Final Exam Take-home

This final take home exam is worth 100% of the Final Mark
Marks: This will be marked out of 100 marks
Conditions: Open book
Submission Details:
- You must upload your file before the deadline
- No submissions will be accepted via email
- 10% penalty will apply for every 2 minutes after the deadline
- Your file should be a zip file containing all the necessary elements to run your program
- You will be allowed multiple submissions but only your last submission will be marked
- Upload your work as you go along
- Please comment your code this makes up 15% of your grade
- Anyone submitting after 12:10 am will not be graded
- If your application does not compile it will receive a grade of zero

There are 5 parts to this Final Exam
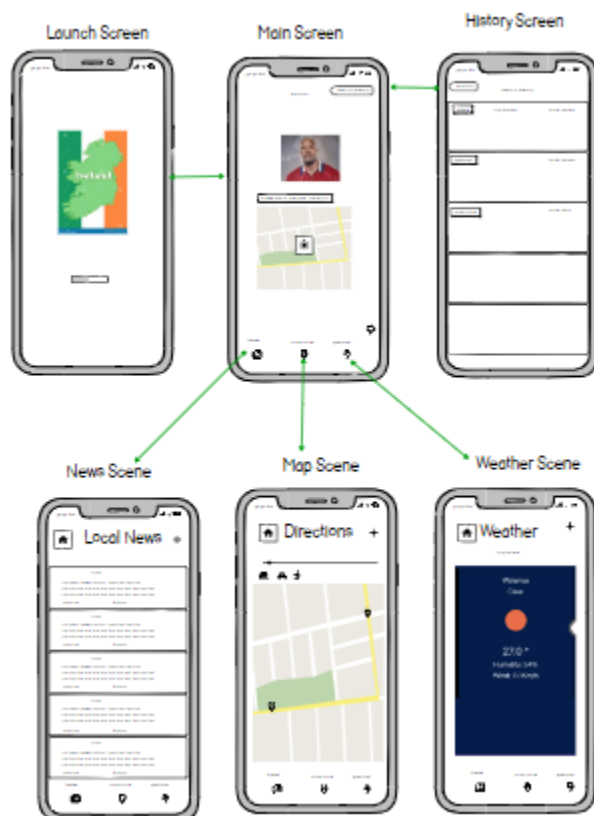You will be using all the tools you have learned into a single multipage application.

General project setup	15
Main Scene	15
Components	25
Function	25
Code Hygiene	20
Total Marks available	100

Note: Values in red font indicate attribute values that must be set to the defined values provided
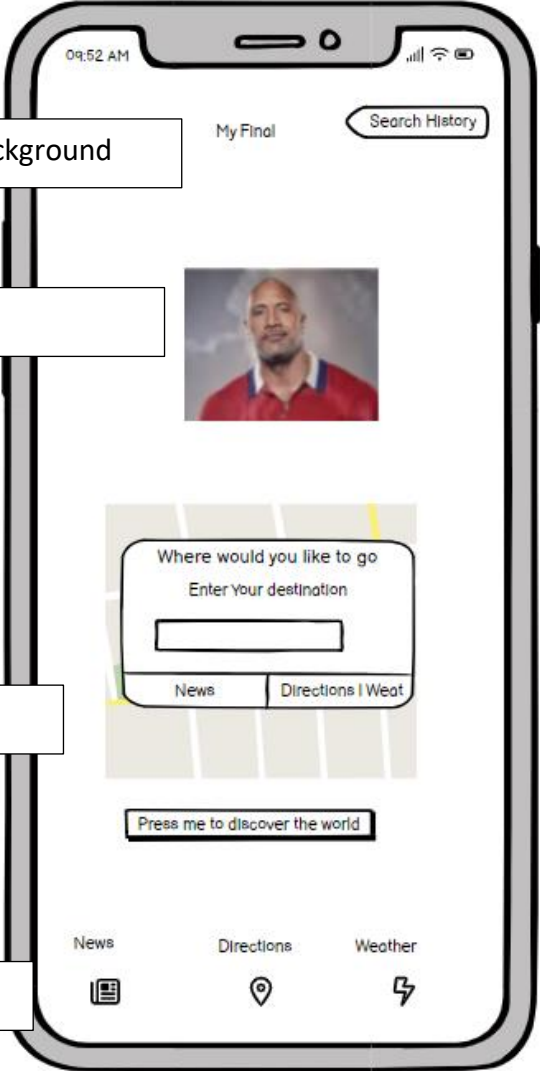
Part 1 General Project Setup

Work effort	Marks
The Project name should be Firstname_Lastname_FE_StudentNumber	1
Create an App Icon	2
Create a Launch page	2
Add a Main Scene named "Main" of type UIViewController Add a News Scene named "News" of Type UITableViewController Add a Map Scene named "Map" of type UIViewController Add a weather Scene named "Weather" of type UIViewController Add a history Scene named "History" of Type UITableViewController – Include all necessary files	5
Setup Privacy Permissions necessary for location access	2
Used the correct Navigation objects to go from Main page to the other three pages	3
TOTAL Part 1 General Project Setup	15

Navigation should allow the user to follow the following navigation framework

Part 2 Main Scene
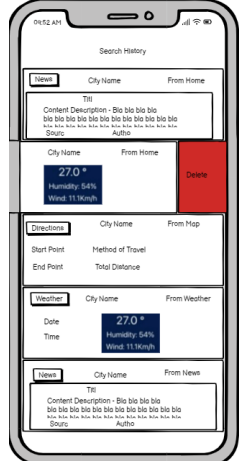
This is the Main Scene After loading your application your launch page should appear and should immediately go to the Main Scene The Main Scene has 4(four) elements that you must build 1. Background 2. You 4. Entry 3. Buttons	 09:52 AM My Final Search History Where would you like to go Enter Your destination News Directions I Weat Press me to discover the world News Directions Weather

Work Effort	Grade
1.Background: Select a background image to fill the screen set the Alph to 0.25	5
2. Select a picture of yourself and set the image at x = 50 and y = 150 Set the width = 275 height = 250 Set the four constraints Ensure the constraint between the button and image is set to 35	5
3. Create an entry field on an ALERT that will allow the user to enter a city name	3

4 Create a navigation that will be used to link to your next scene – give your button a name	2
Total Grades for Part 2 Main Scene	15

Part 3 Components

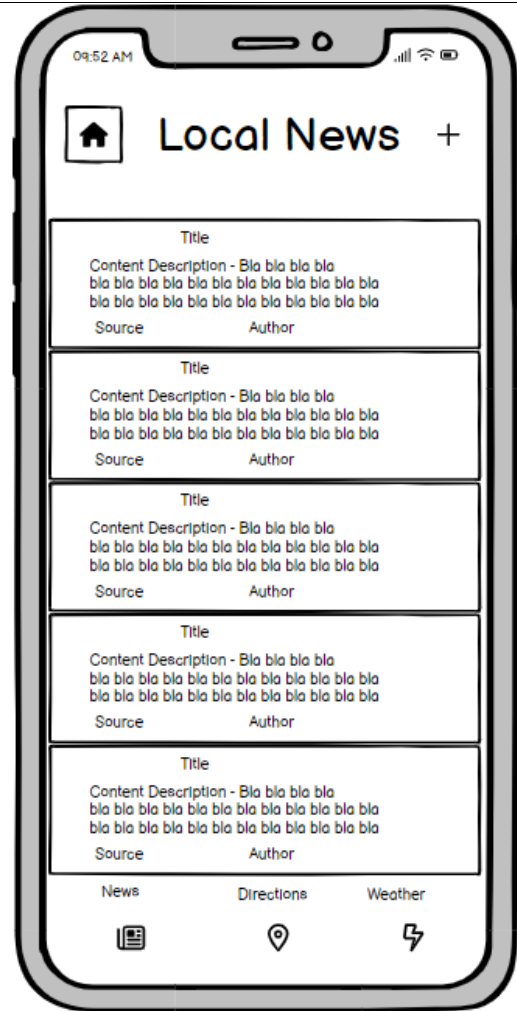| You must use all the following elements to build your application	Grade
Core Data	4
URL Session	3
Codable Protocol	3
Custom Cell	12
Alert control	3
Total Grades for Part 3 Components	25

Part 4 –Function

Work Effort	Grades
History page – will track the history of the searches made by the user a minimum of 5 cities should be preloaded in your project (hint use the Canadian cities) Each custom cell should include - The source of the transaction, i.e. where the interaction originated (Home, News, Map, Weather) - The type of interaction - For news – only the first story - For weather – date/time and basic weather information - For Map – star and end points along with mode of travel and distance traveled	
6) The ability to delete a row	
Total marks for this page	5

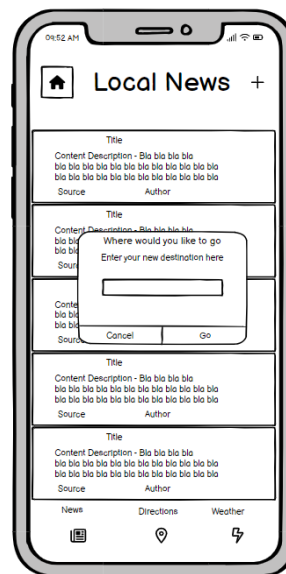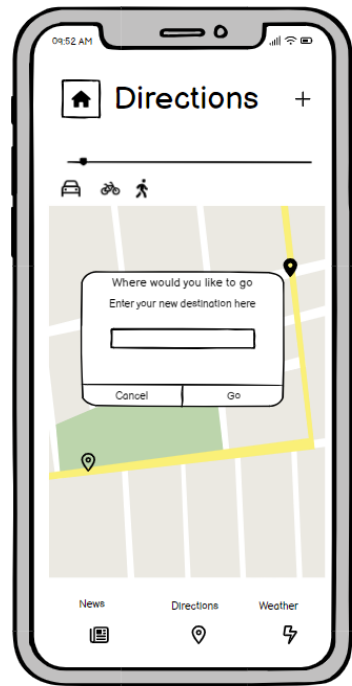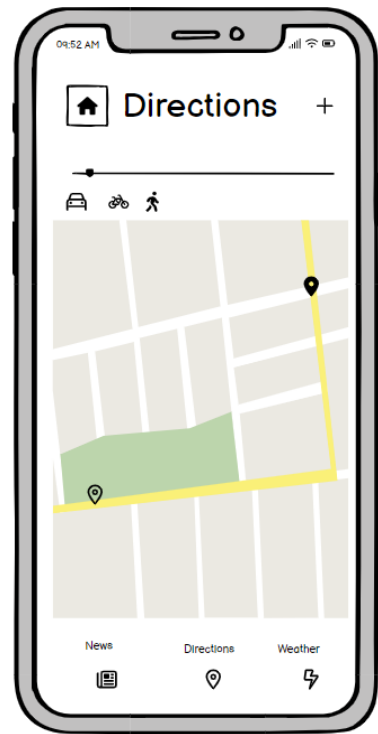|	

News Page - Will display in a table view the news related to the city that was selected on the home page
Each cell will include
    1) Title of the article
    2) Description
    3) The author
    4) The source
 	
Use the NewsAPI.org site for your data	

The user should be allowed to change the city via an alert function from the "+" button	
Total marks for this page	10

Map page that will have a pin showing the location of the city.

Access to the "MAP" Scene can be from a button in cell from the history table or from the Main page

The Map page should have the following functions.

1) Should have a pin to delineate the start point which should be the original location of the phone
2) The second pin should be the end point which should be the name of the city that was entered either on the home screen or via the alert on the map page
3) A slider that allows the user to zoom in or out of the map.
4) A "+" button that will allow the user to change the destination location
5) Three buttons to change the mode of travel – Auto, Bike, walking
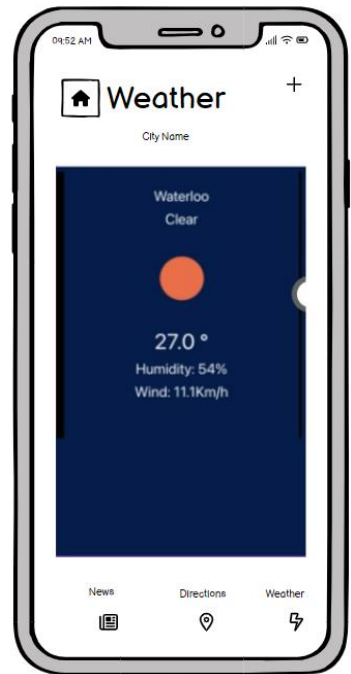6) A Poly line showing the route

Total marks for this page	5

The "Weather" Scene can be reached via a button from the cell from the history list or from the main page.

Weather scene will display weather information for a specific city. A text field with the city name An "+" button will allow the user to change city to check the weather

Total marks for the "Weather" page	5
Design layout and features are left to your own creativity.	
Total Part 4 Content & Function	25

Part 5. Code Hygiene

Work Effort	Grades
Commented code	5
General storyboard layout	5
Good Variable names	5
Clean Code flow	5
Total Part 5 Code Hygene	20