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**.NET Application Programming**

**Project Status and Design Report**

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| **Topic:** | CLC - Milestone 6: Final Project and Presentation: Completed Minesweeper Game | |
| **Date:** | 12/19/2020 | |
| **Revision:** | 1.5 / Final | |
| **Team:** | 1. Kurt Newcomb | |
| 2. Isaac Tucker | |
|  | |
|  | |
| **Weekly Team  Status Summary:** | |  |  |  |  | | --- | --- | --- | --- | | **User Story** | **Team Member** | **Hours Req** | **Hours Remaining** | | Maintain DI from a central location so DI components are easier to manage | Isaac | 4 | 0 | | Have objects take interfaces they are loosely coupled | Isaac | 4 | 0 | | log controller actions Errors might be easier to detect. | Isaac | 4 | 0 | |  |  |  | 0 | | Save connection issues by updating the view rather than refreshing to save connection time | Isaac | 4 | 0 | | Make a Flowchart representing the authentication process | Kurt | 1 | 0 | | Make a Flowchart representing the game logic | Kurt | 1 | 0 | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | |
| **GIT URL:** | <https://github.com/MrAizakku/CST247CLC.git>  Application Demo: <https://www.loom.com/share/6dbeada4e0574038bee45592bcec880c> | |
| **Peer Review:** | Yes | We acknowledge that our team has reviewed this Report and we agree to the approach we are all taking. |

**Planning Documentation**

**Agile Scrum Product Backlog:**

*The Product backlog is available in the Git repository:**https://github.com/MrAizakku/CST247CLC.git*

*The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.*

**Agile Scrum Burn Down Chart:**

*The SCRUM burn down chart is available in the Git repository:**https://github.com/MrAizakku/CST247CLC.git*

*The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.* **Agile Retrospective Results:**

*The following table should be completed after each Retrospective on Things That Went Well (Keep Doing). An alternative to the following table is to use a Mind Mapping tool such as Coggle. If you use a Mind Mapping tool you must include a URL or Image File.*

|  |
| --- |
| **What Went Well** |
| 1. Team communication seems to be going well; all parties reached out within a timely manner and joined a shared medium of communication (discord). |
| 1. Work distribution is going well; each team member grabbed a portion of the assignment and started working on that portion to ensure entire assignment completion. |

*The following table should be completed after each Retrospective on Things That Didn’t Go Well (Stop Doing) and What Would Be Done Differently Next Time with an Action Plan to Improve (Try Doing and Continuous Improvement). An alternative to the following table is to use a Mind Mapping tool such as Coggle. If you use a Mind Mapping tool you must include a URL or Image File.*

|  |  |  |
| --- | --- | --- |
| **What Did Not Go Well** | **Action Plan** | **Due Date** |
| Implementing the REST service to be accessible within the application. | Research more on REST services. | 12/20/2020 |
| Some members are finding difficulty securing time to contribute to CLC progress due to life distractions. | Ensure time is protected as to not be interrupted by outside influences. | Everyday |
| Some users experienced bugs and couldn’t get components to work | Review code via live stream on Discord to work out bugs. | 12/20/2020 |

**Design Documentation**

**Install Instructions:**

To run the application you will need to be able to run ASP.NET MVC applications in C#. Source code is located:  [*https://github.com/MrAizakku/CST247CLC.git*](https://github.com/MrAizakku/CST247CLC.git)  
To run the application you will need access to a DB with two tables as defined below.

**SQL Database:**

User Table:

CREATE TABLE [dbo].[Users] (

[UserID] UNIQUEIDENTIFIER DEFAULT (newid()) NOT NULL,

[FirstName] NVARCHAR (50) NOT NULL,

[LastName] NVARCHAR (50) NOT NULL,

[Sex] NVARCHAR (50) NOT NULL,

[Age] INT NOT NULL,

[State] NVARCHAR (15) NOT NULL,

[Email] NVARCHAR (50) NOT NULL,

[Username] NVARCHAR (50) NOT NULL,

[Password] NVARCHAR (50) NOT NULL,

[GameString] TEXT NULL,

PRIMARY KEY CLUSTERED ([UserID] ASC)

);

CREATE TABLE [dbo].[Scores] (

[Id] UNIQUEIDENTIFIER DEFAULT (newid()) NOT NULL,

[userID] UNIQUEIDENTIFIER NOT NULL,

[score] INT NOT NULL,

[difficulty] NVARCHAR (10) NOT NULL,

[clicks] INT NOT NULL,

PRIMARY KEY CLUSTERED ([Id] ASC)

);

**General Technical Approach:**

At this stage in the program development process we are simply following the instructions as they appear within the milestone assignment. Specifications for attributes within the user class are as defined by the milestone instructions. Views are kept simple to ensure program operation is the main focus. Bootstrap by Twitter has been installed using Nuget to enhance overall views. Minesweeper view has been created with a corresponding controller to make the minesweeper game fully functional with win/lose conditions. Right clicking is also enabled to flag cells.

**Key Technical Design Decisions:**

At this point we are focusing on the required milestone requirements, and will make QoL updates as the project progresses throughout the course of the class. I.e. a check for an already existing user during the registration.

**ER Diagram:**

*The ER Diagrams are available in the Git repository:* [*https://github.com/MrAizakku/CST247CLC.git*](https://github.com/MrAizakku/CST247CLC.git) *The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.*

**DDL Scripts:**

BitBucket is not used for this application.

**Sitemap Diagram:**

*The Sitemap Diagrams are available in the Git repository:* [*https://github.com/MrAizakku/CST247CLC.git*](https://github.com/MrAizakku/CST247CLC.git) *The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.*

**Security Design:**

*A Security Logic Design Flow Chart is available in the Git repository:* [*https://github.com/MrAizakku/CST247CLC.git*](https://github.com/MrAizakku/CST247CLC.git) *The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.*

*There is only one level of access: User.*

**Third Party Interface Design:**

*A WCF REST service was created and is accessed here: http://localhost:53797/ScoreService.svc*

*It provides GetAllScores() and GetUserScoresByName(string user).*

*http://localhost:53797/ScoreService.svc/GetAllScores and http://localhost:53797/ScoreService.svc/GetUserScoresByName/name*

**Flow Charts:**

The flowcharts can be found in the Githhub repo: CST247CLC/PlanningDesign/flowcharts at master · MrAizakku/CST247CLC (github.com)

We created two flowcharts, one for the game logic, and another one for the user authentication process.

**User Interface Diagrams:**

*The User Interface Diagrams, or Wireframes, are available in the Git repository:**https://github.com/MrAizakku/CST247CLC.git*

*The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.*

**Class Diagrams:**

*The Model Class Diagrams are available in the Git repository:**https://github.com/MrAizakku/CST247CLC.git*

*The document is located within the* [*PlanningDesign*](https://github.com/MrAizakku/CST247CLC/tree/main/PlanningDesign) *folder.*

**Pseudo Code:**

*All code used within the application is located within the Git repository: https://github.com/MrAizakku/CST247CLC.git*

**Other Documentation:**

*N/A*