Text

Description automatically generated

**MS806 – Business Applications Programming**

**Student Name: Yun Wei**

**University of Galway ID Num: 23104463**

**Assignment:** 2

**Date of Submission:** 13/10/2023

***“In submitting this assignment, I confirm that it is entirely my own work. I understand that all submissions are covered by and subject to the University of Galway Academic Integrity Policy and Code of Practice.”***

**Assignment 2: Halo Fitness.**

**Screen shots of Application at Runtime:**

A screenshot of a computer

Description automatically generated

**Fig 1: Before Display Button is pressed**

A screenshot of a computer

Description automatically generated

**Fig 2: After Display Button is pressed**

**A screenshot of a computer

Description automatically generated**

**Fig 3: After Booking Button is pressed**

**A screenshot of a program

Description automatically generated**

**Fig 4: After Booking Button is pressed for the second booking**

**A screenshot of a computer

Description automatically generated**

**Fig 5: After Summary Button is pressed**

**A screenshot of a computer

Description automatically generated**

**Fig 6: Input Error**

**Source Code:**

/\* Student Name: Yun Wei

\* Student ID: 23104463

\* Date:13/10/2023

\* Assignment: 2

\* Assignment:

The purpose of this assignment is to create a one-page form that facilitates pricing and booking processes for Halo Fitness programs.

Clients can make program and session choices, and they can take advantage of bundle discounts. For groups of more than 4 people who are also applying for an upgrade course, a group discount is offered, and bottle maintenance can be added for an extra fee. To meet these requirements, list boxes, radio buttons, and checkboxes are used to provide program options. Conditional statements like if-else and switch are applied to store the client's selections.

When the "Display" button is clicked, the information provided by clients is displayed. If they decide to Book, a confirmation message pops up. If clients click "Yes," the interface is cleared for the next booking, and the data is stored in variables. A summary panel displays the price, selected options, and more. If clients press "No," the displayed message changes automatically as they modify their selections.

The "ghost button" is designed to allow clients to express interest in an upgrade course. It is checked by default, and if clients decide not to opt for an upgrade course, they can communicate with the team, and the button becomes visible when they click "Display."

Managing the visibility and enabling/disabling of elements is an interactive aspect of this assignment, ensuring a user-friendly and efficient booking process.

\*/

**using** System**;**

**using** System**.**Collections**.**Generic**;**

**using** System**.**ComponentModel**;**

**using** System**.**Data**;**

**using** System**.**Drawing**;**

**using** System**.**Linq**;**

**using** System**.**Reflection**.**Emit**;**

**using** System**.**Text**;**

**using** System**.**Threading**.**Tasks**;**

**using** System**.**Windows**.**Forms**;**

**using** static System**.**Collections**.**Specialized**.**BitVector32**;**

**using** static System**.**Windows**.**Forms**.**VisualStyles**.**VisualStyleElement**.**TaskBand**;**

**namespace** WindowsFormsApp1

**{**

**public** **partial** class Form1 **:** Form

**{**

**public** Form1**()**

**{**

InitializeComponent**();**

**}**

//Define global const variables of programs and program cost

const string

PROGRAM1 **=** "Circuit Training"**,**

PROGRAM2 **=** "Pilates"**,**

PROGRAM3 **=** "High-intensity Internal Training"**,**

PROGRAM4 **=** "Aerobics"**,**

PROGRAM5 **=** "Fitness Boot Camp"**,**

PROGRAM6 **=** "Weigh Training "**,**

PROGRAM7 **=** "Agility"**,**

PROGRAM8 **=** "Yoga"**,**

PROGRAM9 **=** "Speed Training"**;**

const int PROGRAM1COST **=** 25**,** PROGRAM2COST **=** 40**,**

PROGRAM3COST **=** 25**,** PROGRAM4COST **=** 25**,**

PROGRAM5COST **=** 25**,** PROGRAM6COST **=** 25**,**

PROGRAM7COST **=** 50**,** PROGRAM8COST **=** 35**,**

PROGRAM9COST **=** 45**;**

//Define global const variables of session and buddle discount

const int SESSION1 **=** 1**,** SESSION2 **=** 3**,** SESSION3 **=** 5**,** SESSION4 **=** 7**,** SESSION5 **=** 10**,** SESSION6 **=** 12**;**

const decimal BUDDLEDISCOUNT1 **=** .00m**,**

BUDDLEDISCOUNT2 **=** .05m**,**

BUDDLEDISCOUNT3 **=** .10m**,**

BUDDLEDISCOUNT4 **=** .15m**,**

BUDDLEDISCOUNT5 **=** .20m**,**

BUDDLEDISCOUNT6 **=** .30m**;**

//Define global const variables of optional price and group discount rate

const int UPGRADEPRICE1 **=** 25**,**

UPGRADEPRICE2 **=** 15**,**

UPGRADEPRICE3 **=** 5**,**

UPGRADEPRICE4 **=** 0**;**

const decimal BOTTLEPRICE **=** 7.99m**;**

const decimal GROUPDISCOUNTRATE **=** .075m**;**

//Define global variables of cost and summary

decimal BuddleCost**,** UpgradeCost**,** OverallCost**;**

int ValueForGroupDiscount**,** BookingCount**;**

decimal TotalValueofProgram**,** AverageAvenue**,** TotalOptions**;**

string Program**;**

int Session**;**

//Initilize the visibility and enabled condition of panels and buttons

**private** void Form1\_Load**(object** sender**,** EventArgs e**)**

**{**

NoUpdateRadioButton**.**Visible **=** **false;**

CustomPanel**.**Visible **=** **false;**

SummaryPanel**.**Visible**=** **false;**

NoUpdateRadioButton**.**Checked **=** **true;**

BookButton**.**Enabled**=false;**

SummaryButton**.**Enabled**=false;**

**}**

//when bookbutton enabled, after pressing no, displaying in label change automatically when selection change

**private** void ProgramandPriceListBox\_SelectedIndexChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void MediumGroupRadioButtion\_CheckedChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void NoUpdateRadioButton\_CheckedChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void SmallGroupRadioButtion\_CheckedChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void OneOneRadioButtion\_CheckedChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void BottoleCheckBox\_CheckedChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void AttendTextBox\_TextChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

**private** void SessionandDiscountListBox\_SelectedIndexChanged**(object** sender**,** EventArgs e**)**

**{**

**if** **(**BookButton**.**Enabled**)**

**{**

DisplayButton\_Click**(**sender**,** e**);**

**}**

**}**

//Display the information of selection

**private** void DisplayButton\_Click**(object** sender**,** EventArgs e**)**

**{**

//local variables

decimal BuddleDiscount **=** 0m**,**PriceOfBottle **=** 0m**,** GroupDiscount **=** 0m**;**

int PriceOfUpgrade **=** 0**,**

ParticipantsNum **=** 0**,**

ProgramIndex **=** 0**,** SessionIndex **=** 0**,**

PricePerSession **=** 0**;**

//select all the information from listbox and radiobuttons to progress the project

**if** **(**ProgramandPriceListBox**.**SelectedIndex **!=** **-**1**)**

**{**

**if(**SessionandDiscountListBox**.**SelectedIndex **!=** **-**1**)**

**{**

**if** **(**int**.**TryParse**(**AttendTextBox**.**Text**,** **out** ParticipantsNum**)** **&&** ParticipantsNum **>**0**)**

**{**

//select program and its session

ProgramIndex **=** ProgramandPriceListBox**.**SelectedIndex**;**

SessionIndex **=** SessionandDiscountListBox**.**SelectedIndex**;**

**switch** **(**ProgramIndex**)**

**{**

**case** 0**:**

Program **=** PROGRAM1**;**

PricePerSession **=** PROGRAM1COST**;**

**break;**

**case** 1**:**

Program **=** PROGRAM2**;**

PricePerSession **=** PROGRAM2COST**;**

**break;**

**case** 2**:**

Program **=** PROGRAM3**;**

PricePerSession **=** PROGRAM3COST**;**

**break;**

**case** 3**:**

Program **=** PROGRAM4**;**

PricePerSession **=** PROGRAM4COST**;**

**break;**

**case** 4**:**

Program **=** PROGRAM5**;**

PricePerSession **=** PROGRAM5COST**;**

**break;**

**case** 5**:**

Program **=** PROGRAM6**;**

PricePerSession **=** PROGRAM6COST**;**

**break;**

**case** 6**:**

Program **=** PROGRAM7**;**

PricePerSession **=** PROGRAM7COST**;**

**break;**

**case** 7**:**

Program **=** PROGRAM8**;**

PricePerSession **=** PROGRAM8COST**;**

**break;**

**case** 8**:**

Program **=** PROGRAM9**;**

PricePerSession **=** PROGRAM9COST**;**

**break;**

**}**

**switch** **(**SessionIndex**)**

**{**

**case** 0**:**

Session **=** SESSION1**;**

BuddleDiscount **=** BUDDLEDISCOUNT1**;**

**break;**

**case** 1**:**

Session **=** SESSION2**;**

BuddleDiscount **=** BUDDLEDISCOUNT2**;**

**break;**

**case** 2**:**

Session **=** SESSION3**;**

BuddleDiscount **=** BUDDLEDISCOUNT3**;**

**break;**

**case** 3**:**

Session **=** SESSION4**;**

BuddleDiscount **=** BUDDLEDISCOUNT4**;**

**break;**

**case** 4**:**

Session **=** SESSION5**;**

BuddleDiscount **=** BUDDLEDISCOUNT5**;**

**break;**

**case** 5**:**

Session **=** SESSION6**;**

BuddleDiscount **=** BUDDLEDISCOUNT6**;**

**break;**

**}**

//optional selection

**if** **(**BottoleCheckBox**.**Checked**)**

**{**

PriceOfBottle **=** BOTTLEPRICE**;**

**}**

**if** **(**OneOneRadioButtion**.**Checked**)**

**{**

PriceOfUpgrade **=**UPGRADEPRICE1**;**

**}**

**else** **if** **(**SmallGroupRadioButtion**.**Checked**)**

**{**

PriceOfUpgrade **=** UPGRADEPRICE2**;**

**}**

**else** **if** **(**MediumGroupRadioButtion**.**Checked**)**

**{**

PriceOfUpgrade **=** UPGRADEPRICE3**;**

**}**

**else**

**{**

NoUpdateRadioButton**.**Checked **=** **true;**

PriceOfUpgrade **=** UPGRADEPRICE4**;**

**}**

//group discount

bool GetGroupDiscount **=** ParticipantsNum **>=** 4 **&&** PriceOfUpgrade **>** 0**;**

**if** **(**GetGroupDiscount**)**

**{**

GroupDiscount **=** GROUPDISCOUNTRATE**;**

ValueForGroupDiscount **+=** 1**;**

**}**

//calculation

BuddleCost **=(((**PricePerSession **+** PriceOfUpgrade**)** **-** **(**BuddleDiscount **\*** **(**PricePerSession **+** PriceOfUpgrade**)))** **\***Session**)\***ParticipantsNum**;**

UpgradeCost **=** **(**PriceOfUpgrade **\*** Session **+** BOTTLEPRICE**)** **\*** ParticipantsNum**;**

OverallCost **=** **((((**PricePerSession **+** PriceOfUpgrade**)** **-**

**(**BuddleDiscount **\*** **(**PricePerSession **+** PriceOfUpgrade**)))** **\*** Session**)** **+** BOTTLEPRICE**)**

**\*** ParticipantsNum**\*(**1**-**GroupDiscount**);**

//output

DisplayLabel**.**Text**=** "Program Details:\n\n"

**+** "\tProgram: " **+** Program **+** "\n"

**+** "\tBuddleCost: " **+** BuddleCost**.**ToString**(**"C2"**)** **+** "\n"

**+** "\tUpgradeCost: " **+** UpgradeCost**.**ToString**(**"C2"**)** **+** "\n"

**+** "\tOverallCost: " **+** OverallCost**.**ToString**(**"C2"**);**

//enable-disable

CustomPanel**.**Visible **=** **true;**

BookButton**.**Enabled **=** **true;**

NoUpdateRadioButton**.**Visible **=** **true;**

**}**

//else messages when not typing in the participants

**else**

**{**

MessageBox**.**Show**(**"Invalid Number of participants, please enter an integer value bigger than 0."**);**

AttendTextBox**.**Focus**();**

AttendTextBox**.**SelectAll**();**

**}**

**}**

//else messages for not selecting the session

**else**

**{**

MessageBox**.**Show**(**"Please select the Session."**,**

"Session needed"**,**

MessageBoxButtons**.**OK**,**

MessageBoxIcon**.**Exclamation**);**

**}**

**}**

//else messages not selecting the program

**else**

**{**

MessageBox**.**Show**(**"Please select a Program."**,**

"Program needed"**,**

MessageBoxButtons**.**OK**,**

MessageBoxIcon**.**Exclamation**);**

**}**

**}**

**private** void BookButton\_Click**(object** sender**,** EventArgs e**)**

**{**

String Message **=** String**.**Format**(**

"Confirm Booking Details:\n\n" **+**

"Program:\t\t{0}\n " **+**

"Total\_Duration:\t\t{1}\n " **+**

"Total\_Cost:\t\t{2:C2}\n\n" **+**

"Comfirm Booking?"**,**

"\t"**+**Program**,** Session**,** OverallCost**);**

**if** **(**DialogResult**.**Yes **==** MessageBox**.**Show**(**Message**,** "CNL - Booking Confirmation"**,** MessageBoxButtons**.**YesNo**,** MessageBoxIcon**.**Question**))**

**{**

//update summary

TotalValueofProgram **+=** OverallCost**;**

TotalOptions **+=** UpgradeCost**;**

BookingCount **+=** 1**;**

BookButton**.**Enabled **=** **false;**

SummaryButton**.**Enabled **=** **true;**

//clear for a new booking

ClearButton\_Click**(null,** **null);**

**}**

//else: do nothing just leave everything there

**}**

//clear for a new booking

**private** void ClearButton\_Click**(object** sender**,** EventArgs e**)**

**{**

DisplayLabel**.**Text **=** ""**;**

SummaryLabel**.**Text **=** ""**;**

ProgramandPriceListBox**.**ClearSelected**();**

SessionandDiscountListBox**.**ClearSelected**();**

AttendTextBox**.**Text **=** ""**;**

BottoleCheckBox**.**Checked **=** **false;**

OneOneRadioButtion**.**Checked **=** **false;**

SmallGroupRadioButtion**.**Checked **=** **false;**

MediumGroupRadioButtion**.**Checked **=** **false;**

//visible-invisible

CustomPanel**.**Visible **=** **false;**

SummaryPanel**.**Visible **=** **false;**

NoUpdateRadioButton**.**Visible **=** **false;**

ProgramandPriceListBox**.**Enabled **=** **true;**

SessionandDiscountListBox**.**Enabled **=** **true;**

AttendTextBox**.**Enabled **=** **true;**

BottoleCheckBox**.**Enabled **=** **true;**

OneOneRadioButtion**.**Enabled **=** **true;**

SmallGroupRadioButtion**.**Enabled **=** **true;**

MediumGroupRadioButtion**.**Enabled **=** **true;**

NoUpdateRadioButton**.**Enabled **=** **true;**

**}**

//summary for all the bookings

**private** void SummaryButton\_Click**(object** sender**,** EventArgs e**)**

**{**

AverageAvenue **=** TotalValueofProgram **/** BookingCount**;**

SummaryLabel**.**Text **=** "Booking Summary:\n\n"

**+** "\tTotal Value of Program: " **+** TotalValueofProgram**.**ToString**(**"C2"**)+**"\n"

**+** "\tTotal Options: " **+** TotalOptions**.**ToString**(**"C2"**)** **+** "\n"

**+** "\tValue For Group Discount: " **+** ValueForGroupDiscount**.**ToString**()** **+** "\n"

**+** "\tAverage Avenue: " **+** AverageAvenue**.**ToString**(**"C2"**);**

//visible-invisible

CustomPanel**.**Visible **=** **false;**

SummaryPanel**.**Visible **=** **true;**

SummaryButton**.**Enabled **=** **false;**

//disabled the listbox,radiobuttons and checkbox

ProgramandPriceListBox**.**Enabled**=** **false;**

SessionandDiscountListBox**.**Enabled**=false;**

AttendTextBox**.**Enabled**=** **false;**

BottoleCheckBox**.**Enabled**=** **false;**

OneOneRadioButtion**.**Enabled**=** **false;**

SmallGroupRadioButtion**.**Enabled**=** **false;**

MediumGroupRadioButtion**.**Enabled**=** **false;**

NoUpdateRadioButton**.**Enabled**=** **false;**

**}**

**private** void ExitButton\_Click**(object** sender**,** EventArgs e**)**

**{**

**this.**Close**();**

**}**

**}**

**}**