Update_kjakdb.sh.j2

```bash
#!/bin/bash

DATABASE='kjakdb'
MYSQL_ROOT_USER=root
MYSQL_ROOT_PASSWORD='{{ mysql_password }}'
ANON_USER='{{ anon_user }}'
ANON_PASSWORD='{{ anon_password }}'

# Function to check if user exists and create if not
ensure_user_exists() {
  local user=$1
  local password=$2

  echo "Checking if user $user exists..."
  if ! mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -e "SELECT 1 FROM
mysql.user WHERE user = '$user'" | grep -q 1; then
    echo "User $user does not exist, creating..."
    mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -e "CREATE USER
'$user'@'localhost' IDENTIFIED BY '$password';"
  else
    echo "User $user already exists."
  fi
}

# Function to create a single table
create_table() {
  local table_name=$1
  local columns=$2  # Example: "forum_id int(11) NOT NULL AUTO_INCREMENT,
forum_name varchar(255) NOT NULL, description text DEFAULT NULL, created_at
timestamp NOT NULL DEFAULT current_timestamp()"
  local primary_key=$3

  echo "Checking if table $table_name exists..."
  if ! mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -
sse "SHOW TABLES LIKE '$table_name';" | grep -q "$table_name"; then
    echo "Creating table $table_name..."
    mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -e
"CREATE TABLE $table_name ($columns, PRIMARY KEY ($primary_key));"
  else
    echo "Table $table_name already exists."
  fi
}

# Grant permissions to user
grant_permissions() {
  local user=$1
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  local database=$2
  local table=$3
  local privileges=$4

  echo "Granting $privileges privileges to $user on $database..."
  mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -e "GRANT $privileges
ON $database.$table TO '$user'@'localhost';"
  mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -e "FLUSH PRIVILEGES;"
}

# Function to check and add primary keys and indexes
add_primary_key_and_index() {
  local table=$1
  local primary_key=$2
  local index_columns=$3

  echo "Checking primary key for table $table..."
  if ! mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -
sse "SHOW KEYS FROM $table WHERE Key_name = 'PRIMARY';" | grep -q 'PRIMARY';
then
    echo "Adding primary key ($primary_key) to $table..."
    mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -e
"ALTER TABLE $table ADD PRIMARY KEY ($primary_key);" || {
        # Handle duplicate key error (MySQL error code 1062)
        if [[ $? -eq 1062 ]]; then
            echo "Error adding primary key to $table: Duplicate Entry '0' for
key 'PRIMARY'"
        else
            # Re-raise the error if it's something else
            echo "Error setting primary key in $table: $?"
            exit 1
        fi
    }
  else
    echo "Primary key ($primary_key) already exists in $table."
  fi

  if [[ -n "$index_columns" ]]; then
    for index_column in ${index_columns//,/ }; do
      echo "Checking index for column $index_column in $table..."
      if ! mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE"
-sse "SHOW INDEX FROM $table WHERE Column_name = '$index_column';" | grep -q
"$index_column"; then
        echo "Adding index for column $index_column in $table..."
        mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -e
"ALTER TABLE $table ADD INDEX ($index_column);"
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    else
      echo "Index for column $index_column already exists in $table."
    fi
  done
 fi
}


# Function to check and add foreign keys
add_foreign_key() {
  local table=$1
  local constraint_name=$2
  local foreign_key=$3
  local references=$4

  echo "Checking foreign key $constraint_name in table $table..."
  if ! mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -
sse "SELECT CONSTRAINT_NAME FROM information_schema.TABLE_CONSTRAINTS WHERE
CONSTRAINT_SCHEMA = '$DATABASE' AND TABLE_NAME = '$table' AND CONSTRAINT_NAME
= '$constraint_name';" | grep -q "$constraint_name"; then
     echo "Adding foreign key $constraint_name to $table..."
     mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -e
"ALTER TABLE $table ADD CONSTRAINT $constraint_name FOREIGN KEY ($foreign_key)
REFERENCES $references;"
  else
     echo "Foreign key $constraint_name already exists in $table."
  fi
}


# Function to check and set AUTO_INCREMENT
set_auto_increment() {
  local table=$1
  local column=$2

  # Check if AUTO_INCREMENT is already set with desired value
  if mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D
information_schema -sse "SELECT AUTO_INCREMENT FROM TABLES WHERE TABLE_SCHEMA
= '$DATABASE' AND TABLE_NAME = '$table' AND COLUMN_NAME = '$column'" | grep -q
[desired_starting_value]; then
       echo "$column in $table is already set to AUTO_INCREMENT with desired
value."
  else
     echo "Setting AUTO_INCREMENT for $column in $table..."
     mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -e
"ALTER TABLE $table MODIFY $column int(11) NOT NULL AUTO_INCREMENT;"
  fi
}
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# Ensure 'anon' user exists and grant permissions
ensure_user_exists "$ANON_USER" "$ANON_PASSWORD"
grant_permissions "$ANON_USER" "$DATABASE" "*" "SELECT"
grant_permissions "$ANON_USER" "$DATABASE" "kjak_thread" "INSERT, UPDATE"
grant_permissions "$ANON_USER" "$DATABASE" "kjak_post" "INSERT, UPDATE"

# Create the tables idempotently
create_table 'kjak_table' 'forum_id int(11) NOT NULL AUTO_INCREMENT,
forum_name varchar(255) NOT NULL, description text DEFAULT NULL, created_at
timestamp NOT NULL DEFAULT current_timestamp()' 'forum_id'
create_table 'kjak_thread' 'thread_id int(11) NOT NULL AUTO_INCREMENT,
forum_id int(11) DEFAULT NULL, thread_title varchar(255) NOT NULL, created_at
timestamp NOT NULL DEFAULT current_timestamp()' 'thread_id'
create_table 'kjak_post' 'post_id int(11) NOT NULL AUTO_INCREMENT, thread_id
int(11) DEFAULT NULL, author_name varchar(255) DEFAULT NULL, post_text text
NOT NULL, post_image varchar(255) DEFAULT NULL, created_at timestamp NOT NULL
DEFAULT current_timestamp()' 'post_id'

# Add primary keys, indexes, and set auto-increment
add_primary_key_and_index 'kjak_post' 'post_id' 'thread_id'
add_primary_key_and_index 'kjak_table' 'forum_id'
add_primary_key_and_index 'kjak_thread' 'thread_id' 'forum_id'

set_auto_increment 'kjak_post' 'post_id'
set_auto_increment 'kjak_table' 'forum_id'
set_auto_increment 'kjak_thread' 'thread_id'

# Add foreign keys
add_foreign_key 'kjak_post' 'kjak_post_ibfk_1' 'thread_id'
'kjak_thread(thread_id)'
add_foreign_key 'kjak_thread' 'kjak_thread_ibfk_1' 'forum_id'
'kjak_table(forum_id)'

# Insert the forum data if it doesn't exist
mysql -u "$MYSQL_ROOT_USER" -p"$MYSQL_ROOT_PASSWORD" -D "$DATABASE" -e "INSERT
INTO kjak_table (forum_name, description)
SELECT * FROM (SELECT 'Tíðindir', 'Hvat nýtt veitst tú?') AS tmp
WHERE NOT EXISTS (
  SELECT forum_name FROM kjak_table WHERE forum_name = 'Tíðindir'
) LIMIT 1;

INSERT INTO kjak_table (forum_name, description)
SELECT * FROM (SELECT 'Kjak', 'Kjak um hvat sum helst.') AS tmp
WHERE NOT EXISTS (
  SELECT forum_name FROM kjak_table WHERE forum_name = 'Kjak'
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) LIMIT 1;

INSERT INTO kjak_table (forum_name, description)
SELECT * FROM (SELECT 'Áhugi', 'Lat heimin vita um tíni áhugamál.') AS tmp
WHERE NOT EXISTS (
  SELECT forum_name FROM kjak_table WHERE forum_name = 'Áhugi'
) LIMIT 1;
"
```