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-- KURZORA MULTI-LANGUAGE DATABASE SCHEMA UPDATE

-- Step 1: Add Multi-Language Support to Existing Database

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-- Add language preference to users table

ALTER TABLE users

ADD COLUMN IF NOT EXISTS language\_preference VARCHAR(5) DEFAULT 'en' CHECK (language\_preference IN ('en', 'de', 'ar')),

ADD COLUMN IF NOT EXISTS timezone VARCHAR(50) DEFAULT 'UTC',

ADD COLUMN IF NOT EXISTS region VARCHAR(10) DEFAULT 'US',

ADD COLUMN IF NOT EXISTS islamic\_finance\_mode BOOLEAN DEFAULT false,

ADD COLUMN IF NOT EXISTS currency\_preference VARCHAR(5) DEFAULT 'USD';

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-- 1. CONTENT TRANSLATIONS TABLE

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CREATE TABLE IF NOT EXISTS content\_translations (

id UUID PRIMARY KEY DEFAULT gen\_random\_uuid(),

content\_key VARCHAR(255) NOT NULL,

language VARCHAR(5) NOT NULL CHECK (language IN ('en', 'de', 'ar')),

content\_text TEXT NOT NULL,

content\_html TEXT,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

UNIQUE(content\_key, language)

);

-- Add indexes for performance

CREATE INDEX IF NOT EXISTS idx\_content\_translations\_key\_lang ON content\_translations(content\_key, language);

CREATE INDEX IF NOT EXISTS idx\_content\_translations\_lang ON content\_translations(language);

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-- 2. STOCK TRANSLATIONS TABLE

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CREATE TABLE IF NOT EXISTS stock\_translations (

id UUID PRIMARY KEY DEFAULT gen\_random\_uuid(),

ticker VARCHAR(10) NOT NULL,

language VARCHAR(5) NOT NULL CHECK (language IN ('en', 'de', 'ar')),

company\_name TEXT NOT NULL,

company\_description TEXT,

sector\_name TEXT,

industry\_name TEXT,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

UNIQUE(ticker, language)

);

-- Add indexes for performance

CREATE INDEX IF NOT EXISTS idx\_stock\_translations\_ticker\_lang ON stock\_translations(ticker, language);

CREATE INDEX IF NOT EXISTS idx\_stock\_translations\_lang ON stock\_translations(language);

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-- 3. SIGNAL EXPLANATIONS TABLE (Multi-Language AI Explanations)

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CREATE TABLE IF NOT EXISTS signal\_explanations (

id UUID PRIMARY KEY DEFAULT gen\_random\_uuid(),

signal\_id UUID NOT NULL REFERENCES trading\_signals(id) ON DELETE CASCADE,

language VARCHAR(5) NOT NULL CHECK (language IN ('en', 'de', 'ar')),

explanation\_text TEXT NOT NULL,

explanation\_summary TEXT,

risk\_warning TEXT,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

UNIQUE(signal\_id, language)

);

-- Add indexes for performance

CREATE INDEX IF NOT EXISTS idx\_signal\_explanations\_signal\_lang ON signal\_explanations(signal\_id, language);

CREATE INDEX IF NOT EXISTS idx\_signal\_explanations\_lang ON signal\_explanations(language);

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-- 4. ISLAMIC FINANCE COMPLIANCE TABLE

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CREATE TABLE IF NOT EXISTS islamic\_compliance (

id UUID PRIMARY KEY DEFAULT gen\_random\_uuid(),

ticker VARCHAR(10) NOT NULL UNIQUE,

is\_shariah\_compliant BOOLEAN DEFAULT false,

compliance\_score INTEGER CHECK (compliance\_score >= 0 AND compliance\_score <= 100),

debt\_to\_market\_cap DECIMAL(5,2),

non\_compliant\_income\_ratio DECIMAL(5,2),

compliance\_authority VARCHAR(100),

certification\_date DATE,

review\_date DATE,

compliance\_notes TEXT,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW()

);

-- Add indexes for performance

CREATE INDEX IF NOT EXISTS idx\_islamic\_compliance\_ticker ON islamic\_compliance(ticker);

CREATE INDEX IF NOT EXISTS idx\_islamic\_compliance\_shariah ON islamic\_compliance(is\_shariah\_compliant);

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-- 5. USER NOTIFICATION PREFERENCES (Multi-Language)

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CREATE TABLE IF NOT EXISTS user\_notification\_preferences (

id UUID PRIMARY KEY DEFAULT gen\_random\_uuid(),

user\_id UUID NOT NULL REFERENCES users(id) ON DELETE CASCADE,

signal\_alerts BOOLEAN DEFAULT true,

email\_language VARCHAR(5) DEFAULT 'en' CHECK (email\_language IN ('en', 'de', 'ar')),

telegram\_language VARCHAR(5) DEFAULT 'en' CHECK (telegram\_language IN ('en', 'de', 'ar')),

email\_notifications BOOLEAN DEFAULT true,

telegram\_notifications BOOLEAN DEFAULT false,

push\_notifications BOOLEAN DEFAULT true,

daily\_digest BOOLEAN DEFAULT true,

weekly\_summary BOOLEAN DEFAULT true,

risk\_alerts BOOLEAN DEFAULT true,

min\_signal\_score INTEGER DEFAULT 80 CHECK (min\_signal\_score >= 0 AND min\_signal\_score <= 100),

notification\_timezone VARCHAR(50) DEFAULT 'UTC',

quiet\_hours\_start TIME,

quiet\_hours\_end TIME,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

UNIQUE(user\_id)

);

-- Add indexes for performance

CREATE INDEX IF NOT EXISTS idx\_user\_notification\_prefs\_user\_id ON user\_notification\_preferences(user\_id);

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-- 6. REGIONAL SETTINGS TABLE

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CREATE TABLE IF NOT EXISTS regional\_settings (

id UUID PRIMARY KEY DEFAULT gen\_random\_uuid(),

region\_code VARCHAR(10) NOT NULL UNIQUE,

region\_name\_en VARCHAR(100) NOT NULL,

region\_name\_de VARCHAR(100),

region\_name\_ar VARCHAR(100),

default\_currency VARCHAR(5) DEFAULT 'USD',

default\_timezone VARCHAR(50) DEFAULT 'UTC',

date\_format VARCHAR(20) DEFAULT 'MM/DD/YYYY',

time\_format VARCHAR(10) DEFAULT '12h',

number\_format VARCHAR(20) DEFAULT 'en-US',

islamic\_finance\_default BOOLEAN DEFAULT false,

available\_languages VARCHAR(50) DEFAULT 'en,de,ar',

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW()

);

-- Add indexes for performance

CREATE INDEX IF NOT EXISTS idx\_regional\_settings\_code ON regional\_settings(region\_code);

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-- 7. INSERT SAMPLE DATA FOR TESTING

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-- Insert default regional settings

INSERT INTO regional\_settings (region\_code, region\_name\_en, region\_name\_de, region\_name\_ar, default\_currency, default\_timezone, islamic\_finance\_default) VALUES

('US', 'United States', 'Vereinigte Staaten', 'الولايات المتحدة', 'USD', 'America/New\_York', false),

('DE', 'Germany', 'Deutschland', 'ألمانيا', 'EUR', 'Europe/Berlin', false),

('AE', 'United Arab Emirates', 'Vereinigte Arabische Emirate', 'الإمارات العربية المتحدة', 'AED', 'Asia/Dubai', true),

('SA', 'Saudi Arabia', 'Saudi-Arabien', 'المملكة العربية السعودية', 'SAR', 'Asia/Riyadh', true)

ON CONFLICT (region\_code) DO NOTHING;

-- Insert sample content translations

INSERT INTO content\_translations (content\_key, language, content\_text) VALUES

('welcome\_message', 'en', 'Welcome to Kurzora Trading Platform'),

('welcome\_message', 'de', 'Willkommen bei der Kurzora Trading Platform'),

('welcome\_message', 'ar', 'مرحباً بكم في منصة كورزورا للتداول'),

('signal\_score', 'en', 'Signal Score'),

('signal\_score', 'de', 'Signal-Bewertung'),

('signal\_score', 'ar', 'نقاط الإشارة'),

('risk\_warning', 'en', 'Trading involves significant risk'),

('risk\_warning', 'de', 'Trading birgt erhebliche Risiken'),

('risk\_warning', 'ar', 'التداول ينطوي على مخاطر كبيرة')

ON CONFLICT (content\_key, language) DO NOTHING;

-- Insert sample Islamic compliance data for major stocks

INSERT INTO islamic\_compliance (ticker, is\_shariah\_compliant, compliance\_score, debt\_to\_market\_cap, non\_compliant\_income\_ratio, compliance\_authority) VALUES

('AAPL', true, 85, 15.5, 2.1, 'AAOIFI'),

('MSFT', true, 90, 12.3, 1.8, 'AAOIFI'),

('GOOGL', false, 45, 8.2, 15.7, 'AAOIFI'),

('AMZN', true, 75, 22.1, 4.2, 'AAOIFI'),

('TSLA', true, 88, 18.9, 0.5, 'AAOIFI')

ON CONFLICT (ticker) DO NOTHING;

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-- 8. UPDATE RLS POLICIES FOR MULTI-LANGUAGE SUPPORT

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-- Enable RLS on new tables

ALTER TABLE content\_translations ENABLE ROW LEVEL SECURITY;

ALTER TABLE stock\_translations ENABLE ROW LEVEL SECURITY;

ALTER TABLE signal\_explanations ENABLE ROW LEVEL SECURITY;

ALTER TABLE islamic\_compliance ENABLE ROW LEVEL SECURITY;

ALTER TABLE user\_notification\_preferences ENABLE ROW LEVEL SECURITY;

ALTER TABLE regional\_settings ENABLE ROW LEVEL SECURITY;

-- Content translations - public read access

CREATE POLICY "Content translations are publicly readable"

ON content\_translations FOR SELECT

USING (true);

-- Stock translations - public read access

CREATE POLICY "Stock translations are publicly readable"

ON stock\_translations FOR SELECT

USING (true);

-- Signal explanations - authenticated users can read all

CREATE POLICY "Signal explanations are readable by authenticated users"

ON signal\_explanations FOR SELECT

USING (auth.role() = 'authenticated');

-- Islamic compliance - public read access

CREATE POLICY "Islamic compliance data is publicly readable"

ON islamic\_compliance FOR SELECT

USING (true);

-- User notification preferences - users can only access their own

CREATE POLICY "Users can view their own notification preferences"

ON user\_notification\_preferences FOR SELECT

USING (auth.uid() = user\_id);

CREATE POLICY "Users can update their own notification preferences"

ON user\_notification\_preferences FOR UPDATE

USING (auth.uid() = user\_id);

CREATE POLICY "Users can insert their own notification preferences"

ON user\_notification\_preferences FOR INSERT

WITH CHECK (auth.uid() = user\_id);

-- Regional settings - public read access

CREATE POLICY "Regional settings are publicly readable"

ON regional\_settings FOR SELECT

USING (true);

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-- 9. CREATE HELPER FUNCTIONS FOR MULTI-LANGUAGE CONTENT

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-- Function to get translated content with fallback to English

CREATE OR REPLACE FUNCTION get\_translated\_content(

content\_key\_param VARCHAR(255),

language\_param VARCHAR(5) DEFAULT 'en'

)

RETURNS TEXT

LANGUAGE SQL

STABLE

AS $$

SELECT COALESCE(

(SELECT content\_text FROM content\_translations

WHERE content\_key = content\_key\_param AND language = language\_param),

(SELECT content\_text FROM content\_translations

WHERE content\_key = content\_key\_param AND language = 'en'),

content\_key\_param

);

$$;

-- Function to get translated stock name with fallback

CREATE OR REPLACE FUNCTION get\_translated\_stock\_name(

ticker\_param VARCHAR(10),

language\_param VARCHAR(5) DEFAULT 'en'

)

RETURNS TEXT

LANGUAGE SQL

STABLE

AS $$

SELECT COALESCE(

(SELECT company\_name FROM stock\_translations

WHERE ticker = ticker\_param AND language = language\_param),

(SELECT company\_name FROM stock\_translations

WHERE ticker = ticker\_param AND language = 'en'),

ticker\_param

);

$$;

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-- COMPLETION MESSAGE

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-- You're done! Your database now supports:

-- ✅ Multi-language content (EN/DE/AR)

-- ✅ Islamic finance compliance tracking

-- ✅ User language preferences

-- ✅ Regional settings

-- ✅ Translated stock information

-- ✅ Multi-language signal explanations

-- ✅ Proper security policies (RLS)

-- ✅ Helper functions for easy content retrieval