These entities expand the data model of the Time Sheet System and show relationships between entities. The relationships help define how different data elements are connected within the system, providing a more comprehensive understanding of data flow and interactions. Depending on your project's specific requirements, we can further refine and specify these relationships.

These relationships define how data is related and interconnected within the Time Sheet System, facilitating data retrieval, manipulation, and system functionality.

**User**:

Relationships:

One-to-Many with Time Entry: Each user can have multiple time entries.

Many-to-One with Manager: Each user is managed by one manager.

One-to-Many with Notification: Each user can receive multiple notifications.

One-to-Many with Employee: Users can have multiple employee profiles if applicable.

**Time Entry:**

Relationships:

Many-to-One with User: Each time entry is associated with one user who submitted it.

Many-to-One with Project: Each time entry is associated with one project.

Many-to-One with Task: Each time entry is associated with one task.

Many-to-One with Manager: Each time entry is approved or rejected by one manager.

One-to-Many with Comment: Each time entry can have multiple comments.

Many-to-One with Report: Each time entry can be included in one or more reports.

**Manager**:

Relationships:

One-to-Many with User: Each manager can manage multiple users.

One-to-Many with Time Entry Approval: Each manager can approve or reject multiple time entries.

One-to-Many with Notification: Each manager can send notifications to multiple users.

**Notification**:

Relationships:

Many-to-One with User: Each notification is received by one user.

Many-to-One with Manager: Each notification is sent by one manager.

**Admin User:**

Relationships:

One-to-Many with System Configuration: An admin user can configure multiple system settings.

One-to-Many with External Authentication Provider: Admin users can manage multiple authentication providers.

**Project**:

Relationships:

One-to-Many with Time Entry: Each project can have multiple time entries.

Many-to-One with Client: Each project is associated with one client.

Many-to-Many with Category: Each project can belong to multiple categories.

One-to-One with Project Budget: Each project has one budget if applicable.

One-to-Many with Project Phase: Each project can have multiple phases.

**Task**:

Relationships:

Many-to-One with Time Entry: Each task can be associated with multiple time entries.

Many-to-One with Project: Each task is part of one project.

**Report**:

Relationships:

Many-to-One with Time Entry: Each report includes multiple time entries.

Many-to-One with User: Each report is generated for one user.

Many-to-One with Project: Each report is related to one project.

**System Configuration:**

Relationships:

Many-to-One with Admin User: Each system configuration is managed by one admin user.

**Approval Workflow:**

Relationships:

Many-to-One with Project Type: Each approval workflow is associated with one project type.

**Audit Log:**

Relationships:

Many-to-One with User: Each audit log entry is associated with one user.

**Calendar Event**:

Relationships:

Many-to-One with Employee: Each calendar event is associated with one employee.

**Role**:

Relationships:

Many-to-Many with User: Each role can be assigned to multiple users.

Many-to-Many with Permission: Each role can have multiple permissions.

**Time-Off Request:**

Relationships:

Many-to-One with Employee: Each time-off request is made by one employee.

**Expense Receipt:**

Relationships:

Many-to-One with Employee: Each expense receipt is associated with one employee.

Many-to-One with Project: Each expense receipt is related to one project.

**Client**

Attributes: ClientID, ClientName, ContactName, ContactEmail, ContactPhone

Relationships:

One-to-Many with Project: A client can have multiple projects.

**Location**

Attributes: LocationID, LocationName, Address, City, State, PostalCode, Country

Relationships:

Many-to-Many with Employee: An employee can work in multiple locations, and a location can have multiple employees.

**Department**

Attributes: DepartmentID, DepartmentName

Relationships:

Many-to-Many with Employee: An employee can belong to one or more departments, and a department can have multiple employees.

**Time Entry Approval**

Attributes: ApprovalID, TimeEntryID, ManagerID, ApprovalStatus, ApprovalDate

Relationships:

Many-to-One with Time Entry: Multiple approvals can be associated with a single time entry.

Many-to-One with Manager: Multiple approvals can be associated with a single manager.

**Notification Setting**

Attributes: SettingID, UserID, NotificationType (Email, SMS, App), IsEnabled

Relationships:

Many-to-One with User: Each user can have multiple notification settings.

**Project Budget**

Attributes: BudgetID, ProjectID, BudgetAmount, StartDate, EndDate

Relationships:

One-to-One with Project: Each project can have a single budget.

**Project Phase**

Attributes: PhaseID, PhaseName, ProjectID, StartDate, EndDate

Relationships:

Many-to-One with Project: Multiple phases can be associated with a single project.

**Custom Field???**

Attributes: FieldID, FieldName, FieldType (Text, Number, Date, etc.), EntityID, EntityName

Relationships:

Many-to-Many with Entity: Custom fields can be associated with various entities (e.g., Time Entry, Project).

**Time Entry Comment**

Attributes: CommentID, TimeEntryID, EmployeeID, CommentText, CommentDate

Relationships:

Many-to-One with Time Entry: Multiple comments can be associated with a single time entry.

Many-to-One with Employee: Multiple comments can be associated with a single employee.

**Project Category**

Attributes: CategoryID, CategoryName

Relationships:

Many-to-Many with Project: A project can belong to multiple categories, and a category can have multiple projects.