**Task Management**

**Course:** CST8285 Web Programming  
**Section:** 332  
**Assignment:** Assignment 2  
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# DESCRIPTION OF THE DATABASE

This database manages tasks by organizing them into lists, statuses, and categories, and assigns them to users. It includes five tables, each serving a unique purpose in managing tasks, their categorization, status tracking, and user assignments. Here's a breakdown of each table and its role within the system:

## UsersTable:

This table is central to managing user information within the task management system. It stores essential user details such as a unique identifier (“UserID”), username, password (hashed or encrypted for security), email address, and timestamps for when the user record was created and last updated. The “UserID” serves as a primary key, ensuring each record is unique, and both the `Username` and `Email` fields are marked as unique to prevent duplicate entries.

## TaskLists Table:

Task lists are organized within this table, allowing users to create multiple lists to categorize their tasks (e.g., personal, work-related). Each list has a unique identifier (“ListID”), a name (“ListName”), a reference to its creator (“UserID” from the Users table, establishing ownership), a boolean indicating whether it's a personal list, and timestamps for creation and updates. It employs a foreign key relationship with the Users table to link each task list to a specific user.

## TaskStatuses Table:

This table defines possible statuses that can be assigned to tasks, such as "Pending," "In Progress," or "Completed." Each status has a unique identifier (“StatusID”), a descriptive name (“StatusName”), and timestamps indicating when the status was created or last updated. This table allows for easy status tracking and updates for tasks.

## TaskCategories Table:

Similar to the TaskStatuses table, the TaskCategories table allows for the categorization of tasks into different groups (e.g., "Work," "Home," "Health") for better organization. Each category is identified by a unique “CategoryID”, has a “CategoryName”, and includes creation and update timestamps.

## Tasks Table:

This table stores the details of each task, including a unique identifier (“TaskID”), title, description, due date, priority (enumerated as “Low”, “Medium”, “High”), and foreign keys linking to the TaskStatuses, TaskCategories, and TaskLists tables for status, category, and list affiliation, respectively. It also references the Users table twice: once for the user assigned to the task (“AssignedToUserID”) and once for the user who created the task (“CreatedByUserID”), along with timestamps for when the task was created and last updated.