

Developer Manual

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1. Database Design:

1.1 Tables:

1) roles

Column Name	Data Type	Key
role_id_pk	INT	Primary Key
role_name	VARCHAR	

2) users

Column Name	Data Type	Key
user_id_pk	INT	Primary Key
user_login	VARCHAR	
user_first_name	VARCHAR	
user_last_name	VARCHAR	
user_password	VARCHAR	
user_role_fk	INT	Foreign Key Referencing roles(role_id_pk)

3) teams

Column Name	Data Type	Key
team_id_pk	INT	Primary Key (Auto Increment)
team_name	VARCHAR	
tea_description	VARCHAR	

4) team_users

Column Name	Data Type	Key
tu_user_id_pk_fk	INT VARCHAR	Primary Key, Foreign Key referencing users(user_id_pk)
tu_team_id_pk_fk	VARCHAR	Primary Key, Foreign Key referencing teams(team_id_pk)

5) boards

Column Name	Data Type	Key
board_id_pk	VARCHAR	Primary Key
bt_id_fk	VARCHAR	Foreign Key referencing boards(board_id_pk)
board_name	VARCHAR	
board_isArchived	CHAR	

6) iterations

Column Name	Data Type	Key
iteration_id_pk	VARCHAR	Primary Key
iteration_start_date	DATE	
iteration_end_date	DATE	
ib_id_fk	VARCHAR	Foreign Key referencing boards(board_id_pk)
iteration_isArchived	CHAR	
iteration_number	INT	

7) statuses

Column Name	Data Type	Key
status_id_pk	VARCHAR	Primary Key
status_name	VARCHAR	

8) tasks

Column Name	Data Type	Key
task_id_pk	VARCHAR	Primary Key
task_name	VARCHAR	
task_description	VARCHAR	
task_creator_id_fk	VARCHAR	Foreign Key References users(user_id_pk)
task_responsible_person_fk	VARCHAR	Foreign Key References users(user_id_pk)
task_work_estimation	INT	

ti_id_fk	VARCHAR	Foreign Key References iterations(iteration_id_pk)
ti_id_fk	VARCHAR	Foreign Key References statuses(status_id_pk)

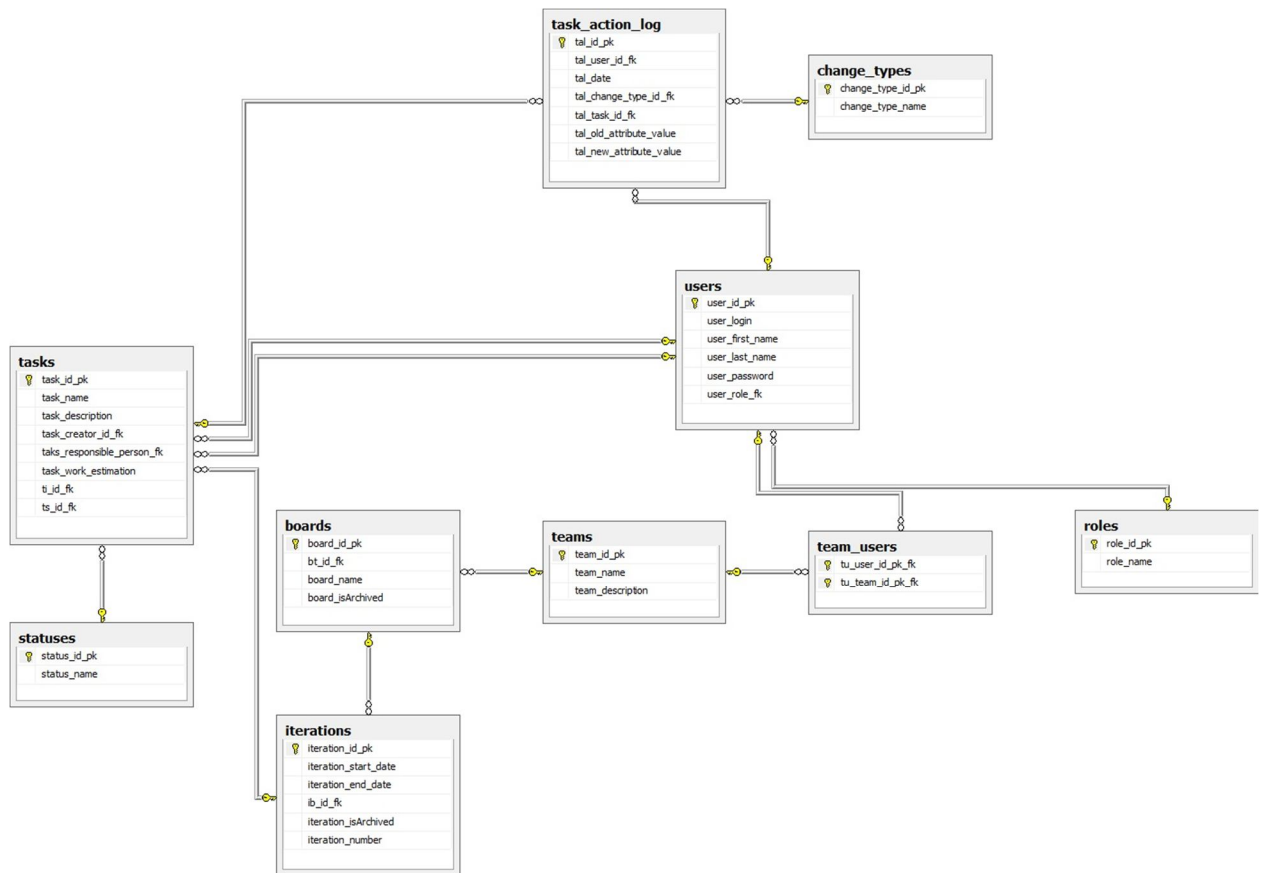
9) change_types

Column Name	Data Type	Key
change_type_id_pk	VARCHAR	Primary Key
change_type_name	VARCHAR	

10) task_action_log

Column Name	Data Type	Key
tal_id_pk	VARCHAR	Primary Key
tal_user_id_fk	VARCHAR	Foreign Key Referencing users(user_id_pk)
tal_date	DATE	
tal_change_type_id_fk	VARCHAR	Foreign Key Referencing tasks(task_id_pk)
tal_task_id_fk	VARCHAR	Foreign Key Referencing change_types(change_type_id_pk)
tal_old_attribute_value	VARCHAR	
tal_new_attribute_value	VARCHAR	

1.2 Database Diagram:



1.3 Scripts for initialization and dropping the database:

- 1) agile_board_db_schema_init - is used for creation db schema
- 2) agile_board_db_filling_init - is used for db initialization with fake data.
- 3) agile_board_drop_db - is used to delete all tables from DB.

2. Directory structure:

Home Directory

- controls (directory)
- includes (directory)
- javascripts (directory)
- stylesheets (directory)
- board.php
- index.php
- login.php
- logout.php
- saveBoard.php
- teamEdit.php
- teamList.php
- newIteration.php

includes directory contains the files which need to be included in other files to set the connection properties, set constants, header, footer etc.

javascripts directory contains the required .js file for JavaScript and jQuery functions.

stylesheets directory contains the file main.css which contains the styling data.

Login.php

Grab the UserID and Password from the login page and query the database to verify the credentials.

If a match is not found, display error, otherwise display the user home page. This file also sets the session for the current user. This session is used in the other pages.

Logout.php

Clear all the sessions, redirect to logout and display "Logged Out" message.

Board.php

This file is used to display the board on the screen.

Functions:

1) drawBoard()

Grab the data from the database and display it on the screen. Count the number of data items and as long as the data set is not empty, keep displaying the items.

2) deleteTask(item)

When the "Delete Task" button is clicked, the corresponding task id is passed to this function. It then queries the database to find the id and if found, the task is deleted. The saveBoard.php page is opened which saves the board to the database.

3) **saveTask()**

It is similar to deleteTask(item) function. It grabs the task to be saved and opens the saveBoard.php page, where the data is saved.

saveBoard.php

This file is responsible for executing the "INSERT" and "UPDATE" queries on the database. When it is called by the deleteTask(item) function of the board.php page, the UPDATE query is executed. If called by the saveTask() function the INSERT query is executed.

This file also saves task changes in the taskactionlog table.

newIteration.php

The team is given the option to create a new iteration. When the click on the "New Iteration" button, the current iteration details are saved. Then a query is run to INSERT a new iteration in the iterations table. Once this new iteration is created, the incomplete tasks from the previously saved iteration are moved to this newly created iteration.

teamEdit.php

The admin has the ability to add/remove users to and from a team. This page is responsible for these functionalities. The following tasks can be performed on this page:

- 1) Update team info: The teams, users, iterations and boards tables are locked. Queries to edit team name, description, members are generated and executed on the database.
- 2) Insert a new team: The teams, users, iterations and boards tables are locked. The query to INSERT a team in the teams table is generated and executed. Once the team is successfully inserted, its information is also entered in the team_users table. Similarly, the corresponding values are updated for boards and iterations.
- 3) Delete team info: The teams, users, iterations and boards tables are locked. When a team is deleted from the teams table, its details have to be deleted from the iterations, boards, team_users tables as well, so that the database is updated with the current data and does not contain any obsolete data. The deletion order is:
 - (i) Iterations
 - (ii) Boards
 - (iii) Team_users
 - (iv) Teams
- 4) When a user is deleted from any team, he should appear in the drop down which contains the list of available users that can be added to a particular team. This task is performed by the deleteMember(elementID) function.

teamList.php

Query the database to get a list of all the teams and display them as a list on the screen. The teams are displayed in a table with each row containing the data (team id, description, edit option).

teamHistory.php

Query the database (taskActionLog table) to get a list of the changes made to the given team's agile board. The changes can be of four types:

- 1) Create
- 2) Update
- 3) Deleted
- 4) Status Changed

Based on the type of change, the appropriate value and message is displayed on the screen (in and HTML table).

iterationHistory.php

Query the database (users, team_users, boards and iterations) to get a list of all the previous iterations for the particular team. It will then sort the results on iteration dates and display them on the screen.