Final Project

By: Eric Dockery

Project Description:

For this final project, I wanted to create an application that might turn out to be useful in a dental lab, or dentist in office. This application will help a dentist to select the correct teeth for a denture model based off of the measurements guides that dental laboratory technician's use when selecting the teeth. This application will allow the laboratory to then order the teeth before the model arrives to their site, allowing the creation of the final product to shorten its time turn around time by one or more days.

Design:

For the layout of this application I went with a linear map of the storyboard interface, with the exception of the first View that loads in the view controller. The first View that loads will display the name of the application as a UI Label, two buttons one push Segway to Start New Order view and one push Segway to Review Orders View. Since these are button controllers the Segway set in this view is model not requiring a Navigation Controller.

Once the Start New Order button is pressed the Data View Controller view is displayed. This View is the start of the Navigation Controller and displays a UI Label Face Shape as well as the five most common face shapes that are associated with determining what type of teeth to place in a patients cast. These face shapes are UIImageViews each with a push gesture attached to them. When you select the faceshape that the user is looking for a UIImageView of a green checkmark will appear on the image and it will push the user to the next View.

Depending on the face shape view selected the UILabel at the top of the view (labeled Deminsions,) will be that Face shape label. This view has a smaller label called dimensions under the new Face shape label. There are four UILabels listing the different values that you can select in order to create the array for the teeth image. The labels are Vertical Dimension of Occlusion, Smile Line, Width of Central, and Length of Central. The user can only select two of these options, either Dimension of Occlusion and Smile Line or Width of Central and Length of Central. When the text field is selected for one of these labels then the program will hide the other two options. Also, on this view I was having trouble with the layout and default Decimal Pad keyboard, so I added a button to the top of the keyboard allowing a close of the keyboard to select the Find the Best Teeth-> button.

The values of these text fields are then used to calculate the best Maxillary Anterior teeth for the denture. The best selection is displayed in a UIImageView with a swipe gesture. The swipe gesture will allow a user to select different teeth that fall into the available range for the text values. When the user decides the best selection they will tap on the image view and trigger the tap gesture. This tap gesture will work a push Segway to the next view and will trigger the display for an image view with a green checkmark.

The next View to be displayed is the suggested mandibular anterior teeth for the selected maxillary. This should only return one or possibly two options from the maxillary suggestion. The best selection is displayed in a UIImageView with a swipe gesture. When the user decides the best selection they will tap on the image view

and trigger the tap gesture. This tap gesture will work a push Segway to the next view and will trigger the display for an image view with a green checkmark.

The Degree Posterior view will load and display four UIView options to select. These four views are labeled 0, 10, 20, or 33 degrees. Each UIView has a tap gesture that on selection will display the image view of a corresponding green checkmark and preform the Segway to the next UIView.

From the selection of the maxillary, mandibular teeth and the degree of the posterior the application will generate the posteriors that fit with the selected teeth and degree combination. The best selection is displayed in a UIImageView with a swipe gesture. When the user decides the best selection they will tap on the image view and trigger the tap gesture. This tap gesture will work a push Segway to the next view and will trigger the display for an image view with a green checkmark.

The next View to display will be the Review View. This view will display the selected maxillary, mandibular, and posterior teeth that were selected in unique Image Views. At the bottom of this view the user will be presented with two buttons one to cancel the order returning them to the first Image View, and the other a submit button that will put the information into a table view in the next view.

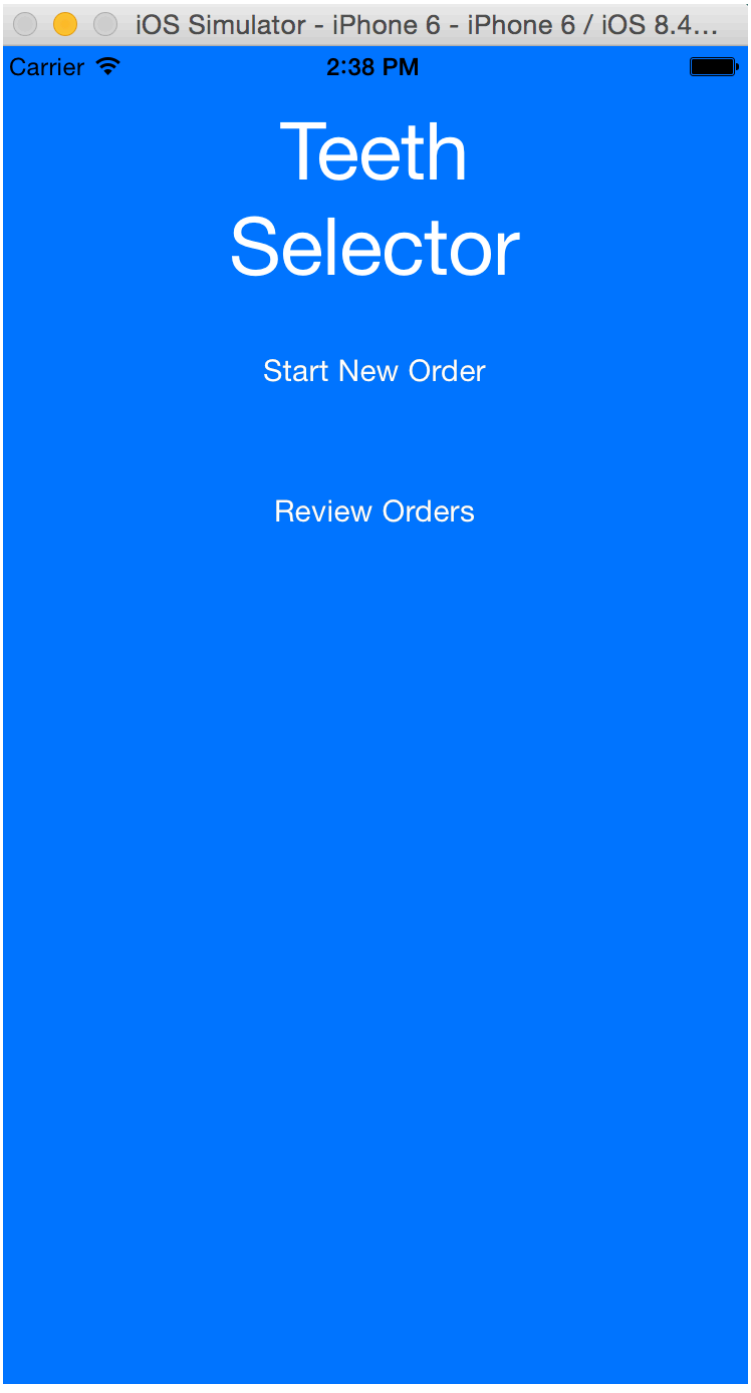
The last View to be triggered is the Past Orders view. This view will have all of the views that were ordered with the app. It has a push button at the bottom labeled Main Page that will return the user to the main page. Eventually I would like to add the ability to push the data to a sql database that could be reviewed by a lab.

Parts Not Completed:

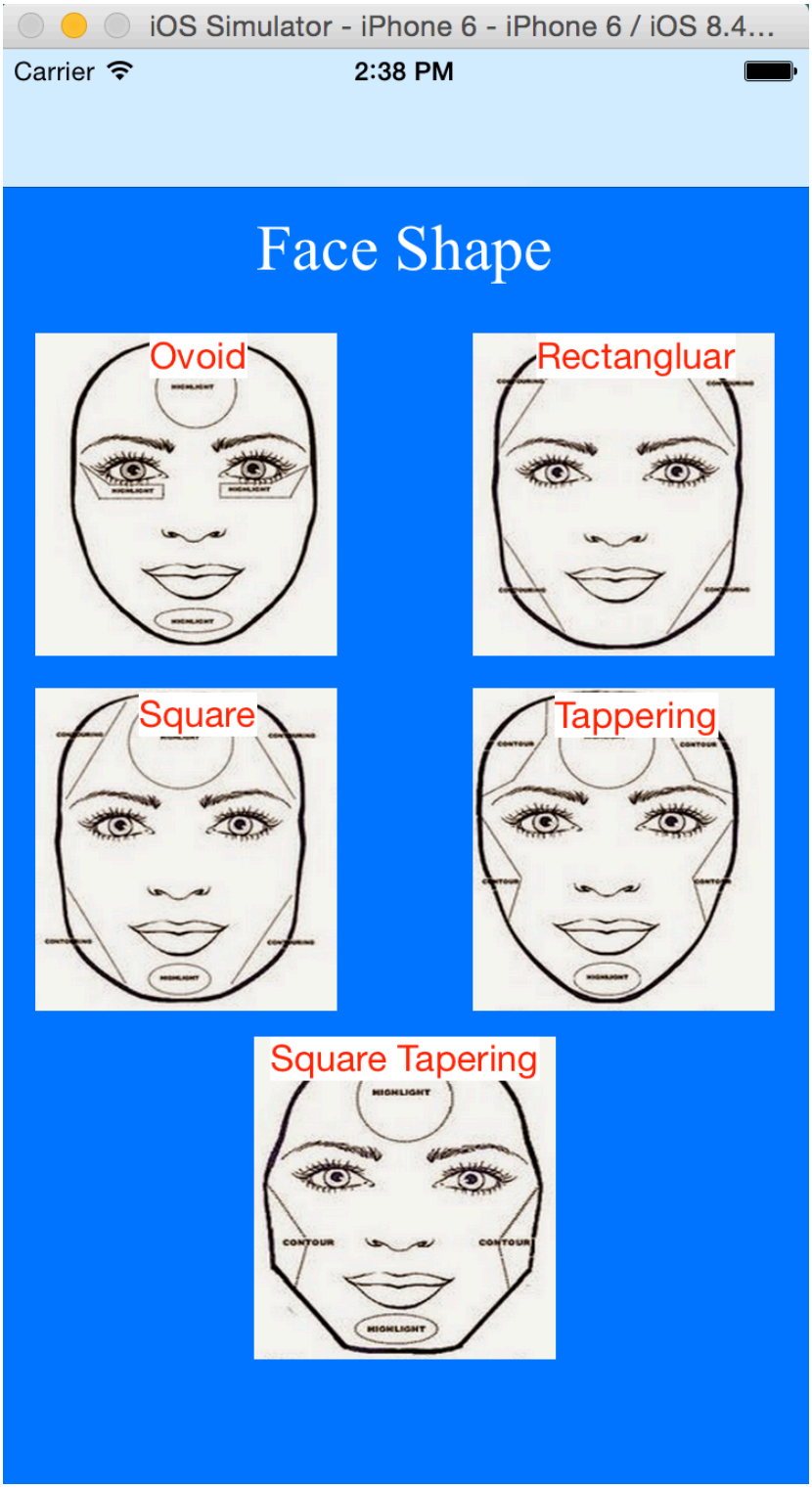
Due to the size of this application I was unable to add all of the functionality that I would have liked. All views frontend developed completely. However the back end code for the all of the views up to the Deminsions is completed. However only the majority of the UpperAntieriors View has been completed. I created the image view swipe gesture for the view but was unable to establish the if statements for the Lower View image View. Thus the program is only finished for the first 4 views.

Screenshots:

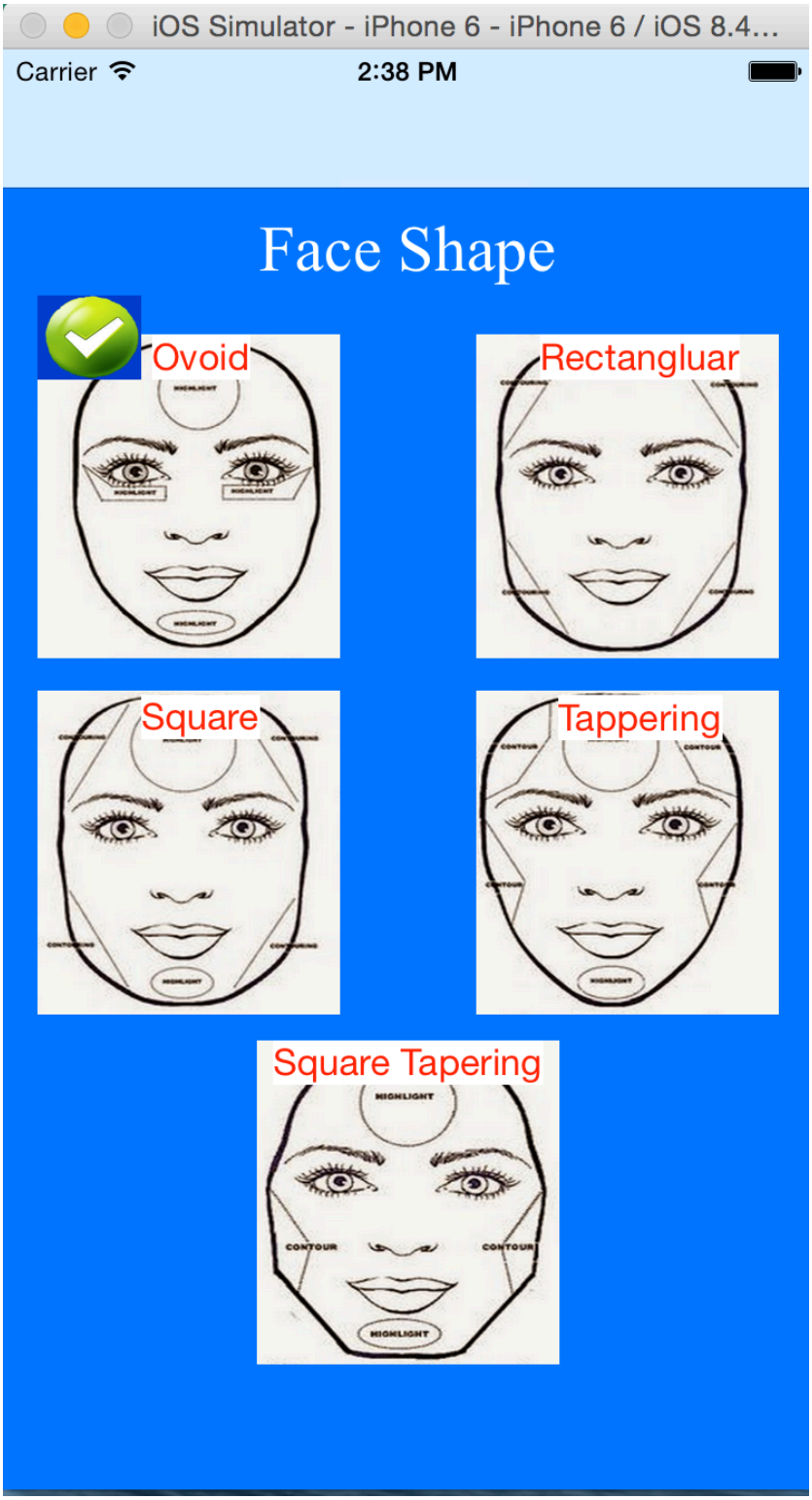
Start View:



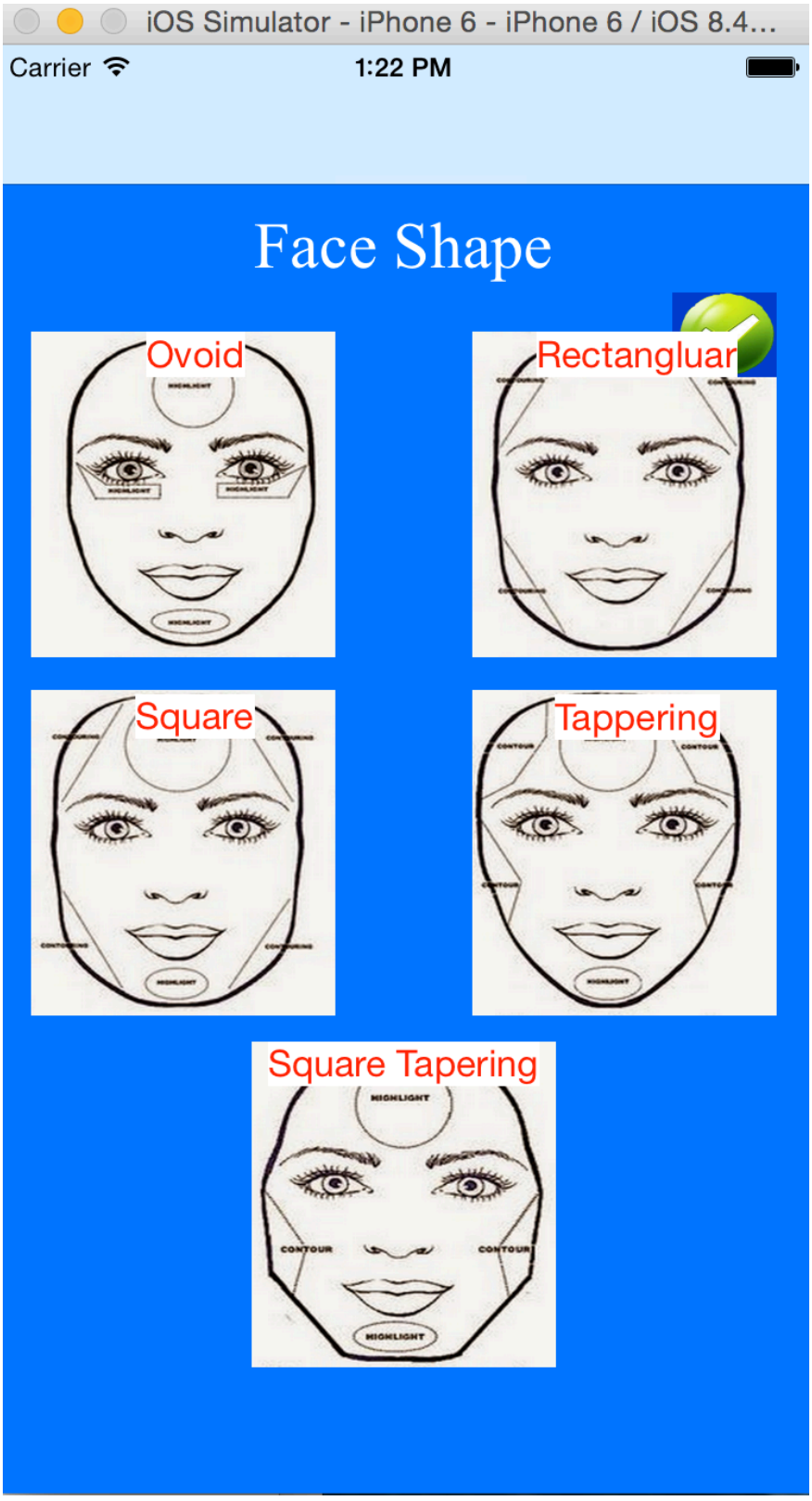
Data View (Faceshape) View:



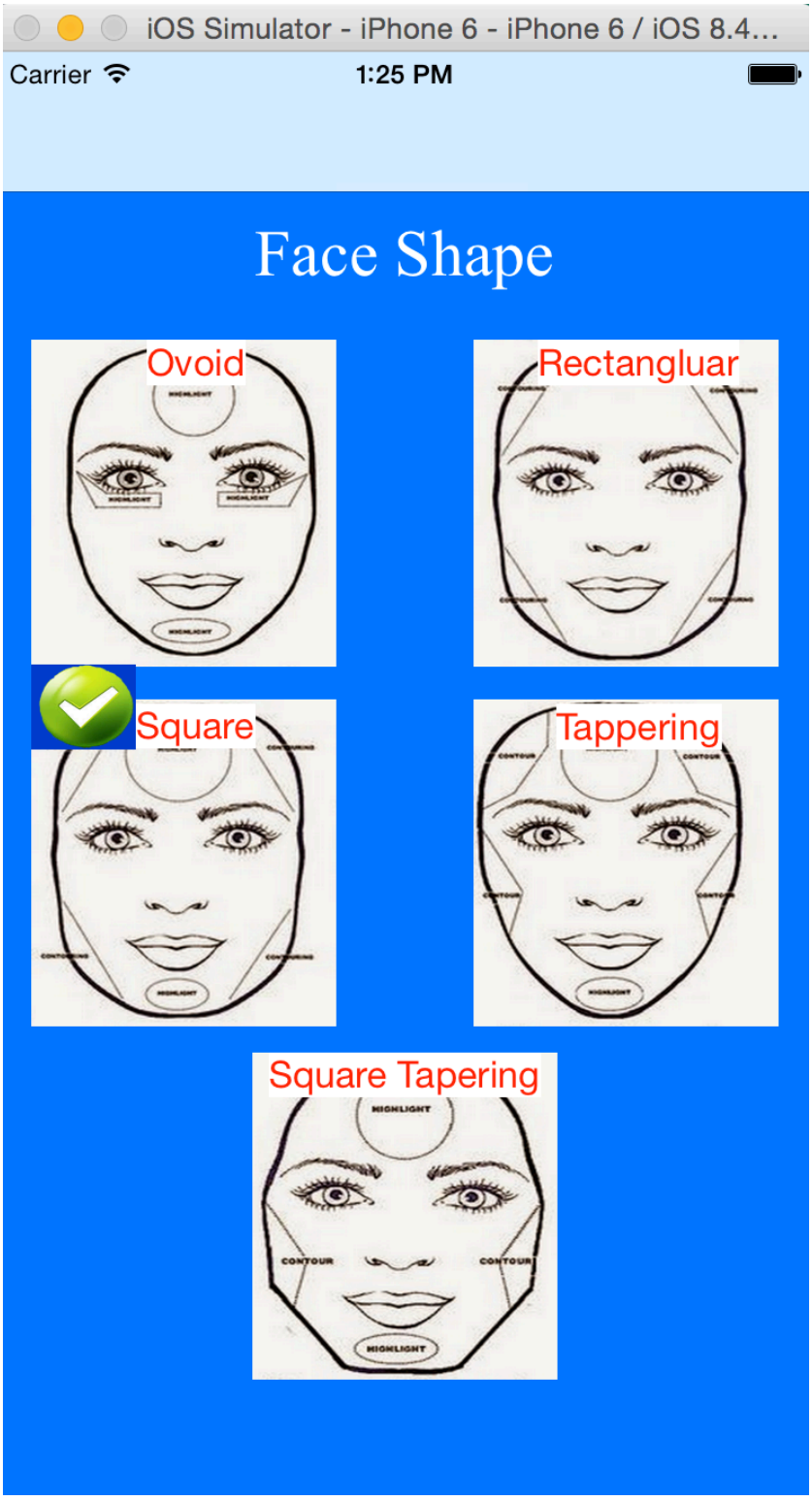
Ovoid Selected:



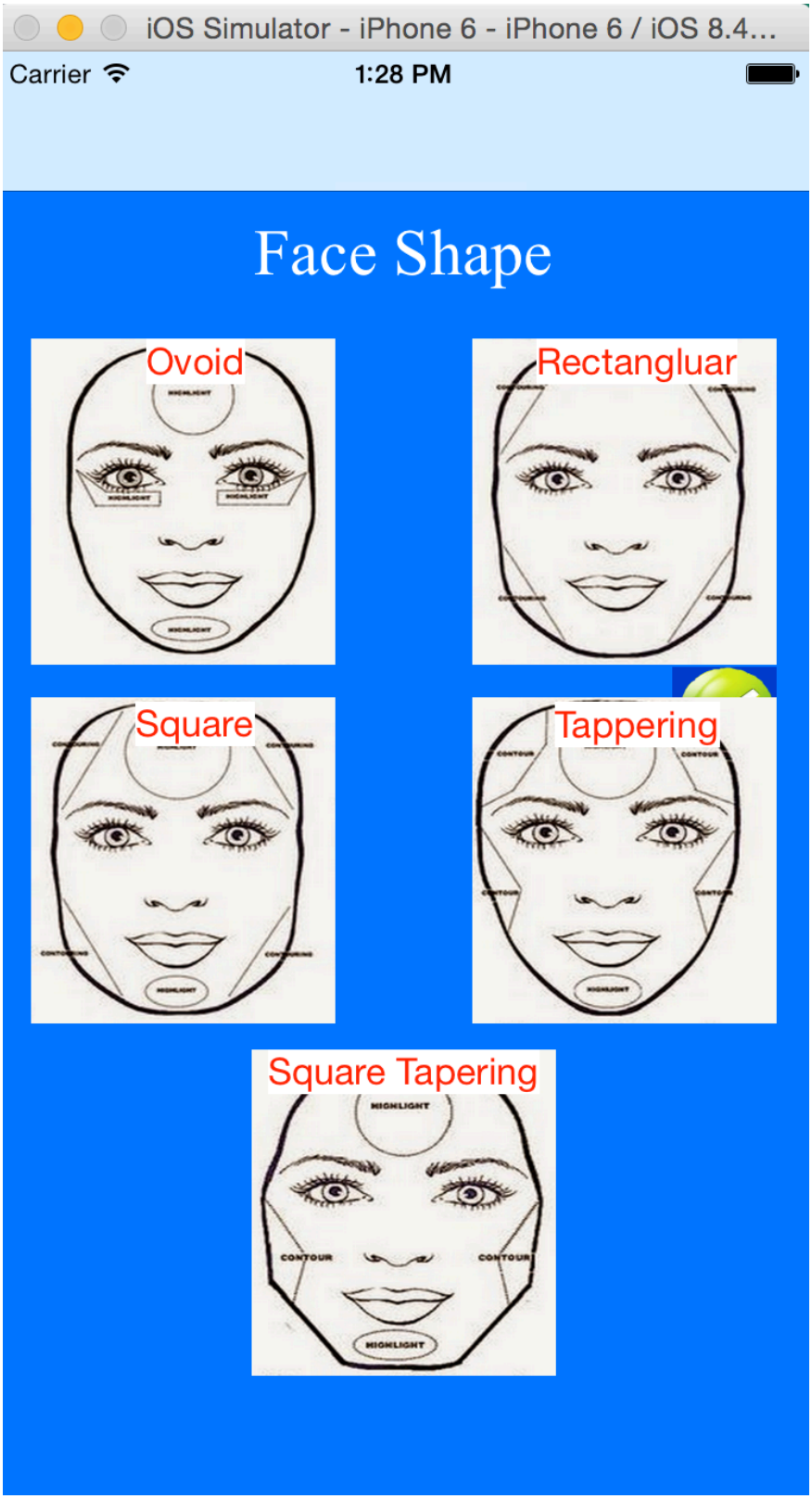
Rectangular Selected:



Square Selected



Tappering Selected



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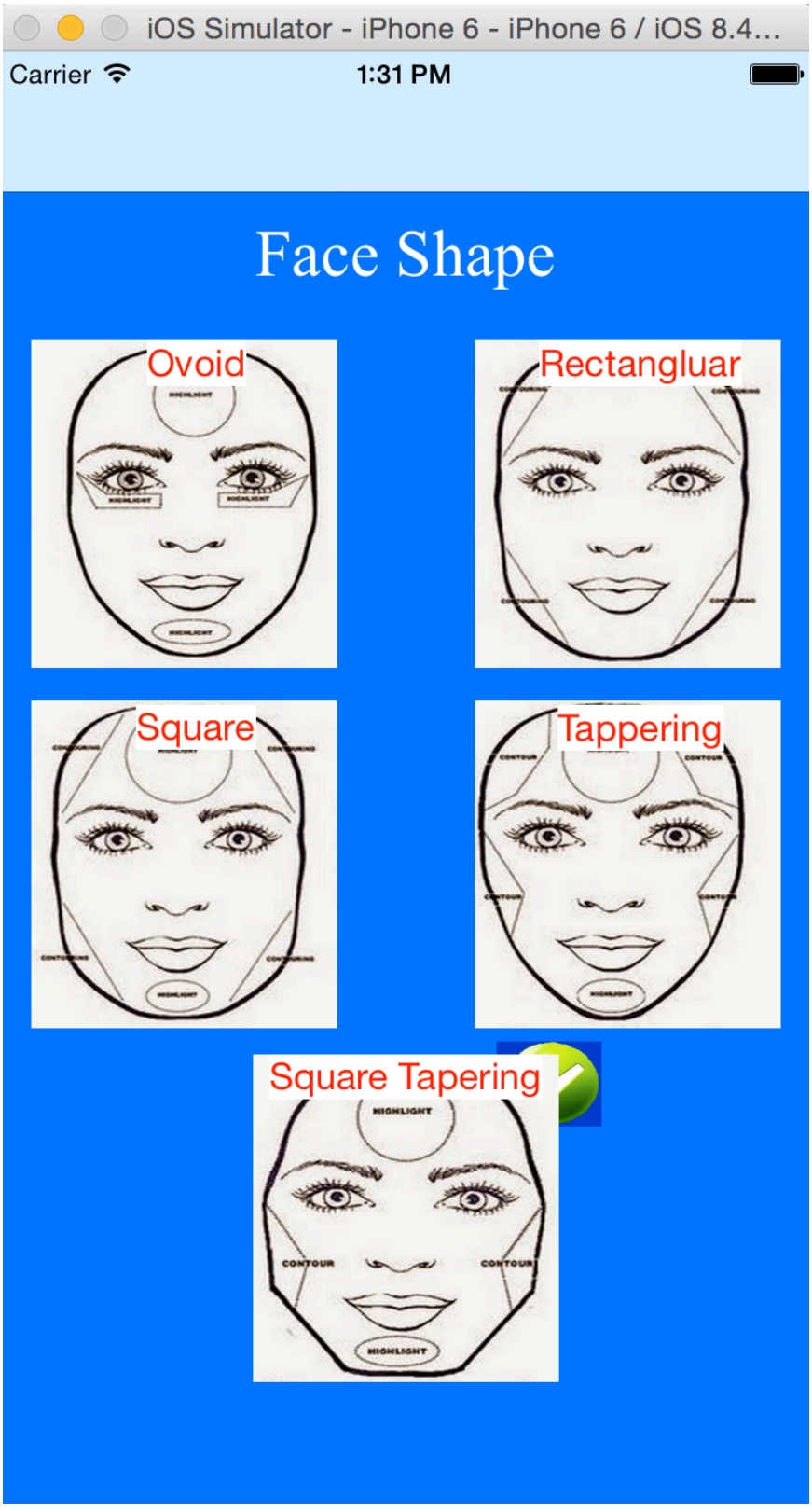
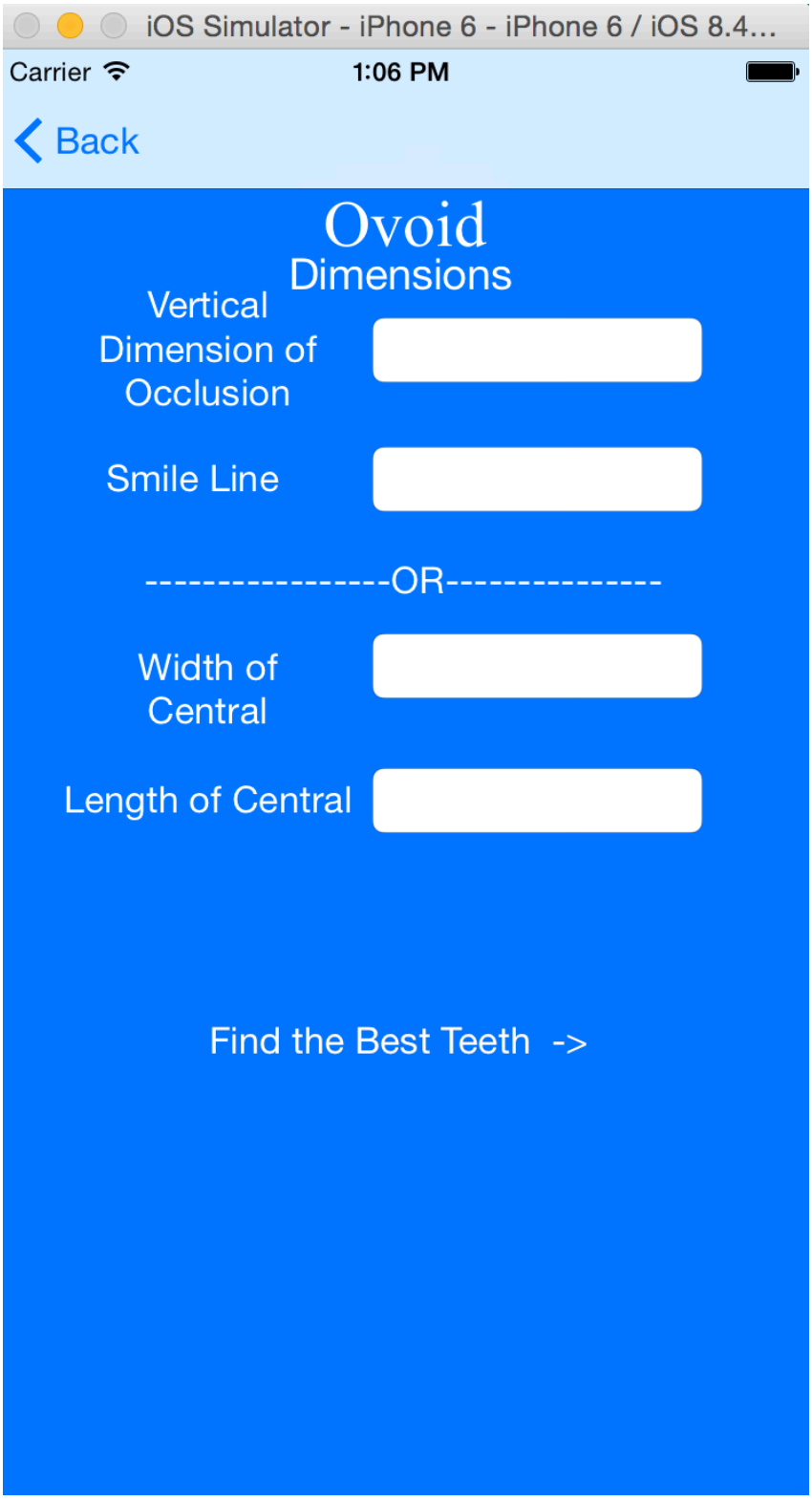
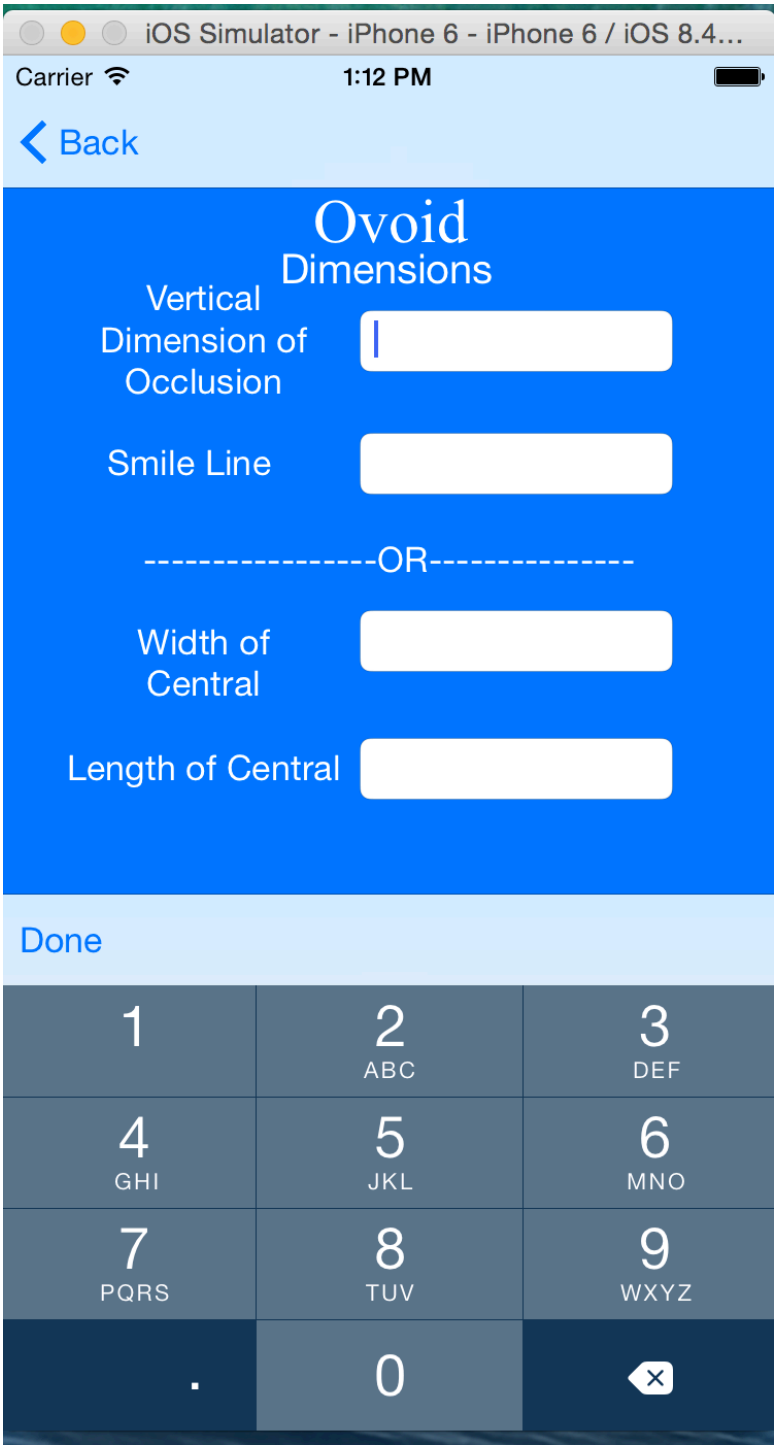


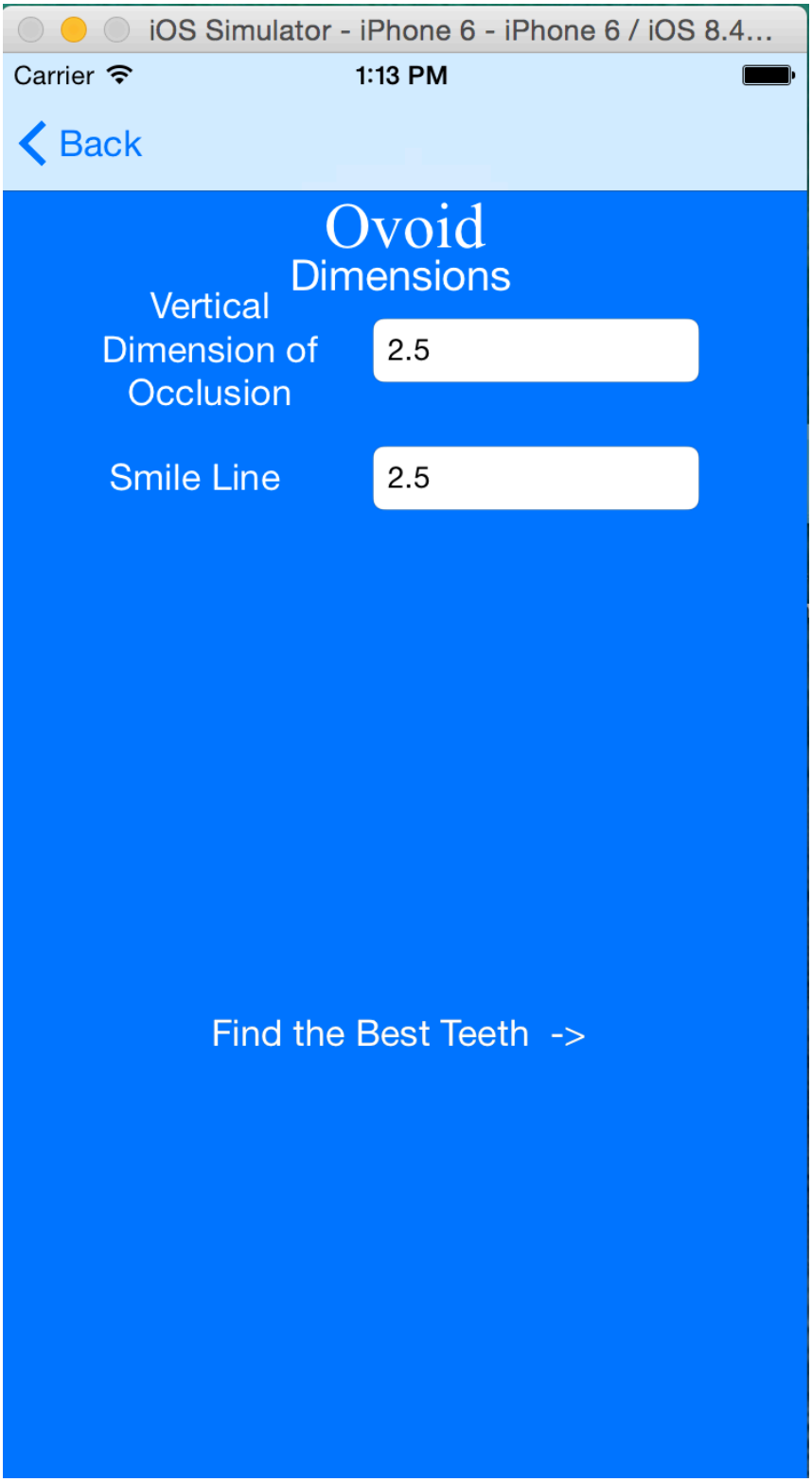
Dimensions View:

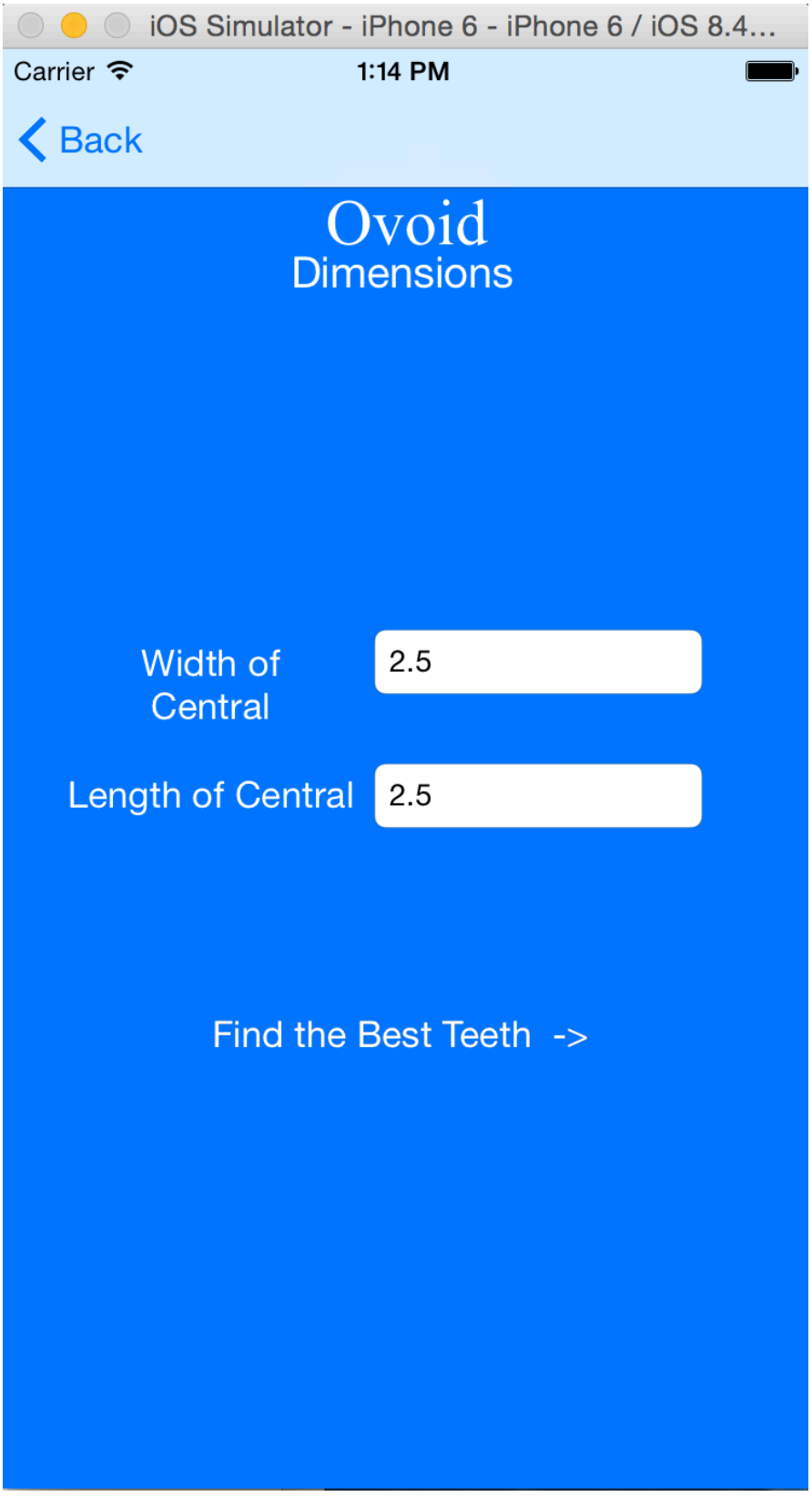
Ovoid Selected:



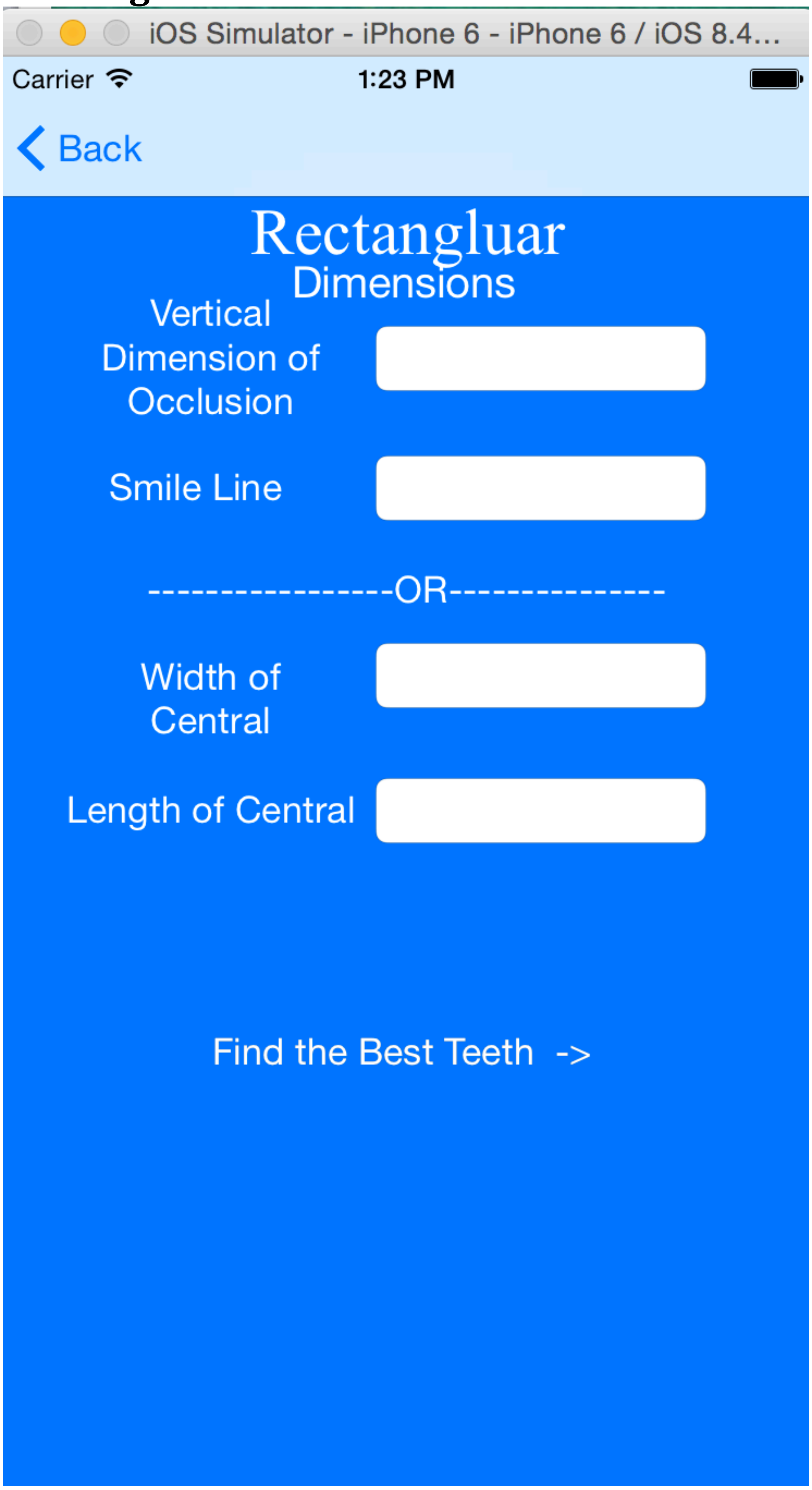


Vertical Dimension of Occlusion & Smile Line Selected:

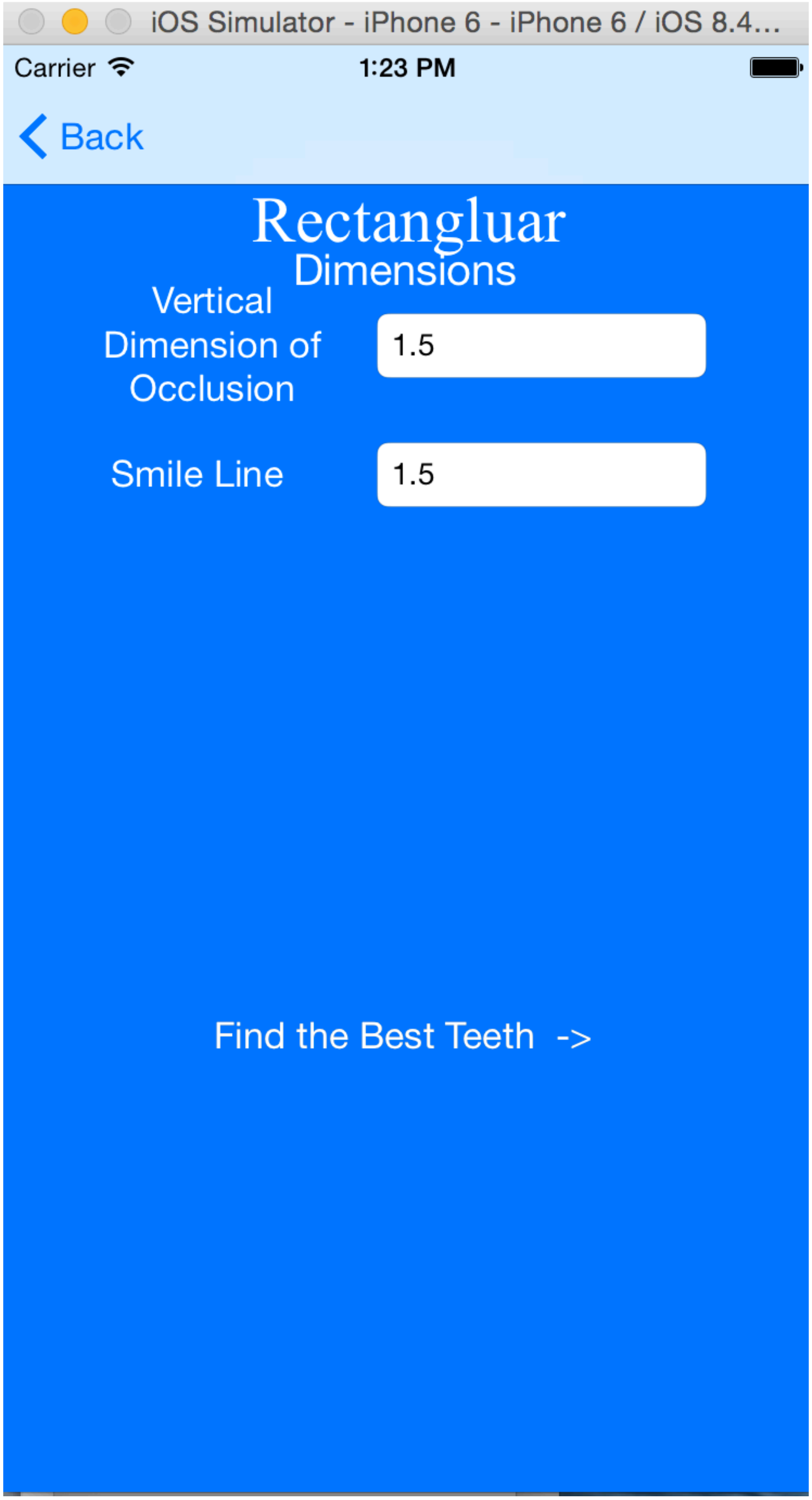

iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:13 PM
Back
Ovoid
Dimensions
Vertical Dimension of Occlusion
2.5
Smile Line
2.5
Find the Best Teeth ->
Width of Central and Length of Central Selected:


iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:14 PM
Back
Ovoid
Dimensions
Width of Central
2.5
Length of Central
2.5
Find the Best Teeth ->
Back

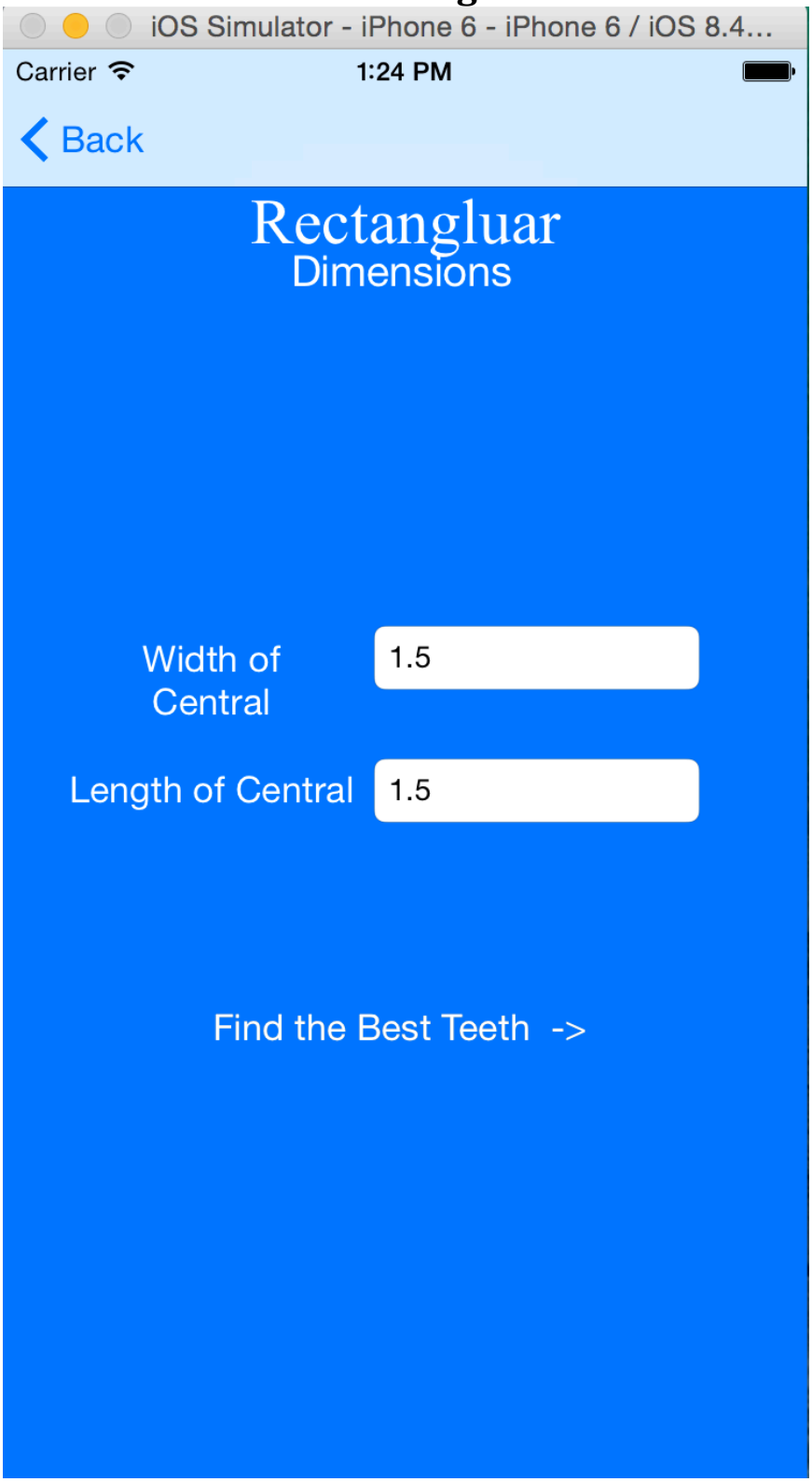
Rectangular Selected:



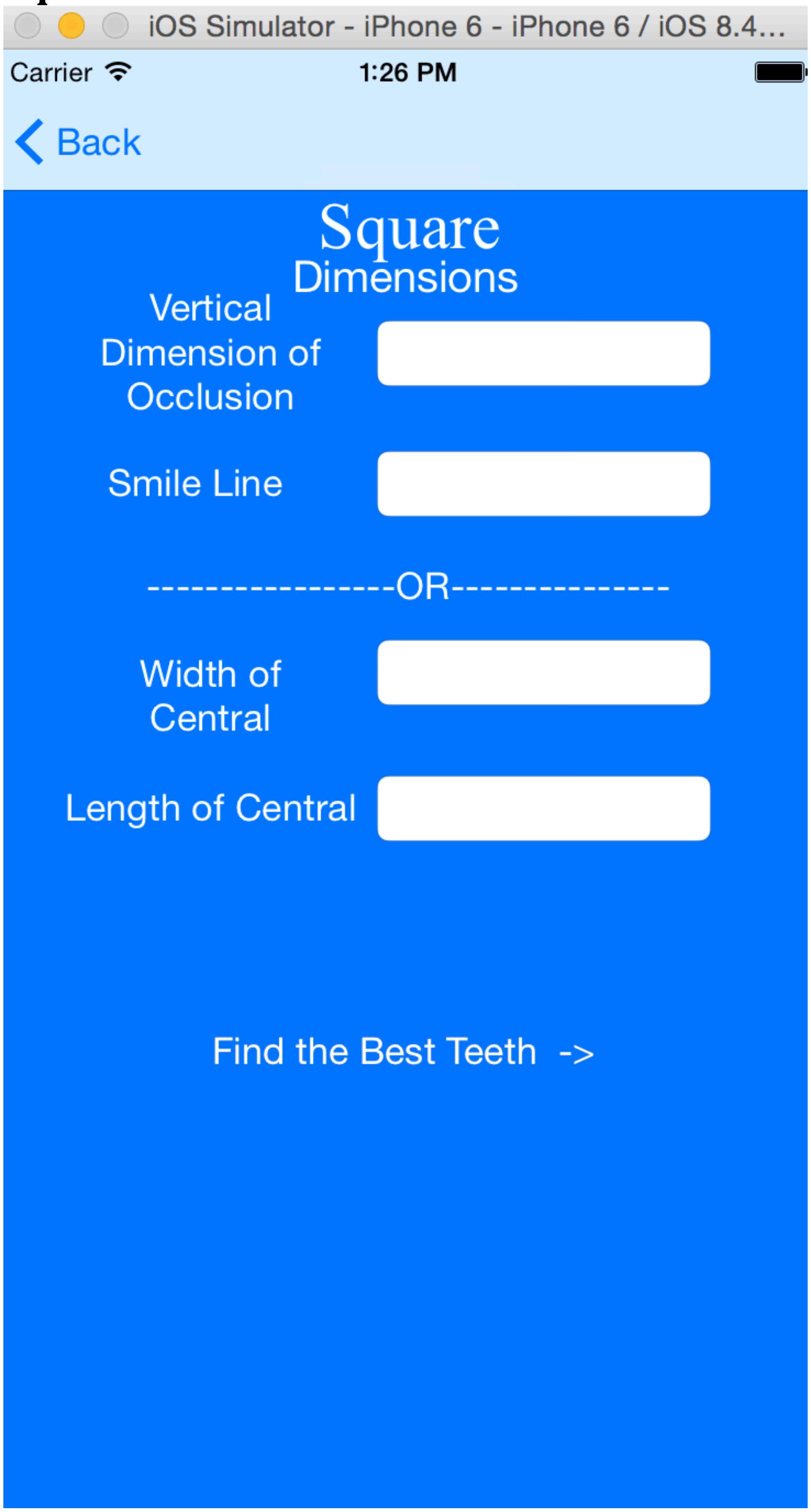
Vertical Dimension of Occlusion & Smile Line Selected:



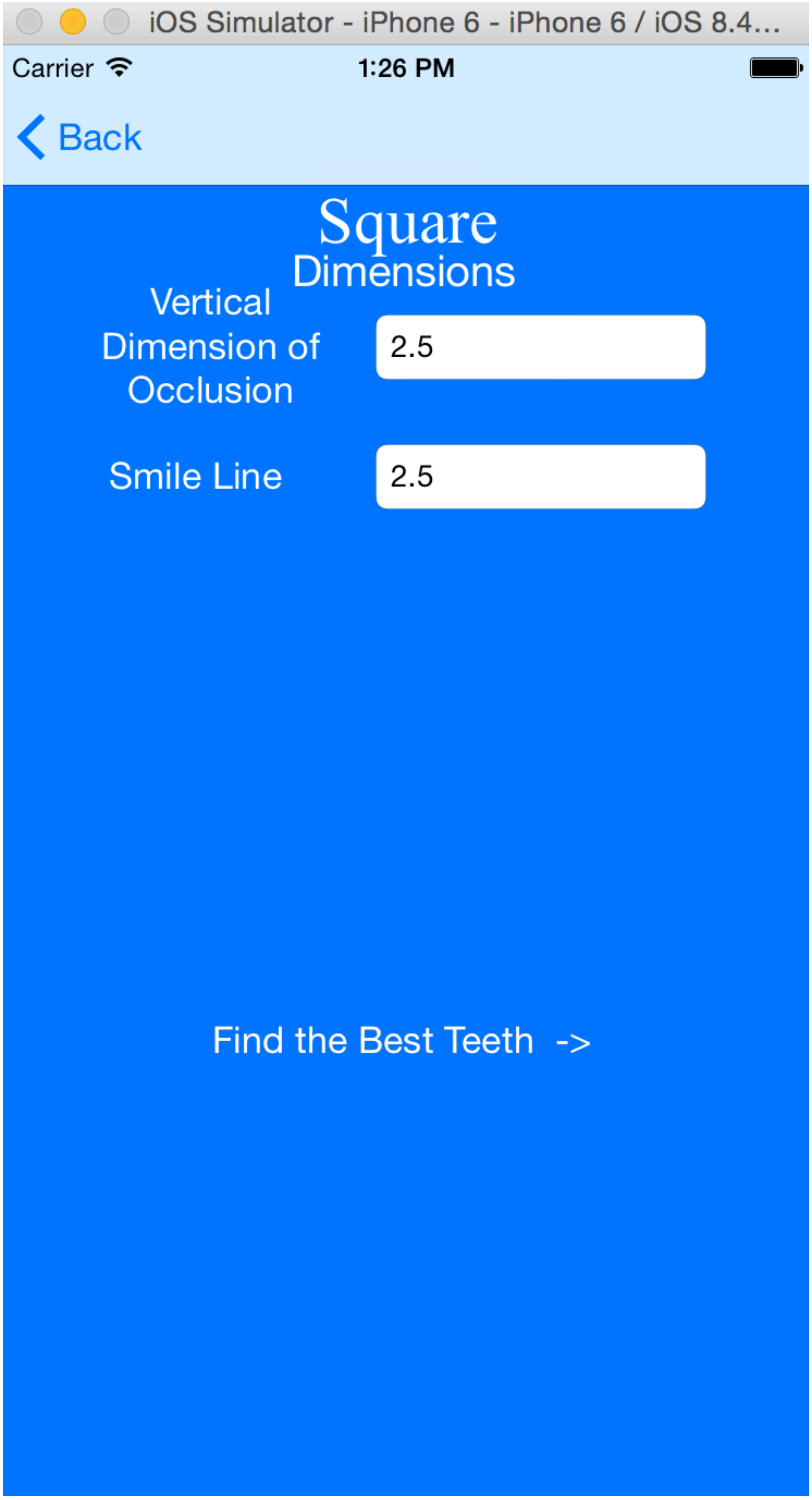
Width of Central and Length of Central Selected:



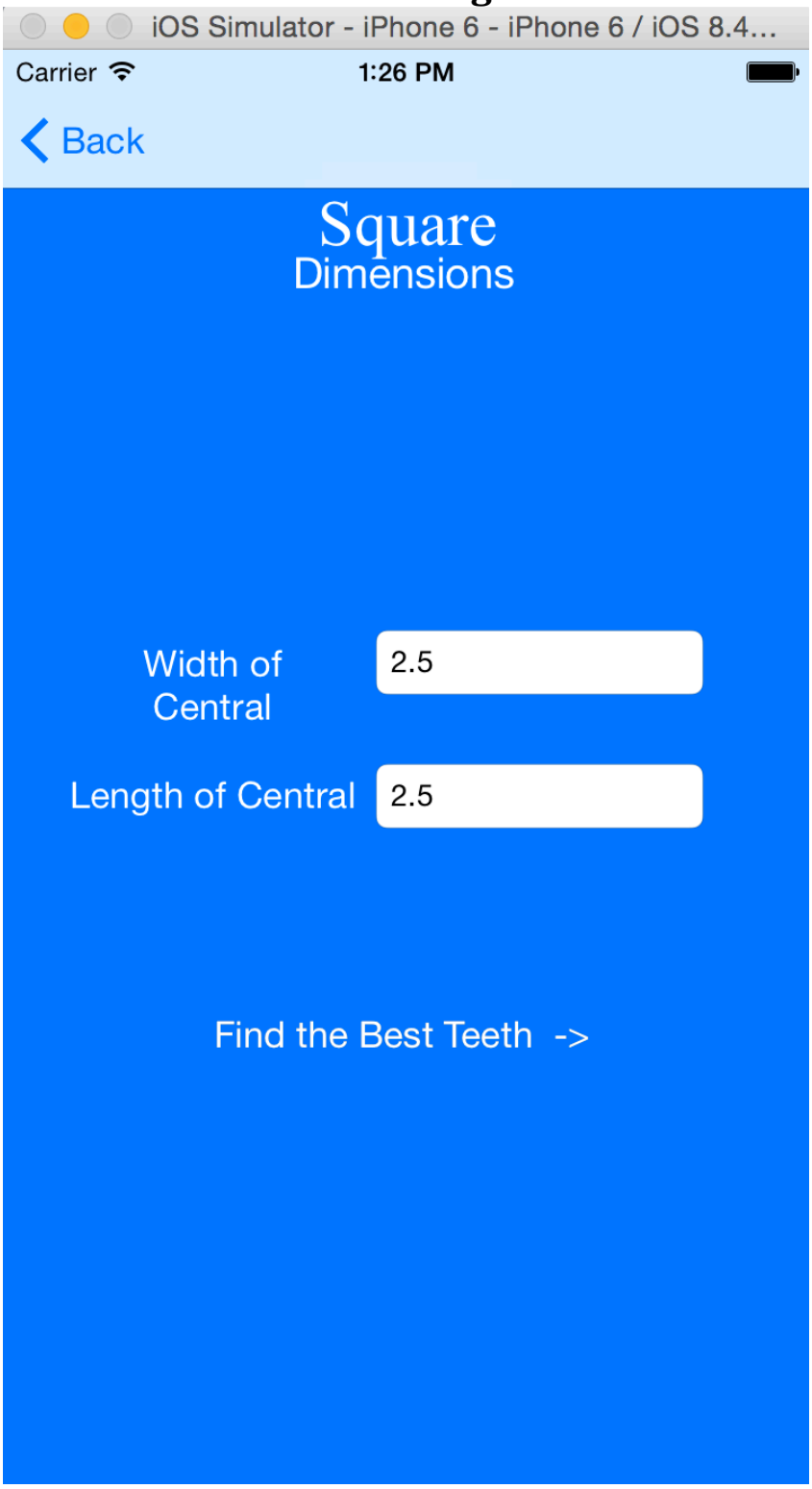
Square Selected:

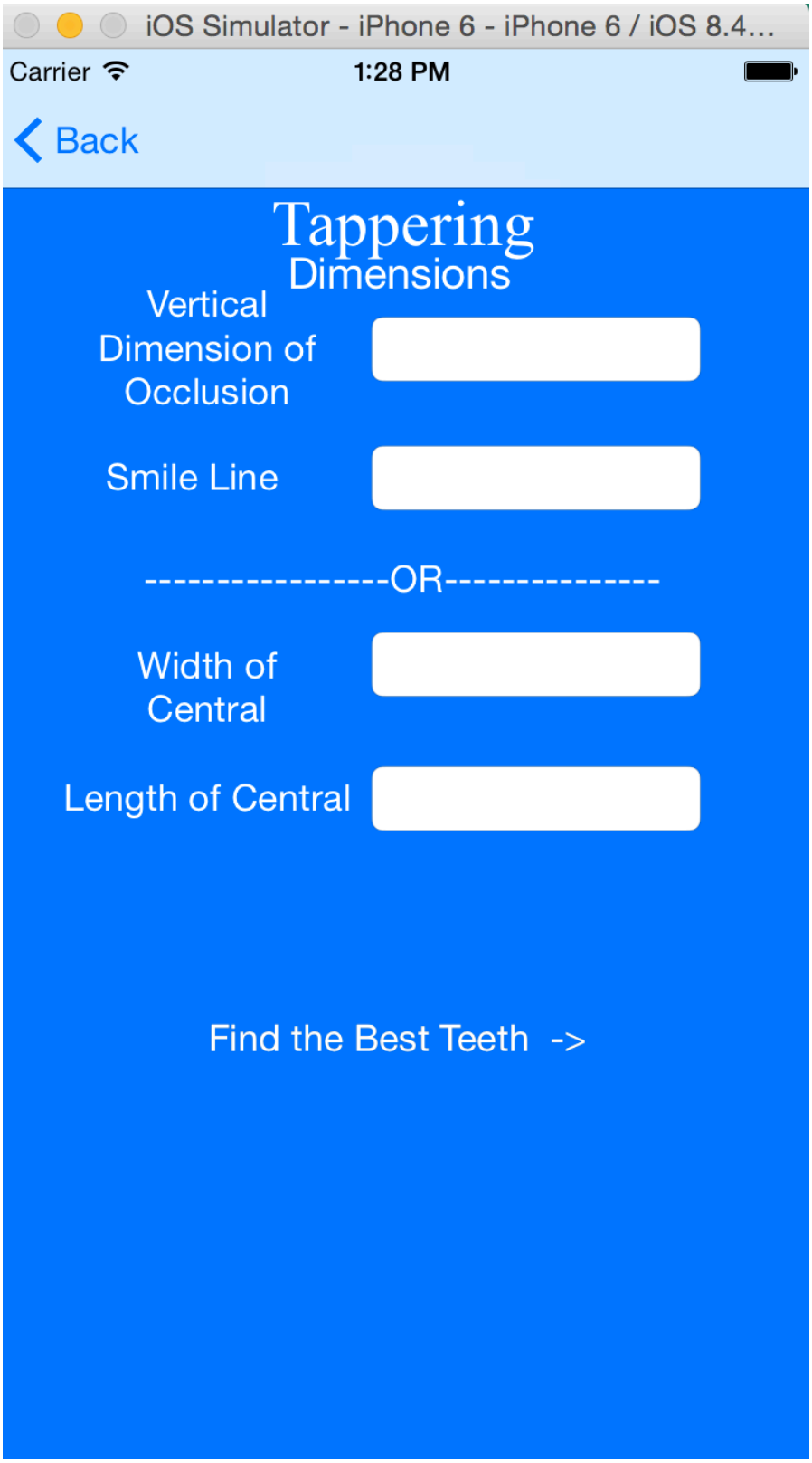


Vertical Dimension of Occlusion & Smile Line Selected:

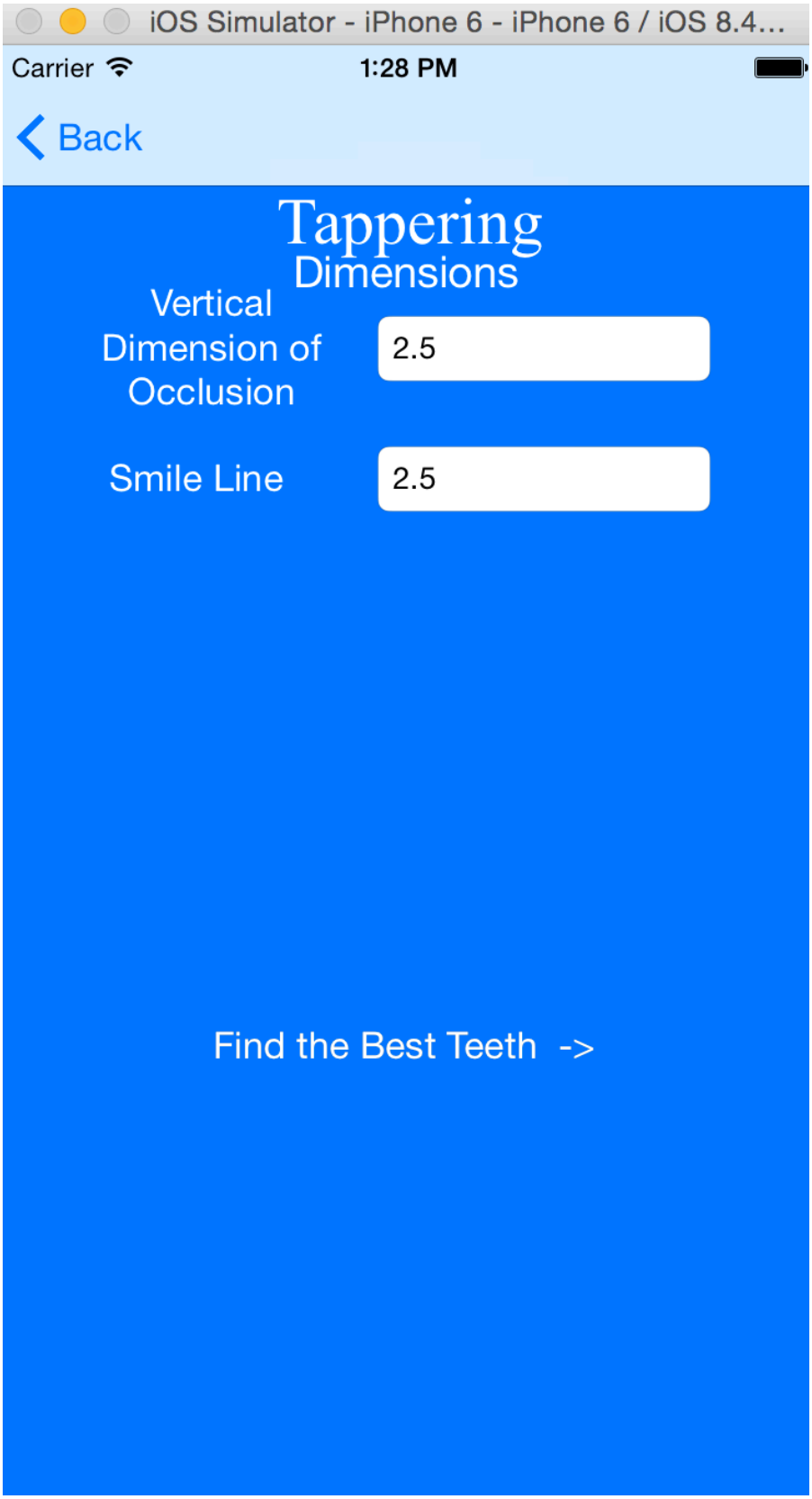


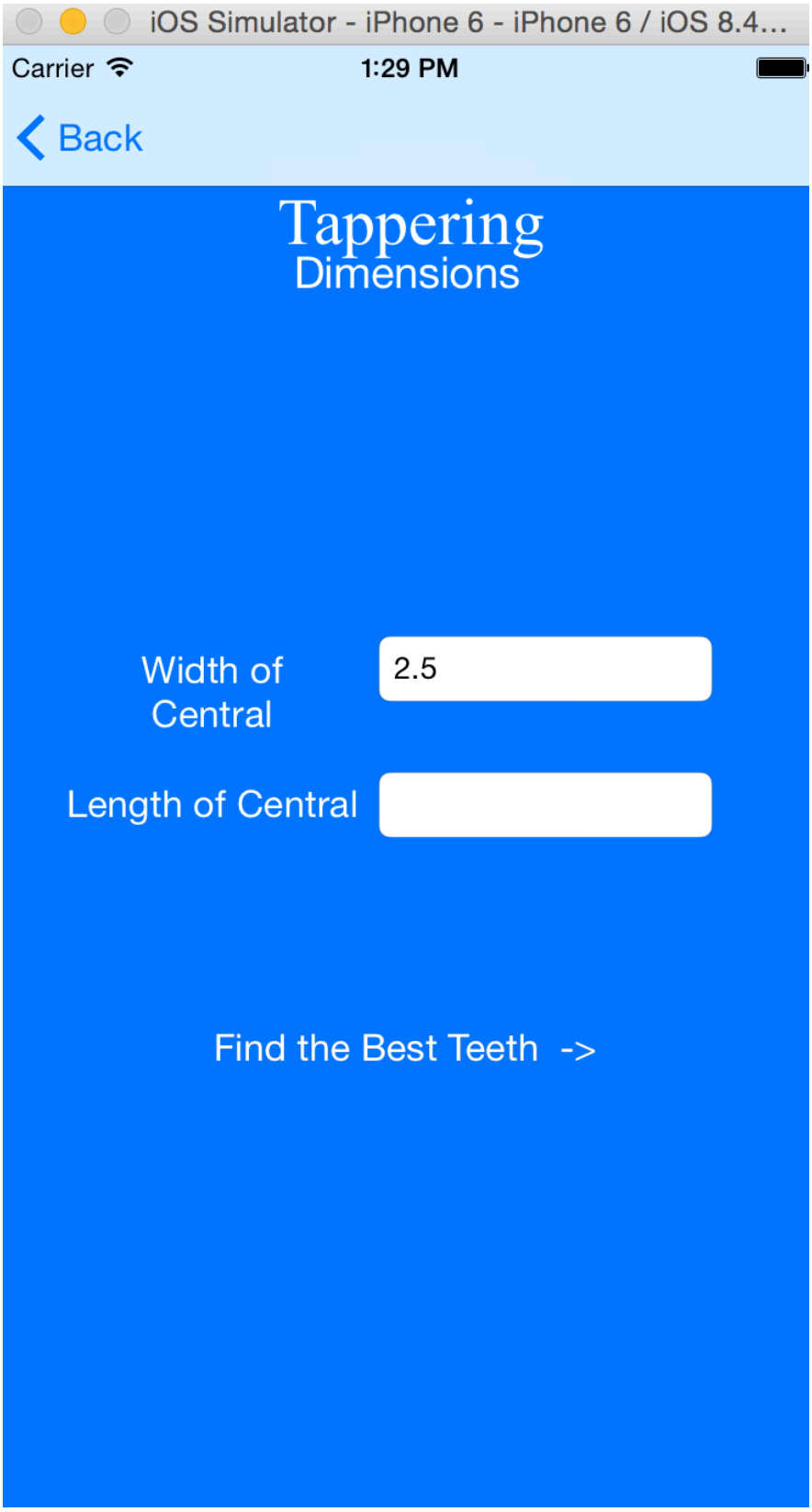
Width of Central and Length of Central Selected:



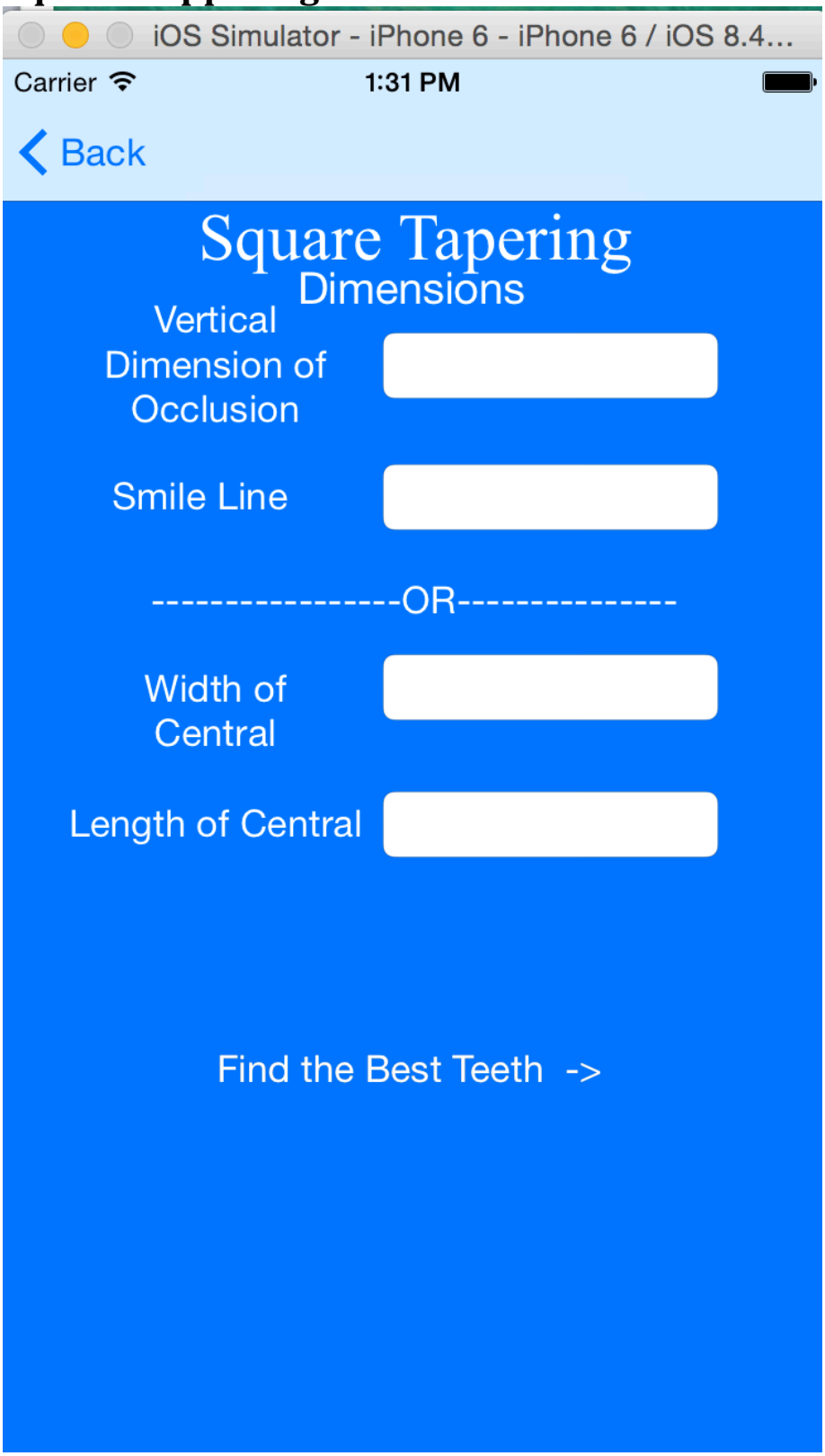


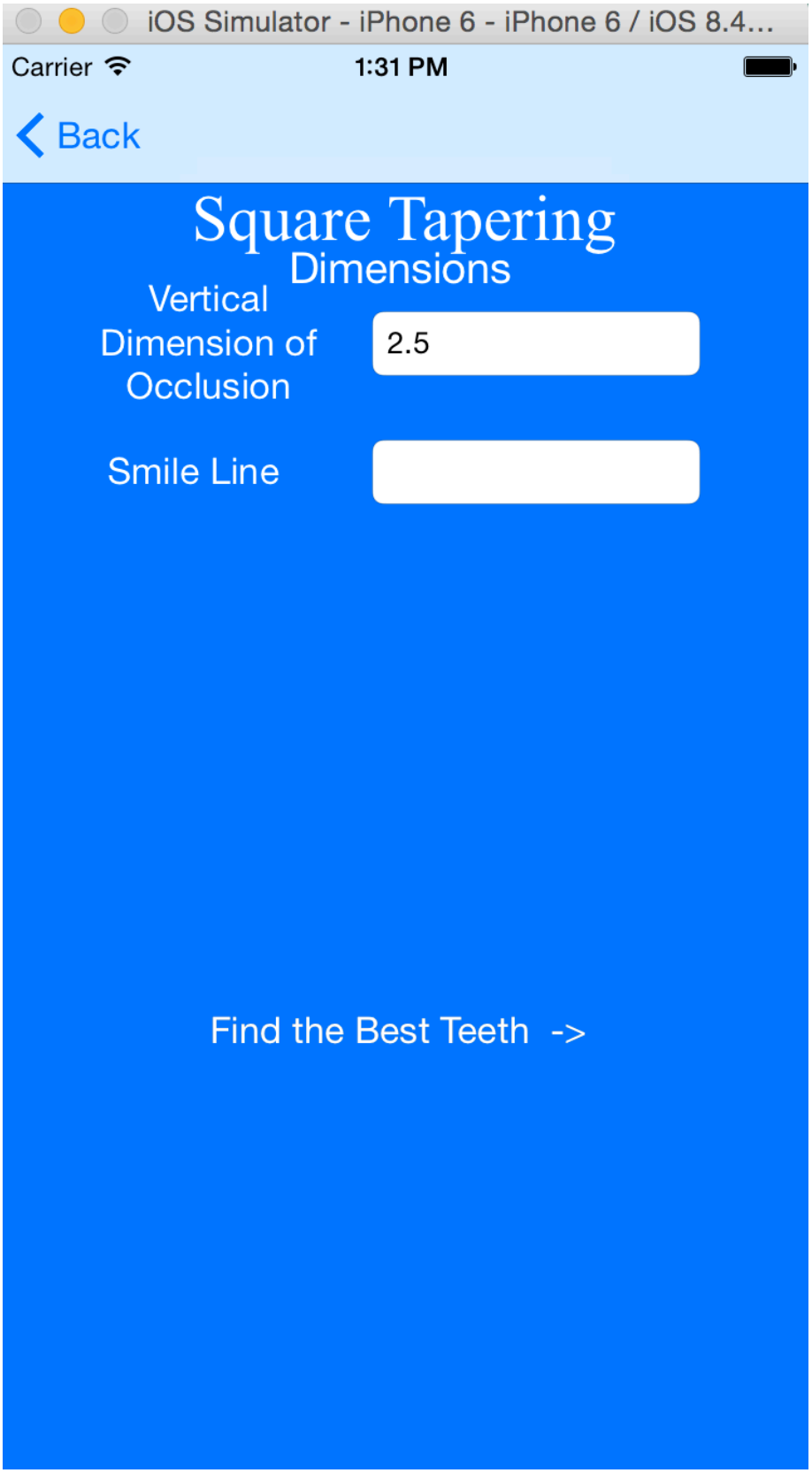
Vertical Dimension of Occlusion & Smile Line Selected:

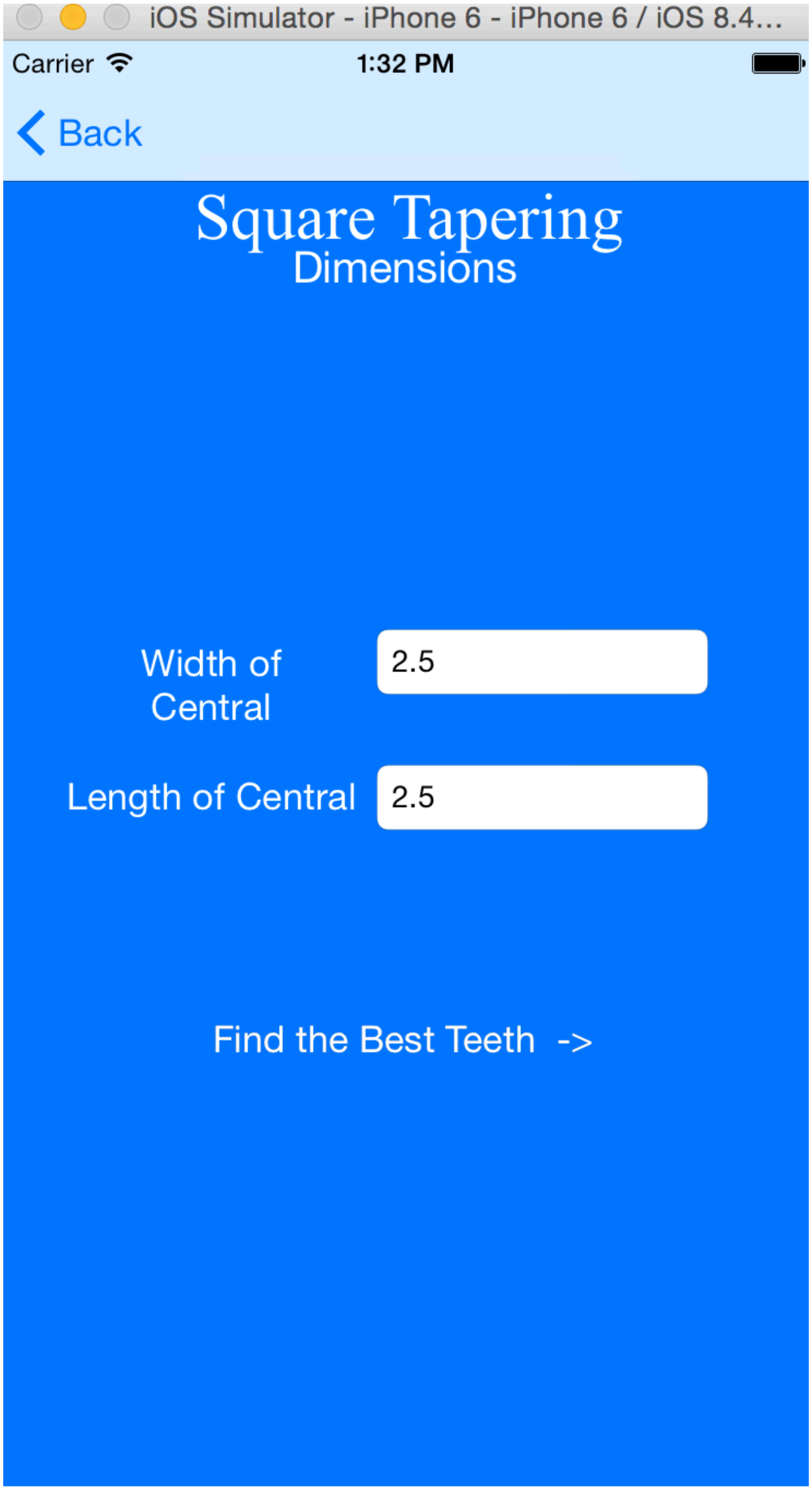

iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:28 PM
Back
Tappering
Dimensions
Vertical Dimension of Occlusion
2.5
Smile Line
2.5
Find the Best Teeth ->
Width of Central and Length of Central Selected:


iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:29 PM
Back
Tappering
Dimensions
Width of Central
2.5
Length of Central
Find the Best Teeth ->
Tappering Dimensions

Square Tappering Selected:

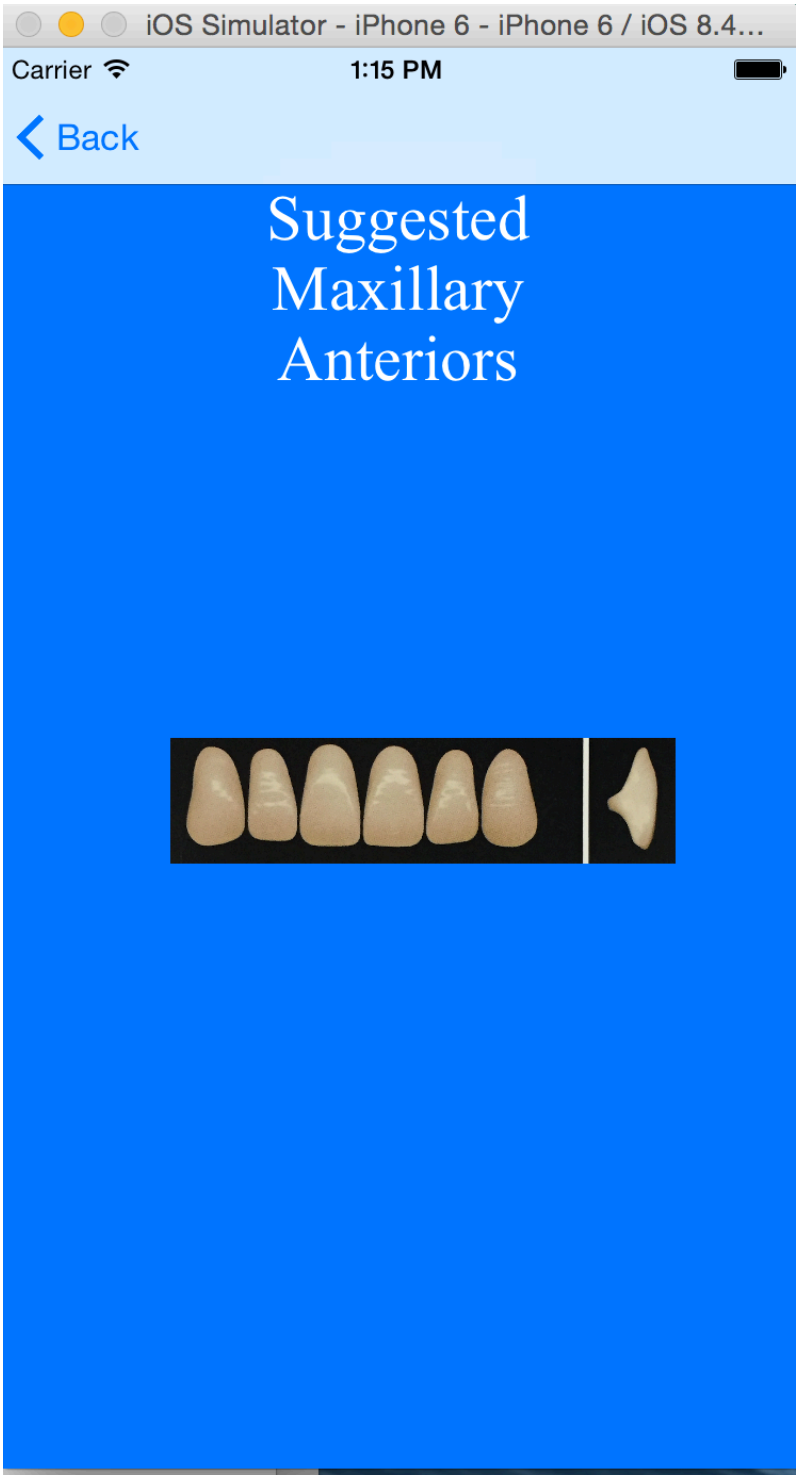



iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:31 PM
Back
Square Tapering
Dimensions
Vertical Dimension of Occlusion
2.5
Smile Line
Find the Best Teeth ->
Width of Central and Length of Central Selected:

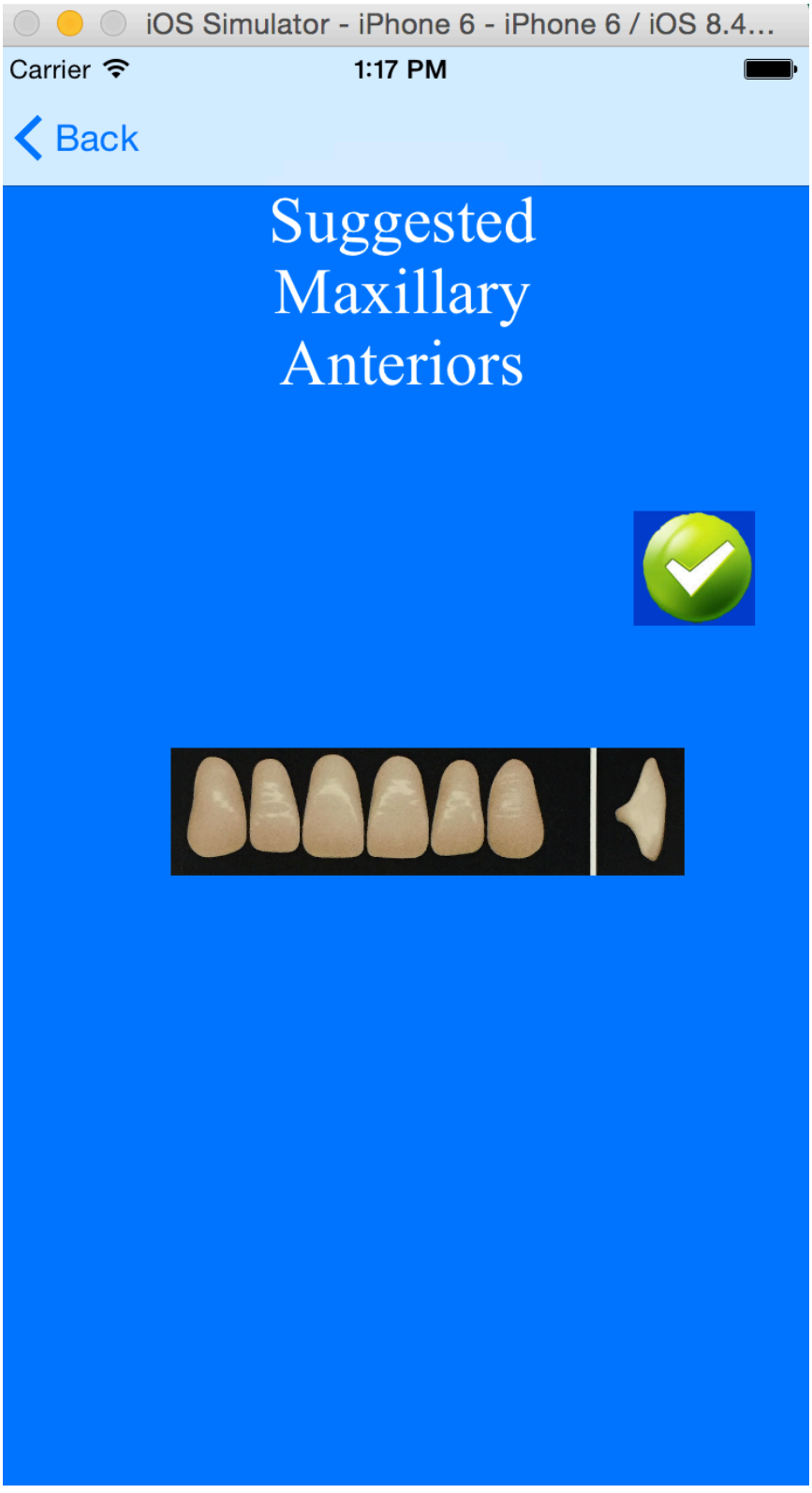

iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:32 PM
Back
Square Tapering
Dimensions
Width of
Central
2.5
Length of Central
2.5
Find the Best Teeth ->

Upper Anteriors (Suggested Maxillary Anteriors) View:

Start of View:

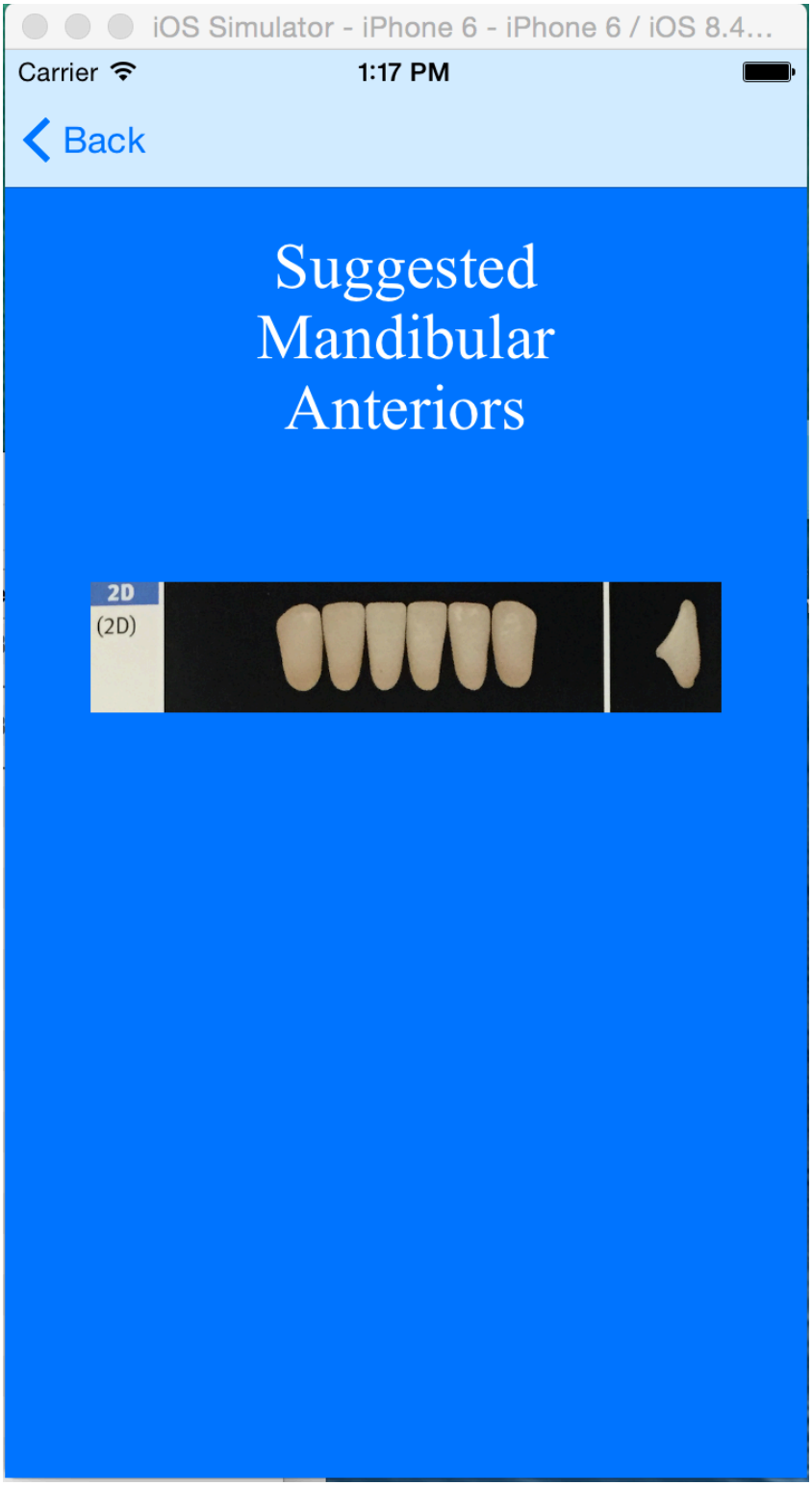


Teeth Selected:

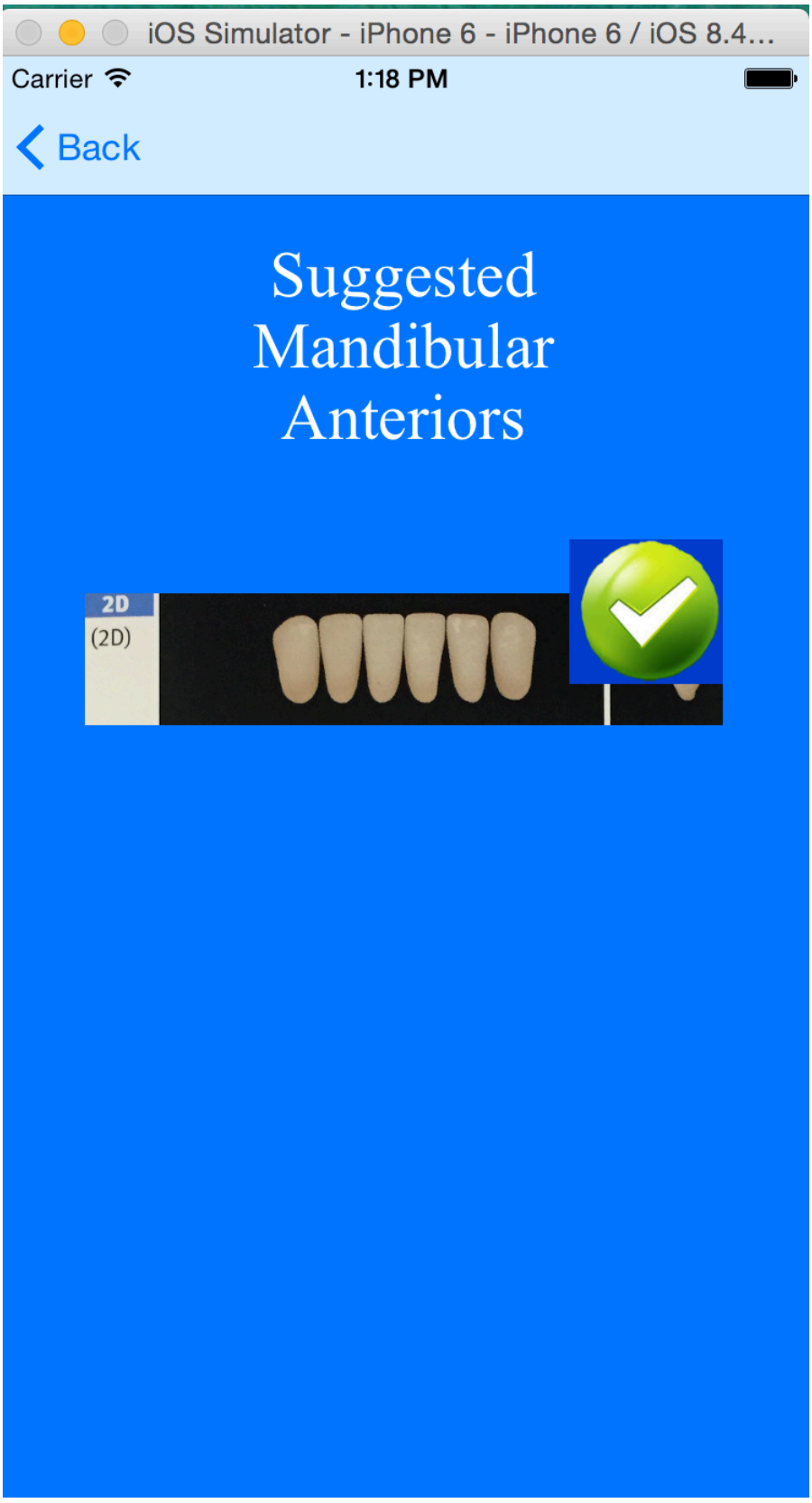


Lower Anteriors (Suggested Mandibular Anteriors) View:

Start of View:

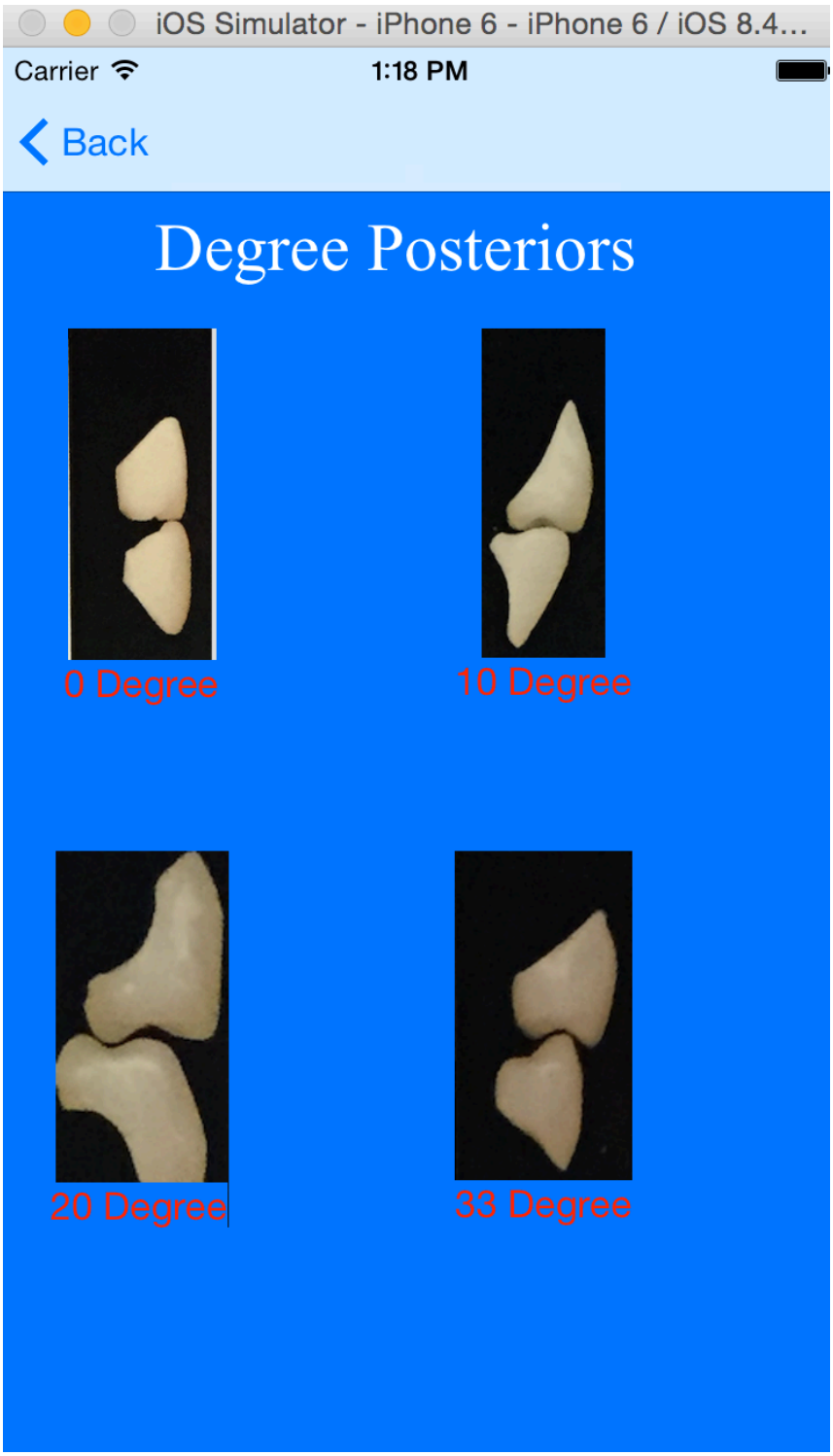


Teeth Selected:

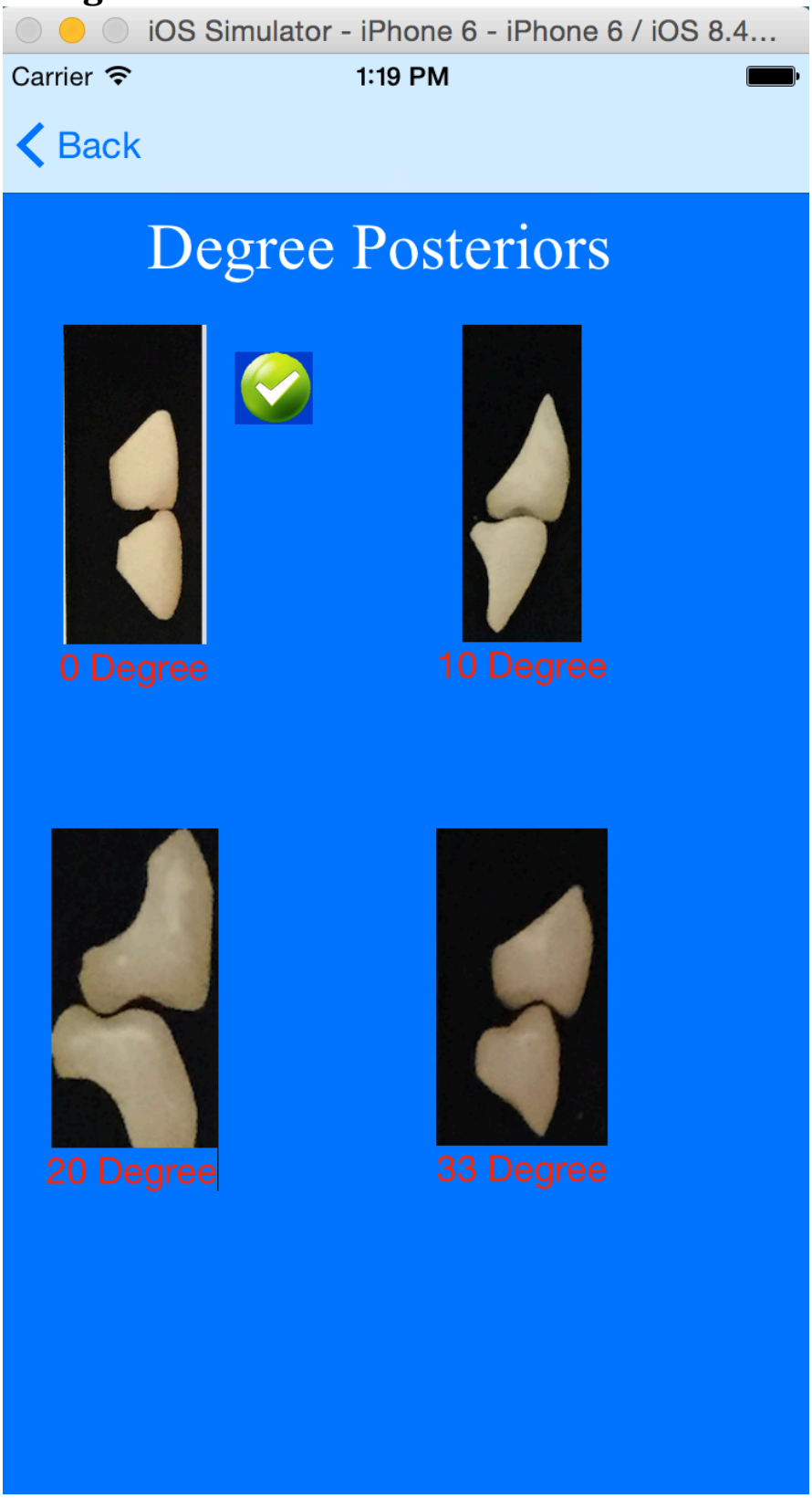


Degree Posteriors View:

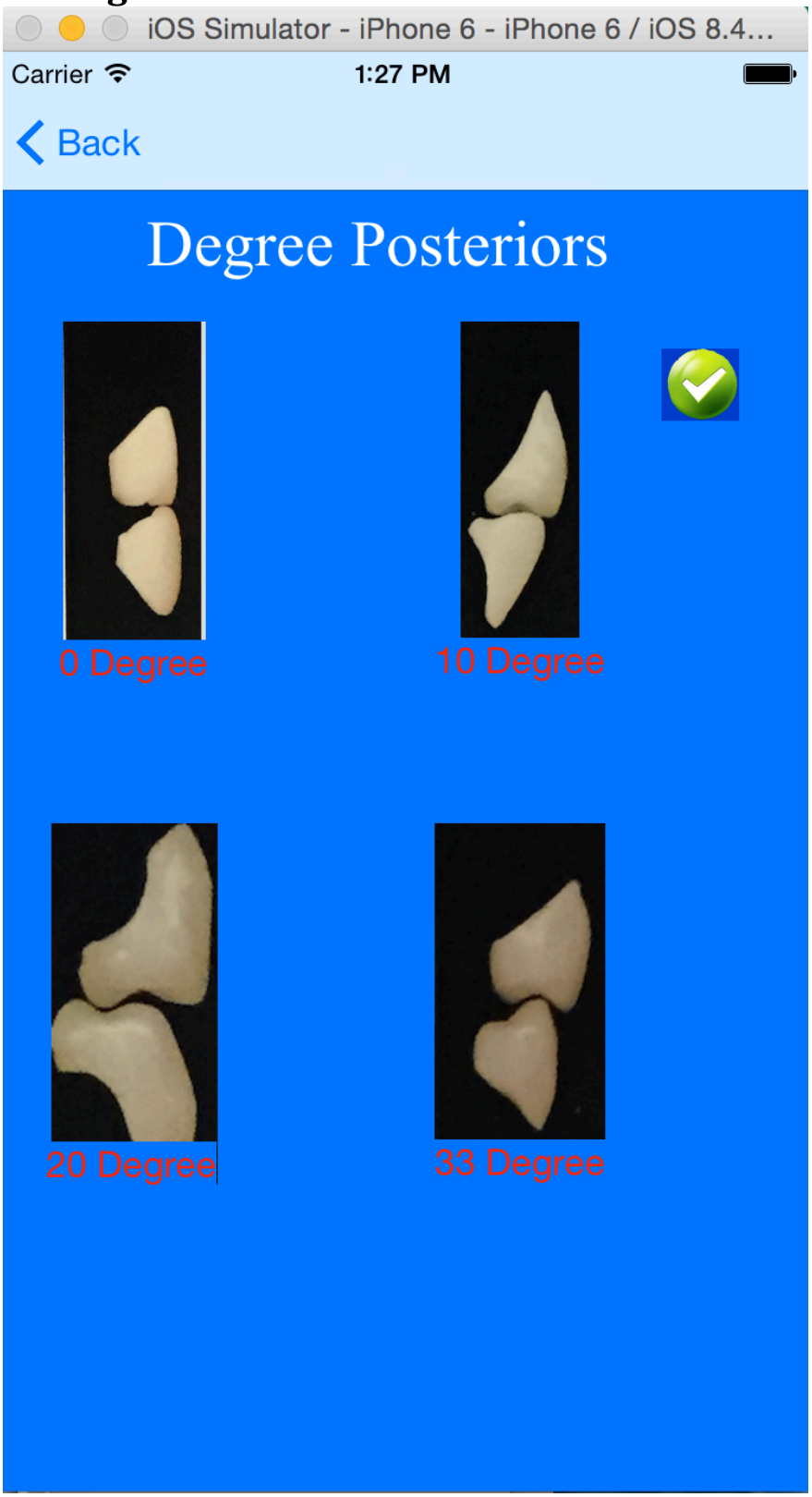
Start of View:



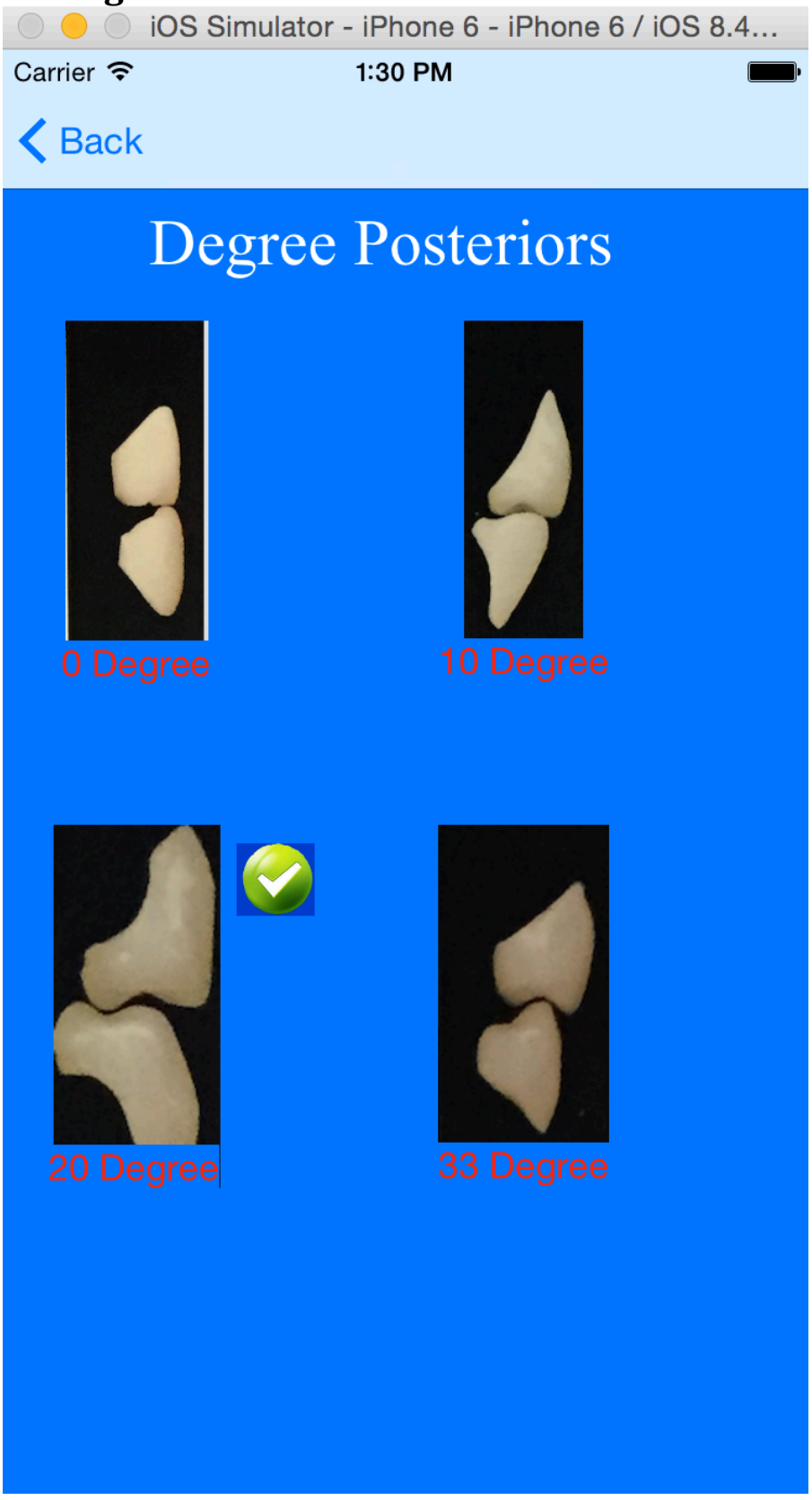
0 Degree Selected:



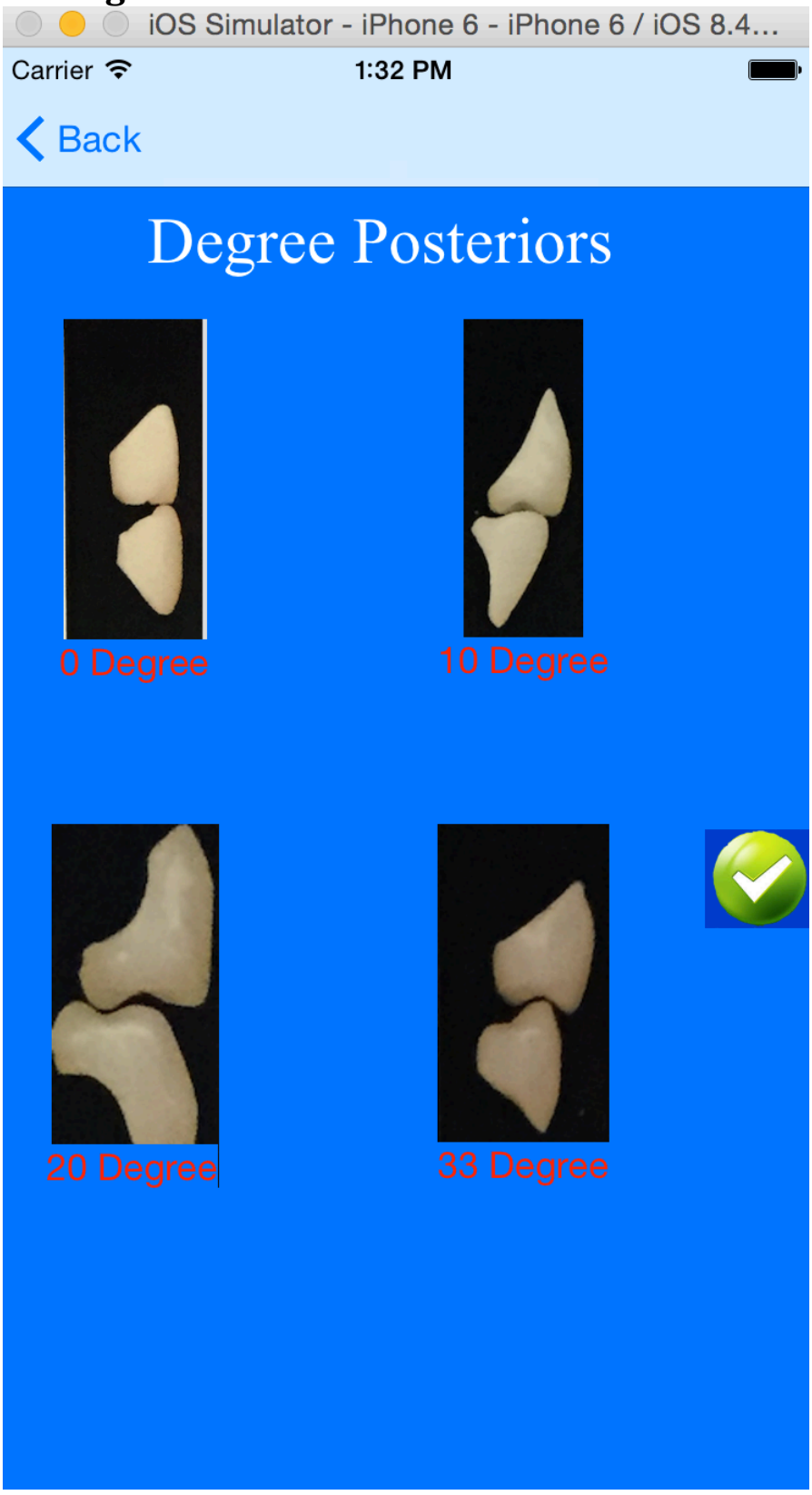
10 Degree Selected:



20 Degree Selected:

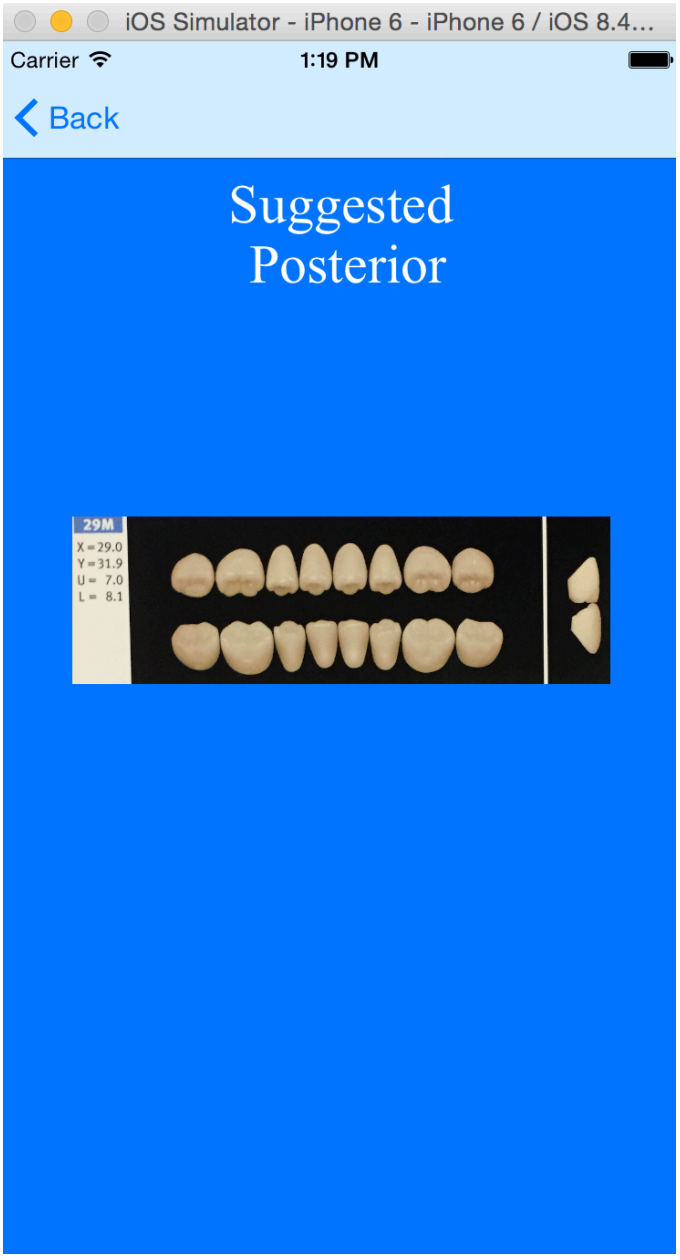


33 Degree Selected:

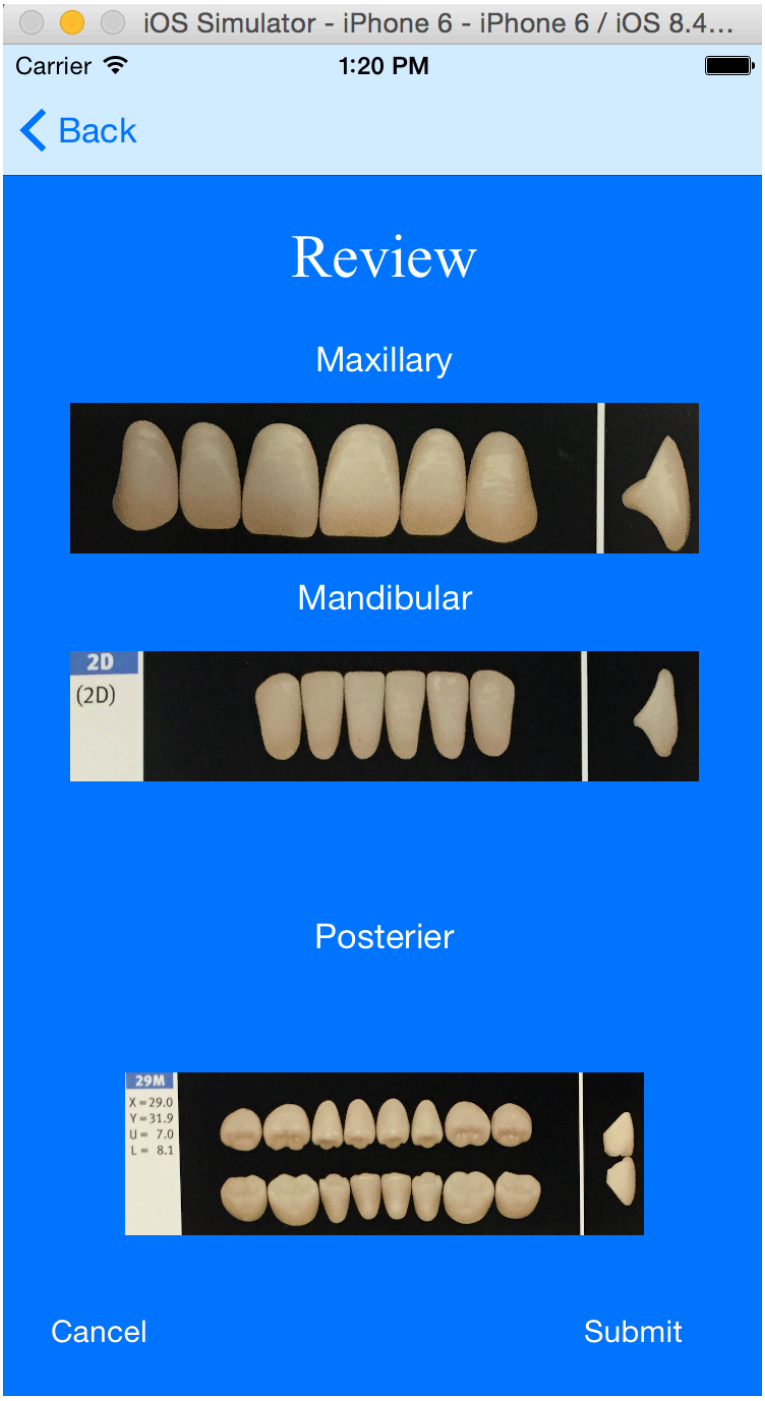


Recommended Posteriors (Suggested Posterior) View:

Start of View:



Review View:


iOS Simulator - iPhone 6 - iPhone 6 / iOS 8.4...
Carrier
1:20 PM
Back
Review
Maxillary
Mandibular
2D
(2D)
Posterier
29M
X=29.0
Y=31.9
U= 7.0
L= 8.1
Cancel
Submit

Past Orders View: