**Report about best devices in PC, best operating system and suitable programming languages.**

**System Name: Task Management Application**

* **Best Devices**
* Processor core (i7,i5): is crucial for running the IDE, database, server
* Ram 16GB : Modern development environments and virtual machines are memory-intensive.
* Fast SSD(512GB) : **makes your computer feel fast and responsive**
* **Best Operating System**
* Windows 11: are the best choice for a productive developer environment.
* **Suitable Programming Languages**
* C# .net:  High performance, excellent security, and a robust framework in .NET
* Backend :Node.js, Python: have massive community support.

**Design of an integrated system (Class diagram)**

|  |
| --- |
| User |
| UserID int (pk) identity  Name nvarchar(100)  Password nvarchar(100)  Email nvarchar(100) uniqe  Role nvarchar(100)CHECK(RoleIN('Manager','Employee')) |

|  |
| --- |
| Task |
| TaskID INT (pk)IDENTITY  Title NVARCHAR(200)  Description NVARCHAR(500)  Status NVARCHAR(20) CHECK (Status IN ('Pending', 'In Progress', 'Completed')) DueDate DATETIME NOT NULL  AssignedTo INT (fk) refrences (UserID) |

**Testing**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test case ID** | **Test case description** | **Test Steps** | **Test Data** | **Expected Result** | **Actual Result** | **Pass/Fail** |
| 1 | Login by manager | Enter manager username and Password and click login | Username: mohamed  Password:123 | login to Manager page | login to Manager page | pass |
| 2 | Login by Employee data | Enter Employee username and Password and click login | Username: seif  Password:123 | login to employee page | login to employee page | pass |
| 3 | Login by Employee data | Enter manager username and Password and click login | Username: seif  Password:123 | login to Manager page | Invalid username or password | fail |
| 4 | Login by Employee data | Enter Employee username and Password and click login | Username: mohamed  Password:123 | Invalid username or password | Invalid username or password | pass |
| 5 | In the manager page will add a task | Enter the employee name and description and title and and put the status pending or in progress or completed  Then click add | Employee name = seif  and  Description = wpf task for employee  And  Title = wpf  And  Status = completed | Task add  And displayed | Task add  And  displayed | pass |
| 6 | In the manager page will edit a task | edit the employee name and edit description and edit title and and edit the status pending or in progress or completed  Then click edit | Employee name = zeyad  and  Description = wpf task  And  Title = wpf5  And  Status = pending | Task edited  And displayed | Task edited  And displayed | pass |
| 7 | In the manager page will delete a task | Select the task that he want to delete and click delete | Selected  Seif wpf task for employee  Wpf completed | Task selected and deleted | Task not selected and doesn’t delete the task | fail |