**Assignment - 1**

**1. Investigate and write down in detail which life cycle methods of App delegate and scene delegate are invoked in following scenarios:**

**a. App launch**

application(\_:didFinishLaunchingWithOptions:)

This method is called when the app finishes launching. You typically use this method to perform any final initialization.

**b. App background (Press iPhone home button)**

applicationDidEnterBackground(\_:):

Called when the app enters the background. Use this method to save data, pause ongoing tasks, and update the user interface.  
  
sceneWillResignActive(\_:):

Similar to **applicationWillResignActive** this method is called when the scene is about to move from an active to an inactive state.

* sceneDidEnterBackground(\_:):
* Called when the scene enters the background.

**c. Phone locked (Lock Phone using simulator lock button)**

applicationWillResignActive(\_:):

Called when the app is about to move from an active to an inactive state. This can occur for certain types of temporary interruptions.(Example:when the user locked the screen).

**d. Simulate memory warning (Simulator option -> Debug -> Simulate memory warning)(or shortcut: Shift+cmd+M)**

applicationDidReceiveMemoryWarning(\_:):

Called when the app receives a memory warning. You can use this method to release any unnecessary resources.

**e. App kill**

applicationWillTerminate(\_:):

Called when the app is about to terminate. This is the last opportunity to save data and perform cleanup.

**2. Investigate and write down in detail which life cycle methods of UIViewController are invoked in following scenarios:**

### **App Launch**

viewWillAppear(\_:)

Called just before the view controller's view is added to the view hierarchy.

viewDidAppear(\_:)

Called after the view controller's view has been added to the view hierarchy and becomes visible to the user.

### **App Background (Press iPhone Home Button)**

viewWillDisappear(\_:)

Invoked just before the view controller's view is removed from the view hierarchy.

viewDidDisappear(\_:)

Called after the view controller's view has been removed from the view hierarchy.

### **Phone Locked (Lock Phone using simulator lock button)**

When the phone is locked, the app goes into the background, and the corresponding background methods are invoked.

### **Simulate Memory Warning (Simulator option -> Debug -> Simulate memory warning or shortcut: Shift+Cmd+M)**

didReceiveMemoryWarning

Called on a specific view controller when that particular view controller receives a memory warning.

### **App Kill**

applicationWillTerminate(\_:)

Executed when the app is about to terminate, allowing for any necessary cleanup tasks.

viewWillDisappear(\_:)

Called just before the view controller's view is removed from the view hierarchy.

viewDidDisappear(\_:)

Called after the view controller's view has been removed from the view hierarchy.