by\_profile\_id FK

uuid updated\_by\_profile\_id FK

UQ "table\_identifier, column\_identifier, row\_foreign\_key, language\_code"

}

translations }o--|| languages\_master : "is\_in\_language"

translations }o--o| profiles : "translated\_by"

translations }o--o| profiles : "row\_created\_by"

translations }o--o| profiles : "row\_updated\_by"

7. Multilingual Strategy

Central table for i18n. Application fetches based on user language, with fallback logic.

8. Role-Based Workflow & RLS Notes

Key Fields: `translation\_status`, `translated\_by\_profile\_id`, `translation\_last\_updated\_at`.

RLS Policies: Public read for published/active. Admins manage all. Translator roles need specific policies.

9. ENUM vs Lookup Discussion

`translation\_status`: TEXT with CHECK constraint for V1. Future promotion to master table is an option.

10. UI/UX Enablement

Provides translated content for UI. Admin interfaces use its columns for management. Indexes support query performance.

11. Auditing & Lifecycle Management

Audit: `created\_at`, `updated\_at` (row). `created\_by\_profile\_id`, `updated\_by\_profile\_id` (row lifecycle). `translated\_by\_profile\_id`, `translation\_last\_updated\_at` (translation content lifecycle).

Integrity: Orphan cleanup for `row\_foreign\_key` via parent table triggers is critical.

12. Scalability & Future-Proofing

Can grow large. Indexing is vital. Partitioning is a V2+ option.

13. Seed Data

⚪ N/A - Translations are dynamic content, not seeded master data.

14. Next-Action Checklist

• 🔴 Create Table & Indexes: Execute DDL, including new audit columns and their indexes.

• 🔴 Implement `updated\_at` Trigger (e.g., `extensions.moddatetime`).

• 🔴 Implement Orphaned Translation Cleanup Triggers: On \*\*ALL\*\* parent tables with translatable fields.

• 🟠 Define & Implement RLS Policies.

• 🟢 Document `column\_identifier` conventions for all translatable entities.

• 🟠 Define Population Logic: For `created\_by\_profile\_id`, `updated\_by\_profile\_id` (if not by standard RLS/app context) and ensure `translated\_by\_profile\_id` / `translation\_last\_updated\_at` are correctly set by translation workflows.

• 🟠 Consider Full-Text Search on `translated\_text` for V2+.

• 🟢 Review `translation\_status` for promotion to a master table in future versions.