

# Northern Michigan University (Marquette Co, MI)

CS344-01-24F: iOS / iPhone Programming (Andrew A. Poe) Name: \_\_\_\_\_  
Endterm Examination (Exam 2)

Friday 6 December 2024 1:00 P.M. EST

Time: 50 minutes.

1. Write Swift code that uses an sqlite database (already open) with a table called Disney containing fields named Song and MovieTitle(both are strings). Your Swift code should print (to the screen) the names of all the songs in *The Little Mermaid* in alphabetical order.

```
sqlite3_prepare_v2(db,
"select Song from Disney where MovieTitle='The Little Mermaid'
order by Song",-1,&stmt,nil)
while sqlite3_step(stmt)==SQLITE_ROW {
    let n:String = String (CString:sqlite3_column_text(stmt,0));
    print ("\n(n)")
}
sqlite3_reset (stmt)
sqlite3_finalize (stmt)
```

2. In Main.storyboard, I have a tab bar controller controlling two view controllers. I have a button and a label in the first view controller and two textfields in the second view controller.

Write the Swift @IBAction method for the button in the first view controller. When the button is clicked, it will take the two numbers from the two textfields in the second view controller and place their sum into the label of the first view controller.

```
@IBAction func Add2 () {
    let sum:Int = Int (svc!.tf1!.text)+Int (svc!.tf2!.text)
    lab!.text = String (sum)
}
```

If one of these view controllers had contained a web view, how would I need to adjust the plist to allow the web view to view an unsecure site?

## You need to add NSAllowArbitraryLoads

3. I have a TableViewController that never changes. (You don't have to worry about arrays or databases since the Table never changes. Also don't worry about clicking on an entry.) It has ten sections labeled "1" through "10". There are 55 total rows in the TableView. The first section has one row ("1"). The second section has two rows ("1","2"). The third section has three rows ("1","2","3"), and so forth.

Write the code for the following four methods that will cause the table to display correctly. Think about these methods carefully.

```
func numberOfSections(in tableView: UITableView) -> Int
{
    return 10
}
```

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```
func tableView(_ tableView: UITableView, numberOfRowsInSection section:
Int) -> Int

{return section+1}

func tableView(_ tableView: UITableView, cellForRowAt indexPath:
IndexPath) -> UITableViewCell

{
    let CellIdentifier = "triangle"
    let cell = tableView.dequeueReusableCell(withIdentifier:
CellIdentifier, for: indexPath)
    cell.textLabel!.text = "\(indexPath.row+1)"

    return cell
}

func tableView(_ tableView: UITableView, titleForHeaderInSection section:
Int) -> String?

{return "\(section+1)"}
```

In this case, the TableView controller is *not* part of a Navigation Controller. If it were, what other cool stuff could I do with the TableView that I cannot do now (or at least not as easily)?

**With the Navigation Controller, you can have edit buttons to add or remove items to or from your table quite easily.**

4. Write the viewDidLoad for a simple app (no navigation or tab controller or anything like that; just a regular view on a view controller). The viewDidLoad method writes to a label that already exists and is already connected to the storyboard. Your method should write to the label the hemisphere GPS says that the device is in: northwestern, northeastern, southwestern, or southeastern. You should write the method below as well:

```
func locationManager (_ manager:CLLocationManager,didUpdateLocations
locations:[CLLocation]) {

    let loc = locations[0]
    let coord = loc.coordinate
    let longitude = coord.longitude
    let latitude = coord.latitude
    if latitude > 0 && longitude > 0 {lab!.text = "northeastern"}
    if latitude > 0 && longitude <= 0 {lab!.text = "northwestern"}
    if latitude <= 0 && longitude <= 0 {lab!.text = "southwestern"}
    if latitude <= 0 && longitude > 0 {lab!.text = "southeastern"}

}

override func viewDidLoad() {
    super.viewDidLoad()
```

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```
locationManager.delegate = self
locationManager.desiredAccuracy = kCLLocationAccuracyBest
locationManager.requestAlwaysAuthorization()
locationManager.startUpdatingLocation()
}
```