

Solent Hackathon Event management system

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ERD

ER-modeling is a data modeling technique used in software engineering to produce a conceptual data of a information system. Diagram created using this ER- modeling technique are called Entity-Relationship Diagram, or ER diagram or ERDs.

ERD Details

There are 5 entities –

- Team
- Team_Counceler
- Participant
- Event
- Project

Solent Hackathon

Here **Solent Hackathon** is an Event and it is manage by a web based application where a team counselor manages a specific team and its Coders participant. On the other hand counselor will choose an event and the participants of his team will work on it.

In This ERD, **Event** is a main entity which is contains all basic details about Events such as Event name, Theme, Location etc. Event has a unique identity number, which is Event_ID.

Event table have basic attributes such as Event_Name, Event_Theme, Event_Type, Event_day, Event_time, Event_Duration_in_Day, Event_location and Event_Description.

In this ERD, **Team_counselor** is second entity which is contains all details about Team counselor details. Team_counselor has a unique identity number, which is Team_counselor_ID. Team_counselortable have basic Attributes Such as Team_counselor_ID, Team_counselor_Name, Team_counselor_Phone, Team_counselor_Email, Team_counselor_DOB, Role, Address, Username and Password.

In this ERD, **Team** is third entity. Which is contains all details about Team. Team has a unique identity number, which is Team_ID. Team has basic Attributes Such as Team_counselor_ID, Team_Name and Team_Member_No.

In this ERD, **Participant** is forth entity which is contains all basic details about Participant. Participant has a unique identity number, which is Participant_ID. Participant table has basic Attributes Such as Team_ID*, Participant_Name, Participant_Phone, Participant_Email, Participant_DOB, Participant_Specialties and Participant_Address.

In this ERD, **Project** is fifth entity which is contains all details about Project. Project has a unique identity number, which is Project_ID. Project table has Attributes Such as Event_ID*, Team_ID*, Project_Name, Starting_Date, Ending_Date and Project_Description.

Cardinality:

- Team_Counselor **1:M** Team
- Team **1:M** Project
- Team **1:M** Participant
- Event **1:M** Project

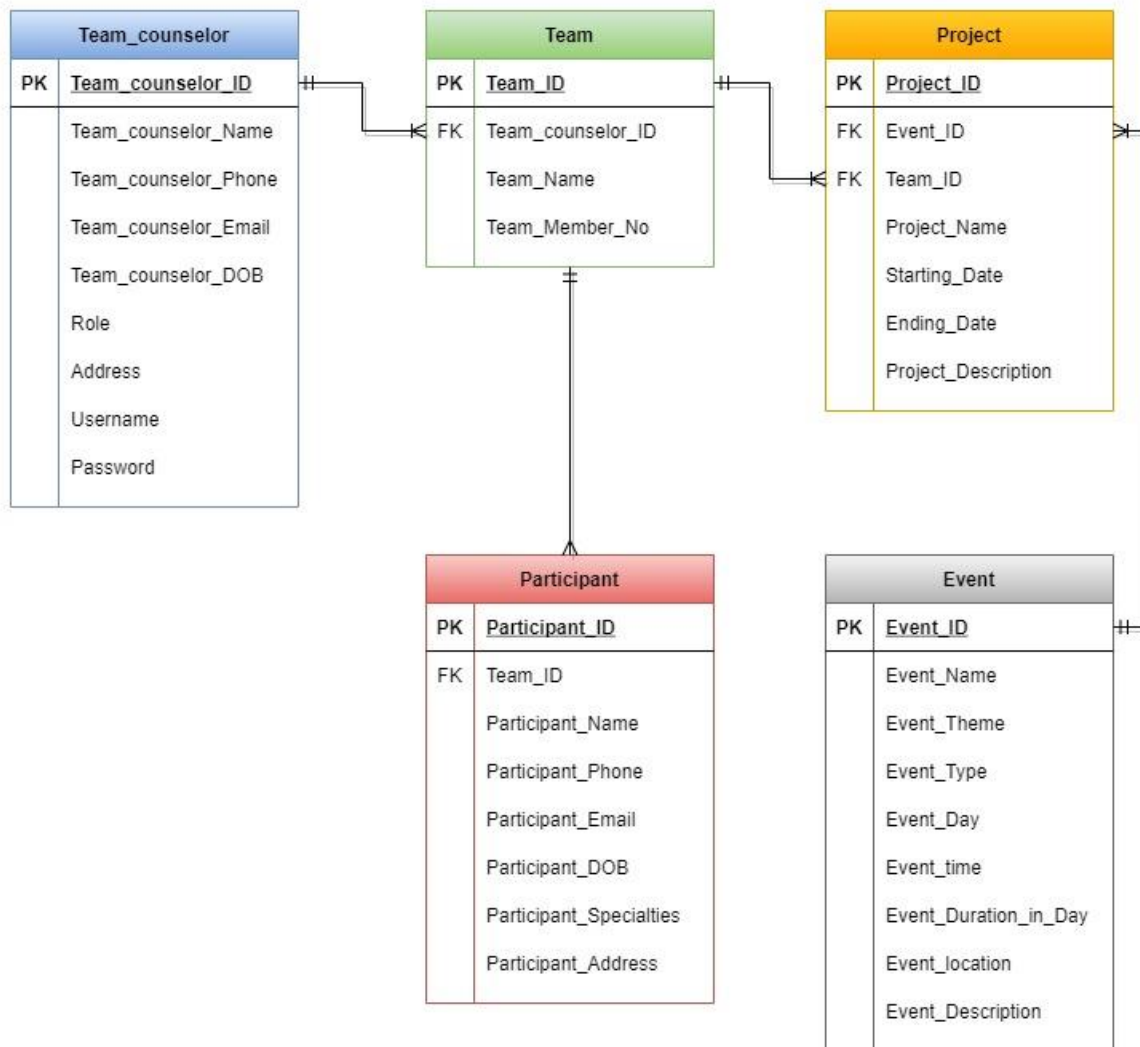


Figure 1: ER Diagram

Use case Diagram

Use case diagram is a graphic depiction of the interactions among the elements of a system. Use case is a methodology used in system analysis to identify, clarify, and organize system requirements. It specific roles played by the actors within and around the system.

Use case diagrams are used to specify:

- Required usages of a system under design or analysis (subject) - to capture what the system is supposed to do.
- The functionality offered by a subject – what the system can do.

- Requirements the specified subject poses on its environment - by defining how environment should interact with the subject so that it will be able to perform its services.

Solent Hackathon

Here **Solent Hackathon** is an Event and it is managing by a web based application where a team counselor manages a specific team and its Coders participant. On the other hand counselor will choose an event and the participants of his team will work on it.

Use Case Name	Login
Use case Description	Admin, Team Counselor and Participant login to system to access the functionality of the system.
Actors	Admin Team Counselor and Customer
Pre-Condition	System Must be Connected to the Network.
Post- Condition	After a successful Login Admin can manage the System.

Main Scenarios	Serial No	Steps
Actors	1	Enter Username Enter Password
	2	Validate Username and Password
	3	Allow access to System
Extensions	1a	Invalid Username System shows an error message
	2b	Invalid Password System shows an error message

Admin Follow these main functions:

- Login
- Manage_Profile
- Manage_System
- Add_and_Publish_Event
- Delete_Update_Event
- Manage_Event
- Generate_Event_Reports
- LogOut

Team_Counselor Follow these main functions:

- Login
- Manage_Profile
- View_Event_Details
- Select_Team
- Manage_Team
- Join_Events
- Manage_Projects
- Logout

Participant Follow these main functions:

- Registration
- Login
- Manage_Profile
- Join_Team
- Join_Events
- Wrok_On_Projects
- Logout

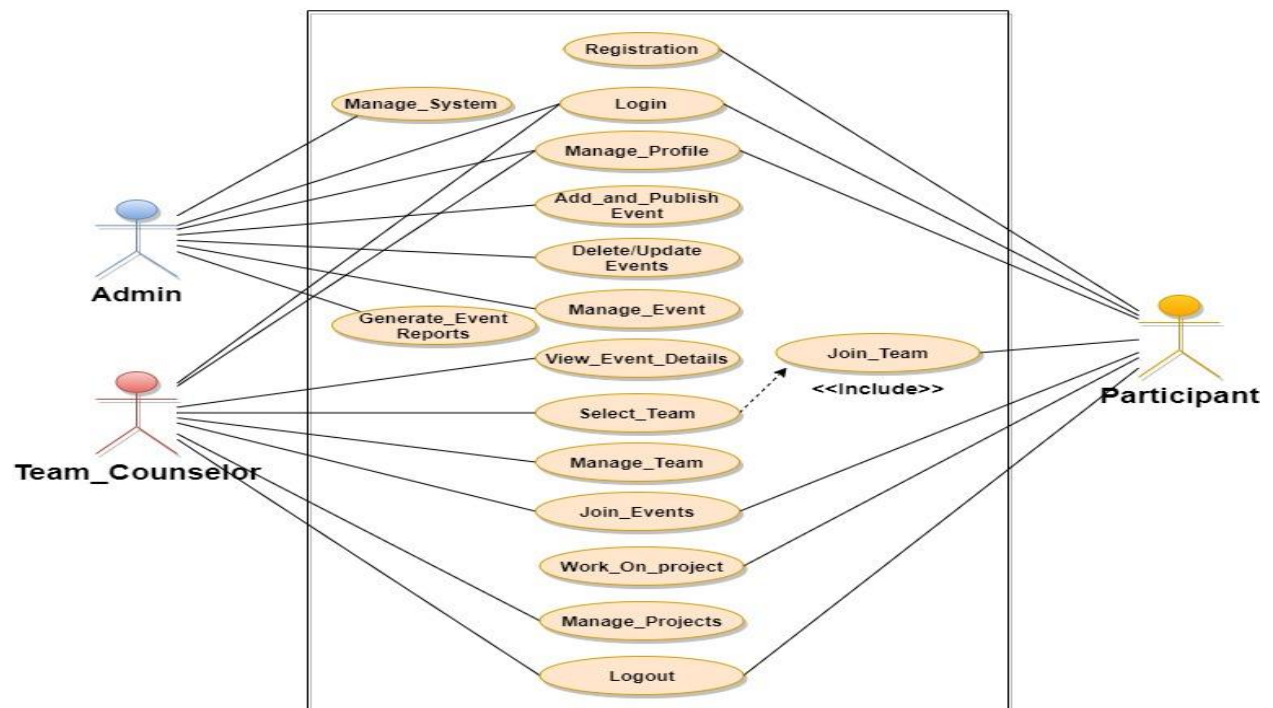


Figure 2: Use Case diagram