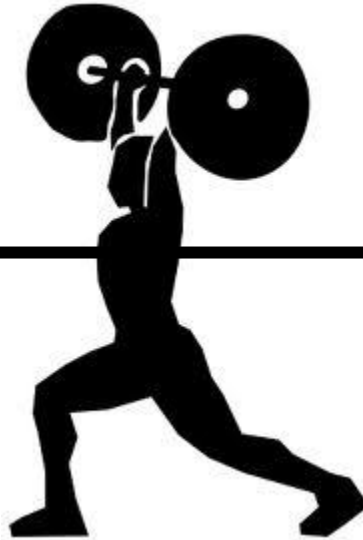


CUSTOMIZED WORKOUT PROGRAM



VBA FINAL PROJECT

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MBA 614**

Executive Summary

Pain

Weight training programs are a huge revenue producing market with low barriers to entry. Whether it is P90x, Fit for Life, Insanity, or a new start-up company, there is a lot of money to be made with a quality program. Quality programs generally focus on addressing the key reasons why people do not work out. These reasons include the consumer wanting a structured program, the consumer feeling like they don't have the time to get an adequate workout in with their busy schedule, and the consumer not seeing inspiring results.

Overview of System Solution

I have created a model that can be used as a start-up workout program tool which allows consumers to overcome the common workout hurdles so they can enjoy a healthier lifestyle and achieve their physical fitness goals.

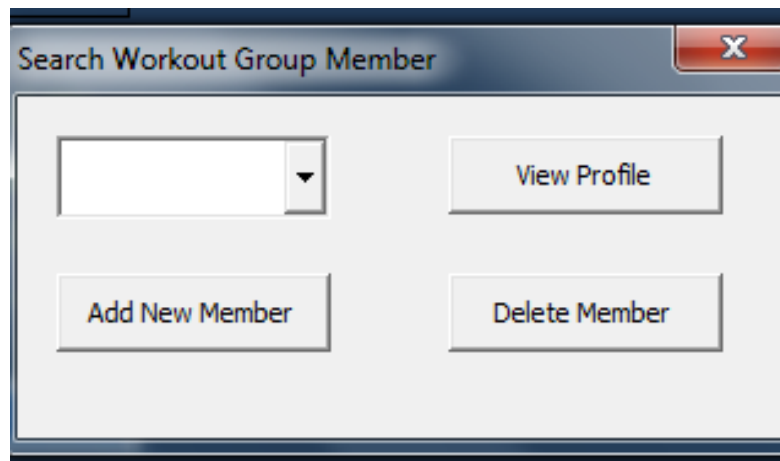
The model syncs user profile information and recent workout data inputs with a workout model I developed that produces a customized workout schedule for each individual user. This schedule is printable so the user can take it into the gym with them. This schedule randomizes exercises for muscle shock, utilizes optimal repetitions for the prescribed workout depending on the user's desired results. It also allows users to compare progress with the other members of their workout group for accountability and motivation purposes. Interactive forms and ribbons contribute to the aesthetically pleasing formatting which allows for a pleasant and smooth user interface.

Implementation Documentation

Forms

When the user opens the workout program file they will first see the “Search Workout Group Member” form (Exhibit 1). The scroll bar allows the user to scroll through the list of the current workout group members that have previously created a profile in the system in order to select themselves as the current user. Once the user has been selected, their name will be highlighted in the scroll bar window. At this point, the user needs only to click the “View Profile” button to be taken to the profile form. Selecting the correct current user is critically important as the entire worksheet is customized to the current user.

Exhibit 1



If the user’s name does not appear as a current user because they have not yet created a profile, the user will click the “Add New Member” button. Clicking on this button will prompt a “Don’t start something you won’t finish!” textbox (Exhibit 2). Also, if the user desires to delete a member’s information for whatever reason then the user clicks the “Delete Member” button. This action will prompt an “Are you sure?” textbox (Exhibit 3). In addition, if the “Delete Member” button is clicked without a member being selected in the scroll down, then a “No User Selected” textbox will be prompted (Exhibit 4).

Exhibit 2

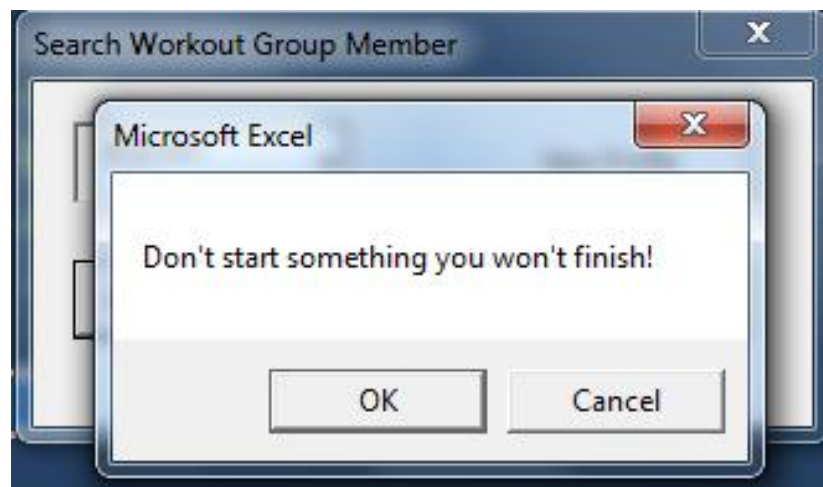


Exhibit 3



Exhibit 4



Once the “Add New Member” button or “View Profile” button (after a member has been selected) has been clicked the “Profile” form is displayed (Exhibit 5). This form utilizes textboxes with labels and option buttons to allow users to enter in data for the first time or see existing data that can be updated. This data is stored in the “Exercisers” sheet.

Exhibit 5

Profile

Name: **Goal Weight:** **Age:**

Workouts per Week	Desired Outcome	Beginning Measurements	
<input type="radio"/> 6 <input type="radio"/> 5 <input type="radio"/> 4 <input checked="" type="radio"/> 3	<input checked="" type="radio"/> Get Big <input type="radio"/> Get in Shape <input type="radio"/> Slim Down	<input type="text" value="40"/> Chest <input type="text" value="15"/> Biceps <input type="text" value="185"/> Weight	<input type="text" value="34"/> Waist <input type="text" value="12"/> Calves <input type="text" value="20"/> Quads

Specifically the “Workouts per Week” option buttons allows the user to indicate how many workout periods they want scheduled in one week for their customized workout schedule. Also, the user indicates one of three options for what their desired outcome of working out is on this form. The number of repetitions per exercise on the customized workout schedule will be decided based on what the user has selected in the “Desired Outcome” option buttons. The Beginning Measurements will be stored for the purposes of the user to see their progress they have made when they started the workout program. This progress is displayed on the “Group Information” tab in the worksheet. Additionally, there are buttons for navigation:

- “Back to Search” displays the “Search Workout Group Member” form again.
- “Save/Update” stores the data on the form in the “Exercisers” sheet.

- “Weights & Measurements” displays said form.
- “Workout Schedule” takes the user to their customized Workout Schedule in the “Calendar” sheet.

The “Weights & Measurements” form is displayed for user data entry (Exhibit 6). Through the use of textboxes and option buttons, this form collects and stores the user’s current measurements data and weight used for each exercise data in the “Exercisers” sheet. The measurements are stored for users to witness progress and the weight data obtained for each workout is simply a way for the workout group members to reference what weight they used for each workout. With so many possible exercisers, it becomes difficult to remember the weights members are using. Having easy access to data is not only convenient, but it also assists in lowering the time needed for workouts which is a major concern for many potential weight trainers. To illustrate, this information takes out the guess and adjusting time of finding the right weight for a particular exercise.

Exhibit 6

Weights & Measurements

Push Workouts

<input type="text" value="35"/> Standing Dumbell	<input type="text" value="95"/> Skull Crunchers	<input type="text" value="125"/> Rope Cable	<input type="text" value="185"/> Dips
<input type="text" value="200"/> Lap Pull	<input type="text" value="55"/> Row Machine	<input type="text" value="90"/> Trap Lifts	<input type="text" value="185"/> Chin Raise

Pull Workouts

<input type="text" value="45"/> 777	<input type="text" value="55"/> Preacher Curls	<input type="text" value="50"/> Cable Curls	<input type="text" value="65"/> Sitting Dumbell Curls
<input type="text" value="225"/> Flat	<input type="text" value="185"/> Incline	<input type="text" value="200"/> Decline	<input type="text" value="175"/> Fly

Leg Workouts

<input type="text" value="200"/> Calf Raises	<input type="text" value="150"/> Hamstring Curls
<input type="text" value="225"/> Squats	<input type="text" value="150"/> Lunges
<input type="text" value="225"/> Dead Lifts	<input type="text" value="150"/> Leg Extensions

Core Workouts

<input type="text" value="50"/> Leg Toss	<input type="text" value="50"/> Decline Medicine Ball
<input type="text" value="50"/> Planks	<input type="text" value="50"/> Side Bends
<input type="text" value="50"/> Curl Ups	<input type="text" value="50"/> Exercise Ball

Measurements

<input type="text" value="42"/> Chest	<input type="text" value="19"/> Biceps	<input type="text" value="200"/> Weight	<input type="text" value="35"/> Waist	<input type="text" value="15"/> Calves	<input type="text" value="24"/> Quads
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Update Group Information Back to Profile Workout Schedule

Additionally, this form contains buttons for simple user navigation:

- “Update” stores the data on the form in the “Exercisers” sheet.
- “Group Information” takes the user to view their Progress in the “Group Information” sheet.
- “Back to Profile” displays said form
- “Workout Schedule” takes the user to their customized Workout Schedule in the “Calendar” sheet.

Sheets

The “Calendar” tab displays the customized workout schedule for each workout group member depending on who the current user is (Exhibit 7). The workout plan I developed focuses on the four most important types of workouts: Pull exercises, Push exercises, Leg exercises, and Core exercises. The “Workouts” tab stores many different workouts for each type of exercise. The code loads an array for each type of workout and randomizes an output exercise for each exercise type into the days which depend on number of workouts the user wants to schedule each week that they have indicated in their profile.

This randomization is critical to the success of the program as muscle shock has proven to be one of the leading causes of workout effectiveness. This means that the user’s muscles and lipids will break down more with unfamiliar exercises. Optimal muscle and lipid breakdown leads to optimal muscle strength. Every group member performs four exercises during each workout no matter how many workouts are performed per week. This contributes to user workouts that both minimize diminishing marginal returns from the workout and it also produces 30-45 minute daily workouts that appear much more doable than a typical 90 minute weight training workout. This shortened time period assists workout group members to fit this important activity into their busy schedules.

Once the workout has been scheduled for the week, the last weights the user lifted for each exercise are generated onto the sheet relative to their associated exercise. In addition, the customized number of lift repetitions is generated on the sheet for each exercise depending on the previously stored data which indicates if the user’s desired outcome for weight training is to get big, stay in shape, or slim down. In order to build size of muscles, it is recommended to perform 4-6 repetitions for each exercise, to build muscles more slowly and evenly, it is recommended to perform 10-12 repetitions for each exercise, and to lose weight, it is recommended to perform 20-22 repetitions for each exercise.

Once the sheet is generated, it is designed to be printed so the user can take the schedule into the gym to be used as both a reference and also to write in changes in the weight lifted for each exercise performed under the NW (New Weight) column. When the user returns to the worksheet after completing a workout, the user can update any change in weights used or measurements on the “Weights & Measurements” form.

Other Sheet:

- “Exercisers” sheet stores all unique workout group members data
- “Workouts” sheet stores the workout program data needed for the model

Exhibit 7

Brandon

	Monday				Tuesday				Wednesday			
	Workout	Reps	LW	NW	Workout	Reps	LW	NW	Workout	Reps	LW	NW
PUSH	Row Machine	4-6	55						Standing Dumbell	4-6	35	
PULL	Decline	4-6	200						Cable Curls	4-6	50	
LEGS	Leg Toss	4-6	50						Decline Medicine Ball	4-6	50	
CORE	Dead Lift	4-6	225						Leg Extensions	4-6	150	

	Thursday				Friday				Saturday			
	Workout	Reps	LW	NW	Workout	Reps	LW	NW	Workout	Reps	LW	NW
PUSH					Rope Cable	4-6	125					
PULL					Fly	4-6	175					
LEGS					Exercise Ball	4-6	50					
CORE					Squats	4-6	225					

LW = Last Weight Lifted
NW = New Weight Lifted

The “Group Information” tab compares the most recent measurements data to the original measurements obtained previously in order to calculate the percent change in measurements (Exhibit 8). The percent change is a universal way to track progress. This sheet shows all of the users’ percent change for each measurement, so it is also used as an accountability tool for the entire workout group. People have extra incentive to both complete their scheduled workouts and also put forth more energy in those workouts when they know their results are public. Both of these outcomes lead to improved workout results.

Exhibit 8

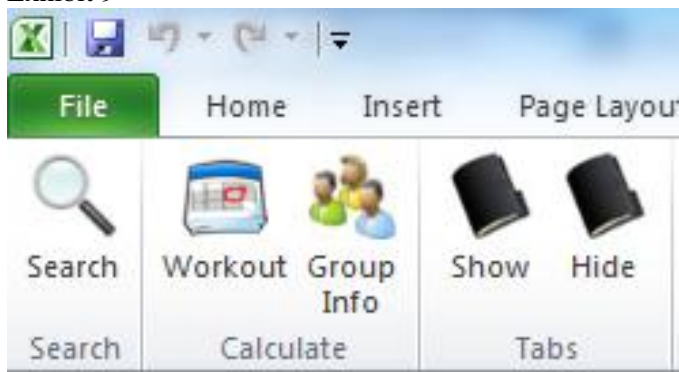
% Change in Measurements from Beginning to Now

	Weight	Waist	Bicep	Chest	Calf	Quad
Members:						
Sharee	-3%	-3%	-10%	-100%	0%	-14%
Brandon	8%	3%	27%	5%	25%	20%
Kyla	13%	48%	9%	-5%	33%	-20%
Kash	-30%	-21%	65%	-44%	-16%	-34%
Makaida	48%	-21%	-2%	6%	7%	27%

Ribbon

- “Search” displays the “Search Workout Group Member” form (Exhibit 9).
- “Workout” calculates a new customized workout schedule and displays it on the “Calendar” sheet for the current user.
- “Group” displays “Group Information” sheet which automatically updates % change measurements.
- “Show” shows “Exercisers” and “Workouts” tabs mainly for administrative purposes as the worksheet loads with them hidden.
- “Hide” hides “Exercisers” and “Workouts” tabs if they are showing.

Exhibit 9



Learning & Assistance

I received feedback on Learning Suite that suggested using a Google Doc to store the data. I searched the internet and inquired of five people that I feel have high VBA IQ and was unable to find the correct way to use a Google Doc that would functionally work with my project. I spoke with James Tall (Teaching Assistant) during office hours who suggested I make a customized workout schedule for each member instead of using Google Docs. He indicated that this change would be a good replacement to maintain scope. This new direction provided many learning opportunities that I was able to wrestle with and ultimately come out with a quality product. Many of my friends and family are going to start using the tool for their own weight training. Also, the spreadsheet is set up to where the “Exercisers” sheet could simply be pasted into a Google Doc in the future by the click of a button from the user, and upon opening the worksheet, the Google Doc information would be pasted into the “Exercisers” sheet.

This project allowed for me to practice many of the concepts and tools I have learned in VBA class this semester, and it has given me much more confidence in creating a program from scratch. The most intimidating thing about VBA for me has always been the blank canvas and not knowing where to start. I feel much more capable of creating a functional code from scratch after this assignment. It forced me to look at an entire program from start to finish. Doing that has deepened my understanding of VBA which was my ultimate goal for taking the class.

My biggest problem had to do with debugging. This was mainly due to the fact that I am not good at using comments throughout my code to help me recognize code and not waste time trying to interpret it from the beginning each time I come across it. This is also the most significant lesson I learned. To illustrate, I learned that I must use comments from the beginning. It becomes difficult to constantly interpret code that you have written days if not weeks ago without appropriate comments. I was able to get some great help in the debugging department from Darrin Craner and David Long when I was not able to figure out the needed debug. Two occasions came to mind when I needed their help. The first time ended up in me needing to make sure I always had a current user value throughout the worksheet, and the second was coding the randomized workouts so that no workout would be repeated in a given week using arrays (Exhibit 10). I also utilized the Ribbon Wizard tool that Gove developed and made available when I created my own ribbon for this assignment.

Exhibit 10

```
Dim N As Long
Dim Temp As Variant
Dim J As Long
For N = LBound(Push) To UBound(Push)
    J = CLng((UBound(Push) - N) * Rnd) + N
    If N <> J Then
        Temp = Push(N)
        Push(N) = Push(J)
        Push(J) = Temp
    End If
Next N

For N = LBound(Pull) To UBound(Pull)
    J = CLng((UBound(Pull) - N) * Rnd) + N
    If N <> J Then
        Temp = Pull(N)
        Pull(N) = Pull(J)
        Pull(J) = Temp
    End If
Next N
```

In addition, a few of the codes took me quite a bit of time to figure out. For example, the code that populated the last weight lifted for each exercise in the “Calendar” sheet really tested my knowledge of loops and gave me good practice in being comfortable with the logic (Exhibit 11).

Exhibit 11

```
'Last weight lifted

For Each cell In LastWeightCal
    For Each subcell In Sheets("Exercisers").Range("Exercises")
        If subcell.Value = cell.Offset(0, -2) Then
            If subcell.Value = "Rope Cable" Then
                Debug.Print "Brandon is awesome."
            End If
            cell.Value = subcell.Offset(UserRow - 1, 0).Value
            Debug.Print subcell.Column
        End If
    Next
Next
```