

Data Model1:ERDiagram1

```

    erDiagram
        Bench ||--o{ Allocate_User_TestCase : "1 to many"
        Bench {
            string Bench_Id PK
            string User_Id
            string Availability
        }
        Users ||--o{ Designation : "1 to many"
        Users ||--o{ Project_Allocation : "1 to many"
        Users ||--o{ Role_Privilege : "1 to many"
        Users ||--o{ Allocate_Modules : "1 to many"
        Users ||--o{ Defect : "1 to many"
        Users ||--o{ Defect_History : "1 to many"
        Users {
            string user_id PK
            string user_name
            string password
            string email
            string first_name
            string last_name
            string Gender
            string Phone_No
            string Join_Date
            string Designation_Id
            string User_status
        }
        Designation ||--o{ Role_Privilege : "1 to many"
        Designation {
            string Designation_Id PK
            string Designation
        }
        Allocate_User_TestCase ||--o{ Project_Allocation : "1 to many"
        Allocate_User_TestCase ||--o{ Testcases : "1 to many"
        Allocate_User_TestCase {
            string Allocate_User_TestCase_Id PK
            string User_Id
            string Allocate_Project_Id
        }
        Project_Allocation ||--o{ Project_User_Privilege : "1 to many"
        Project_Allocation ||--o{ Role : "1 to many"
        Project_Allocation ||--o{ Defect : "1 to many"
        Project_Allocation ||--o{ Allocate_Modules : "1 to many"
        Project_Allocation {
            string Project_Assign_Id PK
            string User_Id
            string Project_Id
            string Allocation_Percentage
            string Role_Id
        }
        Role ||--o{ Role_Privilege : "1 to many"
        Role ||--o{ Defect : "1 to many"
        Role ||--o{ Defect_History : "1 to many"
        Role ||--o{ Allocate_Modules : "1 to many"
        Role ||--o{ Submodule : "1 to many"
        Role {
            string Role_Id PK
            string Role
        }
        Role_Privilege ||--o{ Privilege : "1 to many"
        Role_Privilege {
            string RolePrivilege_Id PK
            string Privilege_Id
            string Role_Id
        }
        Privilege ||--o{ Allocate_Modules : "1 to many"
        Privilege ||--o{ Submodule : "1 to many"
        Privilege {
            string Privilege_Id PK
            string Privilege
        }
        Release ||--o{ Allocate_Testcase : "1 to many"
        Release ||--o{ Defect : "1 to many"
        Release {
            string Release_Id PK
            string Release_Name
            string Project_Id
        }
        Testcase_Status ||--o{ Allocate_Testcase : "1 to many"
        Testcase_Status ||--o{ Defect : "1 to many"
        Testcase_Status {
            string TestcaseStatus_Id PK
            string TestcaseStatus
        }
        Projects ||--o{ Allocate_Testcase : "1 to many"
        Projects ||--o{ Defect : "1 to many"
        Projects ||--o{ Defect_History : "1 to many"
        Projects ||--o{ Allocate_Modules : "1 to many"
        Projects ||--o{ Submodule : "1 to many"
        Projects {
            string Project_Id PK
            string Project
            string Bench_Id
            string Project_duration
        }
        Module ||--o{ Allocate_Modules : "1 to many"
        Module ||--o{ Submodule : "1 to many"
        Module {
            string Module_Id PK
            string Module_Name
            string Project_Id
        }
        Allocate_Testcase ||--o{ Defect : "1 to many"
        Allocate_Testcase ||--o{ Defect_History : "1 to many"
        Allocate_Testcase ||--o{ Submodule : "1 to many"
        Allocate_Testcase {
            string AssignTestcase_Id PK
            string Release_Id
            string Testcase_Id
            string Test_Date
            string Test_Time
            string TestcaseStatus_Id
            string Defect_Id
        }
        Comments ||--o{ Defect : "1 to many"
        Comments ||--o{ Defect_History : "1 to many"
        Comments ||--o{ Allocate_Modules : "1 to many"
        Comments ||--o{ Submodule : "1 to many"
        Comments {
            string Comments_Id PK
            string User_Id
            string Defect_Id
            string Comment
            string Attachment
        }
        Priority ||--o{ Defect : "1 to many"
        Priority ||--o{ Defect_History : "1 to many"
        Priority ||--o{ Allocate_Modules : "1 to many"
        Priority ||--o{ Submodule : "1 to many"
        Priority {
            string Priority_Id PK
            string Priority
            string Priority_Color
        }
        Defect_History ||--o{ Defect : "1 to many"
        Defect_History ||--o{ Allocate_Modules : "1 to many"
        Defect_History ||--o{ Submodule : "1 to many"
        Defect_History {
            string Defect_History_Id PK
            string Defect_Id
            string Defect_Status_Id
            string Assignee
            string AssignedTo
        }
        Testcases ||--o{ Defect : "1 to many"
        Testcases ||--o{ Defect_History : "1 to many"
        Testcases ||--o{ Allocate_Modules : "1 to many"
        Testcases ||--o{ Submodule : "1 to many"
        Testcases {
            string Testcase_Id PK
            string Submodule_Id
            string Descriptions
            string Severity_Id
            string Steps
            string Module_Id
        }
        Defect_Status ||--o{ Defect : "1 to many"
        Defect_Status ||--o{ Defect_History : "1 to many"
        Defect_Status ||--o{ Allocate_Modules : "1 to many"
        Defect_Status ||--o{ Submodule : "1 to many"
        Defect_Status {
            string DefectStatus_Id PK
            string DefectStatus
        }
        Submodule ||--o{ Allocate_Modules : "1 to many"
        Submodule ||--o{ Defect : "1 to many"
        Submodule ||--o{ Defect_History : "1 to many"
        Submodule ||--o{ Defect_Status : "1 to many"
        Submodule {
            string Submodule_Id PK
            string Module_Id
            string Submodule_Name
        }
        TestCase_Type ||--o{ Testcases : "1 to many"
        TestCase_Type {
            string TestCaseType_Id PK
            string TestCase_Type
        }
    
```