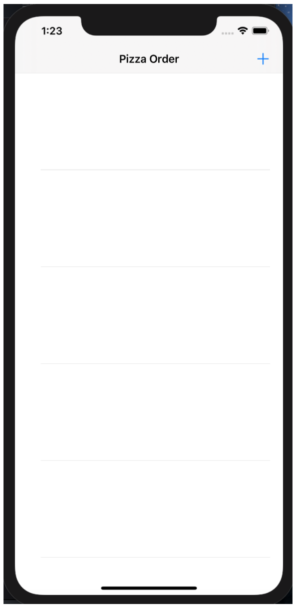
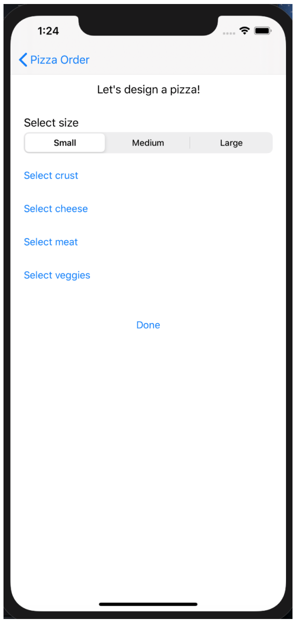
CS 329E: Bulko
Programming Assignment 5
Alert Controllers

1 Problem Definition

In this assignment, you will create a simple application for ordering pizzas! You will use a segmented VC, alerts, and action sheets to allow the user to select options for the pizzas.



(a) The Main View Controller



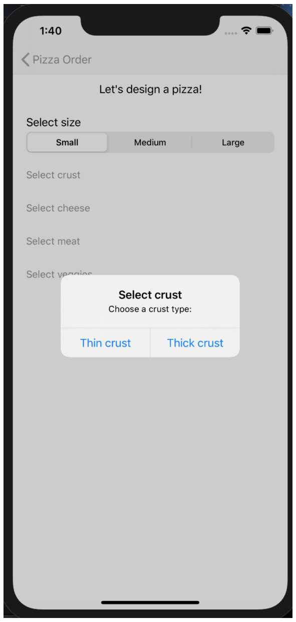
Let's design a pizza!

(b) The Pizza Creation View Controller

The Main VC consists of a Table View containing all of the pizzas that have been created. When the application first launches, the table will be empty as in figure (a). To create a new pizza, the user must click on the "+" button in the Navigation Bar. This will take the user to the Pizza Creation VC, figure (b). The user then configures a pizza to be ordered.

- The user can select one of three pizza sizes, small, medium, or large, using a segmented VC.
- There are two crust types: Thin Crust or Thick Crust. The user should be presented these two options as buttons in an alert.
- There are three cheese options: Regular Cheese, No Cheese, or Double Cheese. The user should be presented these options in an action sheet.

- There are three meat options: Pepperoni, Sausage, or Canadian Bacon. The user should be presented these options in an action sheet.
- There are five veggie options: Mushroom, Onion, Green Olive, Black Olive, or None. The user should be presented these options in an action sheet.



1:40

Pizza Order

Let's design a pizza!

Select size

Small | Medium | Large

Select crust

Select cheese

Select meat

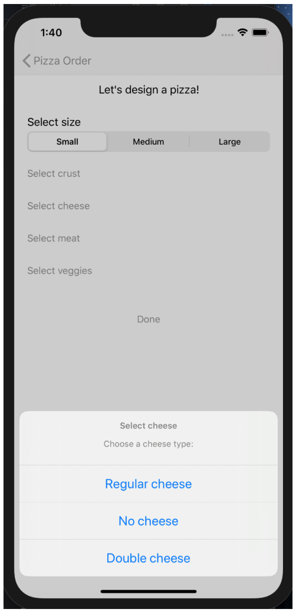
Select veggies

Select crust

Choose a crust type:

Thin crust | Thick crust

(c) Selecting a crust option



1:40

Pizza Order

Let's design a pizza!

Select size

Small | Medium | Large

Select crust

Select cheese

Select meat

Select veggies

Done

Select cheese

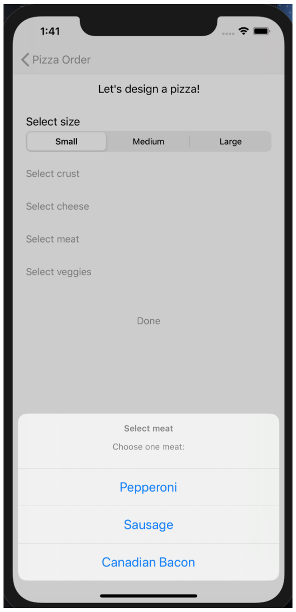
Choose a cheese type:

Regular cheese

No cheese

Double cheese

(d) Selecting a cheese option



1:41

Pizza Order

Let's design a pizza!

Select size

Small | Medium | Large

Select crust

Select cheese

Select meat

Select veggies

Done

Select meat

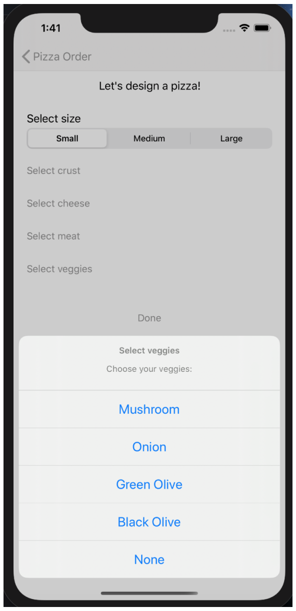
Choose one meat:

Pepperoni

Sausage

Canadian Bacon

(e) Selecting a meat option



1:41

Pizza Order

Let's design a pizza!

Select size

Small | Medium | Large

Select crust

Select cheese

Select meat

Select veggies

Done

Select veggies

Choose your veggies:

Mushroom

Onion

Green Olive

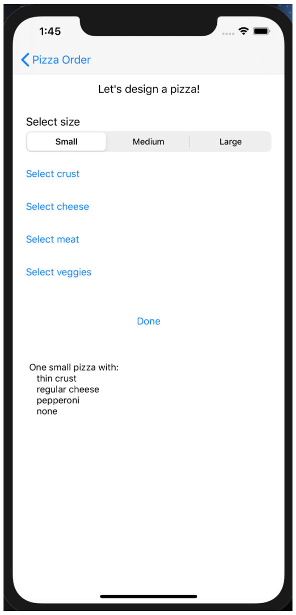
Black Olive

None

(f) Selecting a veggie option

When one of each option has been selected, the user should click the “Done” button. This should display a summary of the pizza created below the button as shown in figure (g) below.

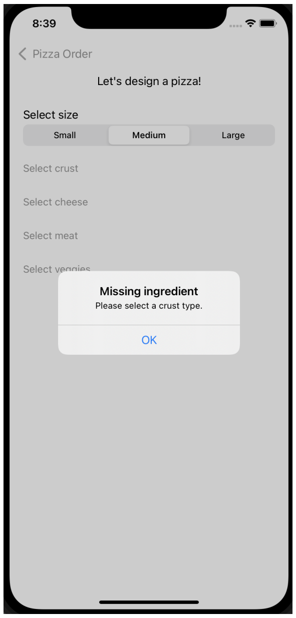
If the user failed to make a selection for any of the options, an error message resembling (h) below should appear. (If the user missed two or more selections, only one error message needs to appear.) Note that since the segmented controller comes up with ”Small” preselected, a small pizza is the default, and you should never see an error for a missing pizza size.



Let's design a pizza!

One small pizza with:
thin crust
regular cheese
pepperoni
none

(g) Clicking the Done button on a complete order

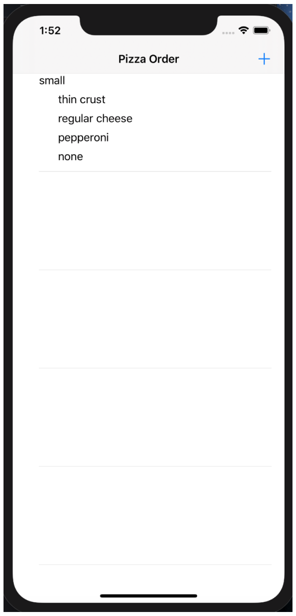


Let's design a pizza!

Missing ingredient
Please select a crust type.

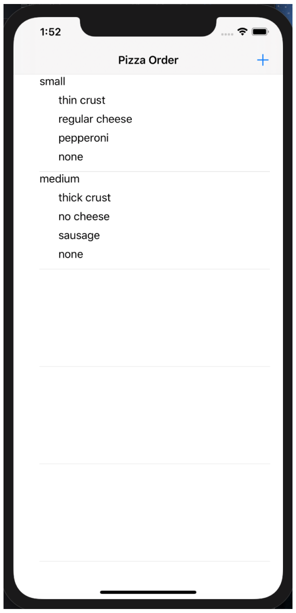
(h) Clicking the Done button on an incomplete order

If the user now clicks on the Pizza Order nav button, the app should return to the Main VC, and the new pizza should be added to the bottom of the Table VC.



small
thin crust
regular cheese
pepperoni
none

(i) After one pizza has been created



small
thin crust
regular cheese
pepperoni
none

medium
thick crust
no cheese
sausage
none

(j) After a second pizza has been created

2 Hints to Get Started

- When you create your new Xcode project, in the screen where you give the project a name, click the ”Use Core Data” checkbox. (We’re going to revisit this code later in the semester when we learn Core Data, so checking this box will make life a lot easier for you later.)
- Use the simulator for ”iPhone 11 Pro Max”.
- Create a class called Pizza that includes properties pSize, crust, cheese, meat, and veggies. Then create a variable `pizzaList:[Pizza] = []`. This will contain the pizzas you create.
- Use delegates and protocols to update the Table View.
- For this assignment, you are not required to write code that allows the user to select a pizza from the table. The only action available from the Main VC is the “+” button to create a new pizza.

3 Grading criteria

1. You have UI components as defined. (20%)
2. The Main VC works as defined. (20%)
3. The Pizza Creation VC works as defined. (20%)
4. The alerts and action sheets work as defined. (20%)
5. Error handling for missing ingredients works as expected. (20%)
6. **If the app does not build and run, ZERO points will be given.**
7. The Coding Standard is followed. One point deducted for each violation.

4 General criteria

1. I will be looking for good documentation, descriptive variable names, clean logical structure, and adherence to all coding conventions expected of an experienced programmer, as well as those outlined in the Coding Standard document. There will be penalties for failure to meet these standards.
2. Your code must compile and run before submission.
3. Xcode will automatically generate standard headers to your .swift files. Add two lines to each Swift file so that the header includes the following:

   // Project: LastnameFirstname-HW5
   // EID: xxxxxx
   // Course: CS329E