

Project description

The database is a business process for working with contracts. The topic was chosen based on previous experience and is based on an attempt to solve the difficulties that arise when trying to streamline the issue of working with contracts.

The main tasks for which the database is needed are: recording contracts; tracking their status and relevance; tracking and controlling the stages of contract preparation for signing; getting information about employees responsible for working with contracts within the company; getting information about the contractor's employees, their area of responsibility and contact information; tracking payments made under contracts.

The database is exported with the addition of the CREATE DATABASE / USE statement.

The database has several views and an example of the implementation of a stored procedure.

The stored procedure 'add_new_contract' is intended to initialize a business process to prepare a new contract for signing. This involves creating a series of entries in two tables 'contracts' and 'contract_preparation_path'. The second table displays a simple internal contract negotiation procedure and is designed to keep track of the stage the contract is at. The 'check_contract_draft_stage' view is created for the same business process.

The 'contractor_contacts' view is an example of selecting contact data of responsible employees. The 'month_report' view displays the amount of payments on a monthly basis. The 'furey_sean_contacts' view is created for demonstration of Codd's rules.

Settings related to data integrity:

The child table 'contractor_employee_contacts' is set to cascade deleting relative to the parent table 'responsible_contractor_employee'. Same for 'contractor_legal_information' – 'contractors'.

The child 'contract' table is set to cascade updating to the relation of the parent table 'contractStatus'. Also table 'contractStatus' is an example of the implementation of the allowable values directory (standardization of terminology, etc.).

In all fields containing foreign keys limitations on NULL-values are set. This also helps business process administration (to guarantee the possibility of control over the entered data).

For easier data entry:

current_timestamp() function is implemented in attributes where appropriate.

All attributes containing primary keys with INT data type are set to auto increment.

The data was tested briefly to see if the data from the linked tables was correctly matched. These queries are saved in the 'SQL_queries.sql' file under /* CHECK IF LINKED TABLES WORK CORRECTLY*/.

The 'SQL_queries.sql' file also contains several simple data processing queries and a number of more complex queries that demonstrate some database manipulation capabilities.

Also, in the 'SQL_queries.sql' file under `/* CREATING USER ACCOUNTS AND GRANTING PRIVILEGES */` several queries related to delimiting user access rights to the database is added.

This base implements basic functions to work with external contracts (i.e., in which the provider of services and goods is an external company.). There are many directions for its development and adaptation to the specific needs of employees and the company. In particular, the complication of the procedure for approving contracts, the implementation of the segment on work with contracts, where the supplier is a current company. This direction requires the development of procedures for the coordination, control and accounting of payments and invoices. The issue of delimitation of rights of access to data among employees also requires development.