***BACKEND:***

***Team:-***

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***Tech Stack:-***

MySQL (Database) , Node.js & Express.js

***Entities:-***

1)Admin

2)Tester

3)Developer

4)Project

5)Module

6)Bug Master Table

7)Issue Description

***Tables & Attributes:-***

CREATE DATABASE IF NOT EXISTS bug\_tracker\_sys\_db;

USE bug\_tracker\_sys\_db;

**1)Admin Table:-**

admin\_id int PRIMARY\_KEY AUTO\_INCREMENT;

admin\_name varchar(100);

admin\_username varchar(100) UNIQUE;

admin\_email varchar(255) NOT NULL;

admin\_password varchar(20);

**2)Tester Table:-**

tester\_id int PRIMARY\_KEY AUTO\_INCREMENT;

tester\_name varchar(100);

tester\_username varchar(100) UNIQUE;

tester\_email varchar(255) NOT NULL;

tester\_password varchar(20);

**3)Developer Table:-**

developer\_id int PRIMARY\_KEY AUTO\_INCREMENT;

developer\_name varchar(100);

developer\_username varchar(100) UNIQUE;

developer\_email varchar(255) NOT NULL;

developer\_password varchar(20);

**4)Project Table:-**

project\_id int PRIMARY\_KEY AUTO\_INCREMENT;

project\_name varchar(100);

project\_status ENUM(“active”, “inactive”) DEFAULT “active”;

created\_by int;

FOREIGN KEY (created\_by) REFERENCES admin(admin\_id);

**5)Module Table:-**

module\_id int PRIMARY\_KEY AUTO\_INCREMENT;

module\_name varchar(100);

module\_status ENUM(“active”, “inactive”) DEFAULT “active”;

project\_id int;

FOREIGN KEY (project\_id) REFERENCES project(project\_id);

**6)Bug Type Master Table:-**

BugType\_id int PRIMARY\_KEY AUTO\_INCREMENT;

BugType \_name varchar(100);

BugType\_description text;

BugType \_status ENUM(“active”, “inactive”) DEFAULT “active”;

**7)Issue Table:-**

issue\_id int PRIMARY\_KEY AUTO\_INCREMENT;

issue\_description TEXT NOT NULL;

steps\_to\_reproduce TEXT;

source\_url VARCHAR(255);

issue\_priority ENUM('Low', 'Mid', 'High');

attachment\_path VARCHAR(255);

added\_on DATETIME DEFAULT CURRENT\_TIMESTAMP;

issue\_status ENUM('New', 'InProgress', 'Resolved', 'Reopen', 'Closed', 'Not a Bug', 'Hold') DEFAULT 'New';

remark TEXT;

project\_id INT;

module\_id INT;

bugType\_id INT;

added\_by INT;

FOREIGN KEY (project\_id) REFERENCES Project(project\_id);

FOREIGN KEY (module\_id) REFERENCES Module(module\_id);

FOREIGN KEY (bugType\_id) REFERENCES BugTypeMaster(bugType\_id);

FOREIGN KEY (added\_by) REFERENCES Tester(tester\_id)

***RELATIONSHIPS:-***

Admin(Relation):-

●(1) Admin handles-> (Many) Projects.

●(1) Admin handles-> (Many) Modules.

●(1) Admin handles-> (Many) Issues.

●(1) Admin controls-> (Many) Testers.

●(1) Admin controls-> (Many) Developers.

Developer(Relation):-

●(1) Developer handles-> (Many) Issues.

Tester(Relation):-

●(1) Tester add-> (Many) Issues.

●(1) Tester add-> (Many) bugs.

Project(Relation):-

●(1) Project has-> (Many) Modules.

●(Many) Project handled by-> (1)Admin.

●(1) Project has-> (Many) Issues.

Module(Relation):-

●(1) module is in-> (1) Project

●(Many) modules handled by-> (1)Admin.

●(1) module has-> (Many) Issues.

Issue(Relation ):-

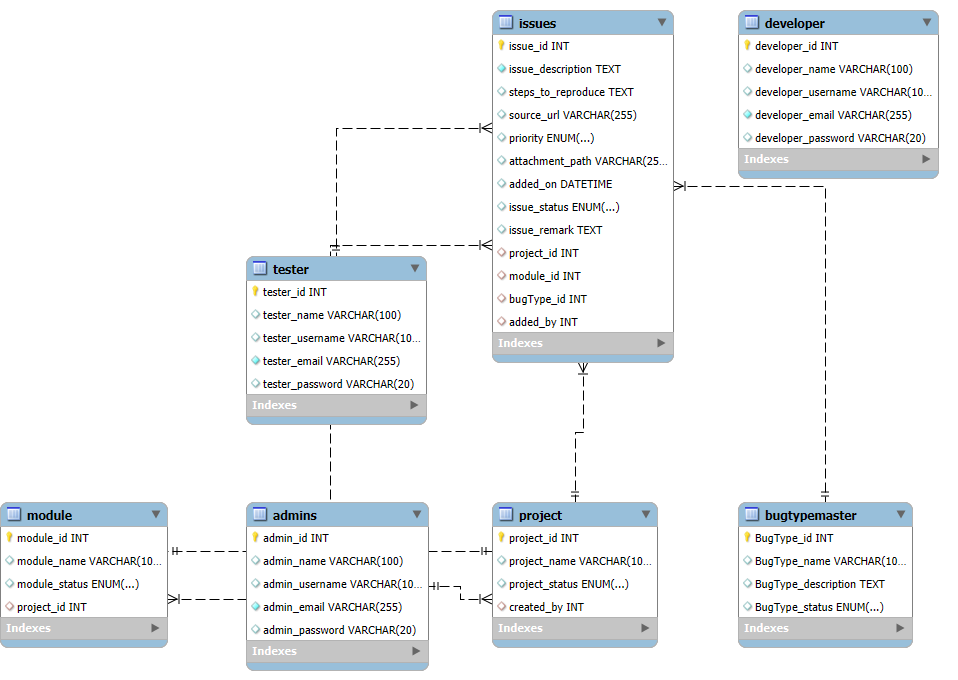
●issue (1) have-> (many)projects.

●issue (1) have-> (many)modules.

●issue (1) have-> (Many)BugType.

●(many) Project have-> (many)issues.

●(many) Modules have-> (many)issues.



**Diagram: EER (Enhanced Entity-Relationship )**

**Developed by:-MYSQL workbench**