

Problem

A good workout is something people always pursue, and in this era of data technology, having every detail about performance is empowering and gives an edge to athletes as well as regular fitness enthusiast. In this case, punching a bag can be a very dull activity since it involves a lot of repetition. However this application attempts to solve:

- Bring data comparison for better workout improvements
- Turn boxing practice into a data driven activity
- Make workout environment a more fun and interactive activity
- Bring a niche workout into a more general audience
- Give people full control over workouts

System(Ver 1.0)

The application runs natively on Windows as a Windows Forms Software. It connects to a Server in MySQL using the MySQLConnector Driver and reads/writes to a Database.

Functions (Ver 1.0)

- Reads data from Arduino
- Writes/Reads to/from Database
- Using a unique ID per user
- User ID/table create on Registration
- Data depends on mode chosen by user
 - Vs Mode or Free Mode
- Uses algorithm to calculate a combo score
- Pulls history from saved sessions and displays for a certain date

Requirements

Ver 0 : The only system that was in place was an Arduino Code file to get readings from Accelerometers

- Create a basic template UI
- Create an algorithm to calculate a combo score
- Create a user class
- Create different modes for users to interact with the sensor
- Create Login auth system
- Create local Database/Database Server to Store all data

Implementation

Visual Studios Stack Utilized

- C# / C++ Language
- Arduino IDE
- Visual Studios IDE
- MySQL Database Server
- MySQL Database Connector for C#
- Windows Forms / Controls

Verification

Test Case ID	PBAG_001	Test Case Description	Test the Login Functionality in PBAG Application
Created By	Ariel	Reviewed By	Ariel
Version	1.0		
Category	Sunny Day	Test Case (Pass/Fail)	Pass

Tester's Name	Ariel	Date Tested	March 20, 2019
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S #	Prerequisites:	S #	Test Data
1	Open Application using Desktop Shortcut	1	Username = aarbo009
2		2	Password = abc123
3		3	
4		4	

Test Scenario: Verify on entering valid userid and password, the customer can login

Step #	Step Details	Expected Results	Actual Results	Pass / Fail
1	Click on Desktop Shortcut of Combo Counter	Application should Open	As Expected	Pass
2	Enter Username & Password	Credential can be entered	As Expected	Pass
3	Click Submit	User can log in	As Expected	Pass

Test Case ID	PBAG_002	Test Case Description	Test the Login Functionality in PBAG Application
Created By	Ariel	Reviewed By	Ariel
Version	1.0		
Category	Rainy Day	Test Case (Pass/Fail)	Pass

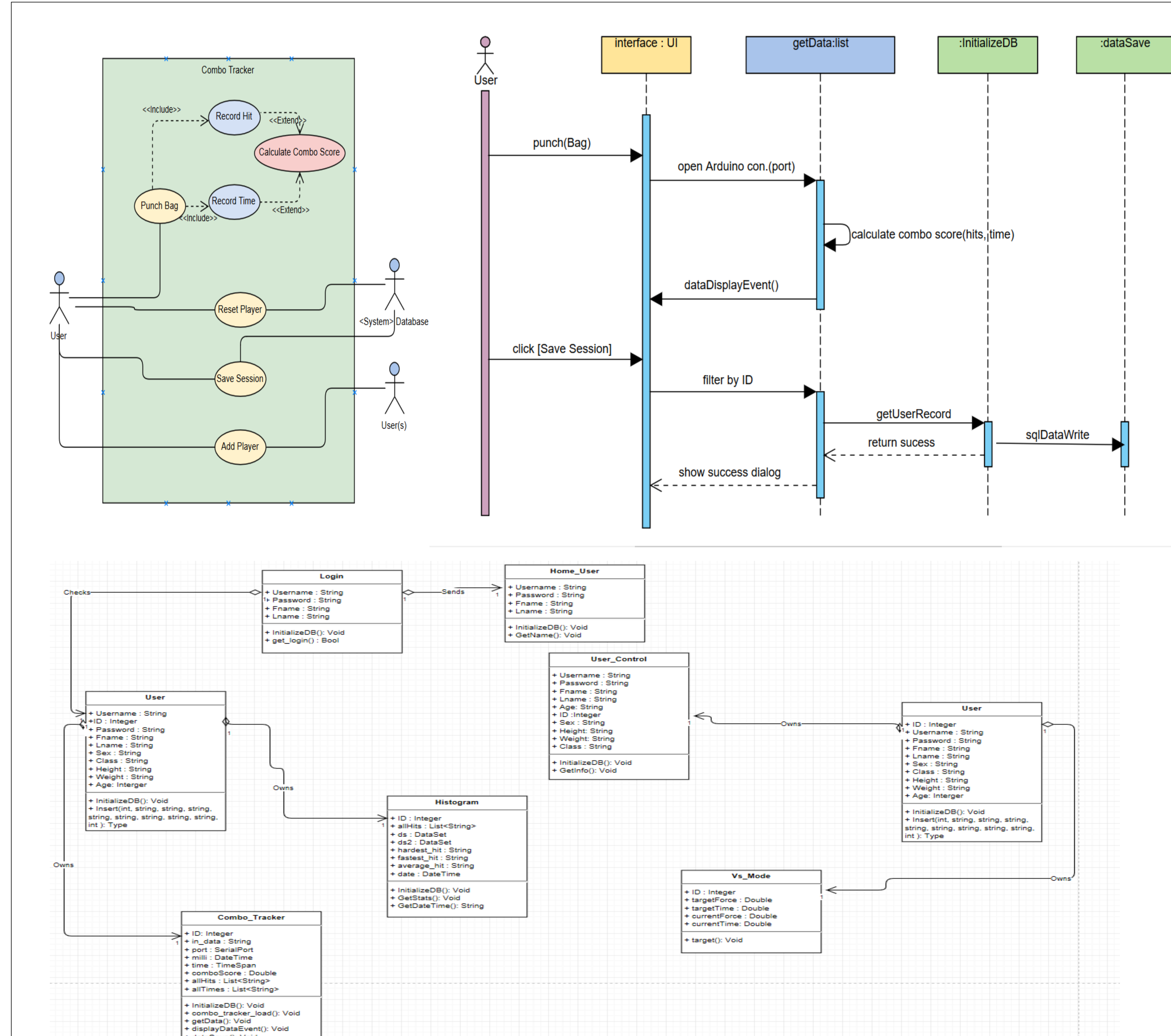
Tester's Name	Ariel	Date Tested	March 20, 2019
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S #	Prerequisites:	S #	Test Data
1	Open Application using Desktop Shortcut	1	Username = aarbo009
2		2	Password = 123abc
3		3	
4		4	

Test Scenario: Verify on entering valid userid and password, the customer cannot login

Step #	Step Details	Expected Results	Actual Results	Pass / Fail
1	Click on Desktop Shortcut of Combo Counter	Application should Open	As Expected	Pass
2	Enter Username & Password	Credential can be entered	As Expected	Pass
3	Click Submit	User is not logged in	As Expected	Pass
4	Click Ok on dialog	Dialog disappears	As Expected	Pass

System and Object Design



Screenshots



Acknowledgement

The material presented in this poster is based upon the work supported by Michael H. Bucar. We/I thank Michael H. Bucar for assistance, cooperation and mentorship that I/we received throughout this process