iPhone Apps Development using Objective C & Xcode (Lesson 8)

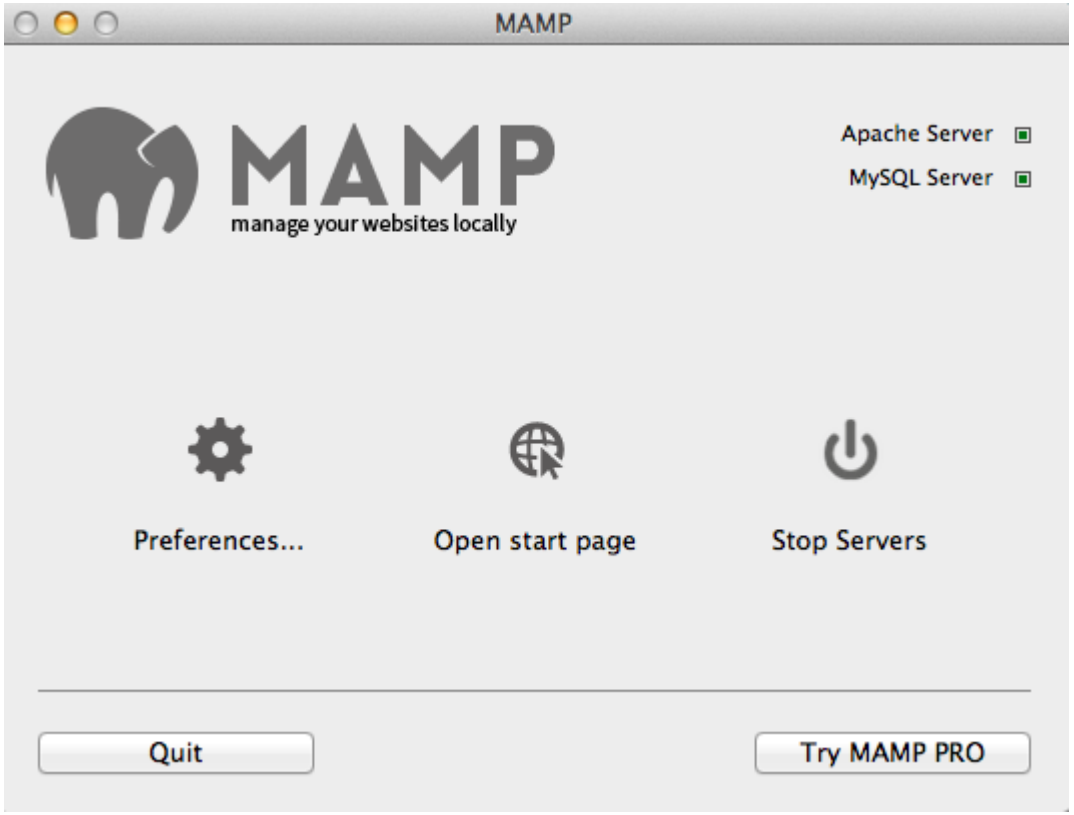
By Dannis Mok

Build an App to access Internet Data

- Download and install MAMP to build a local web server.

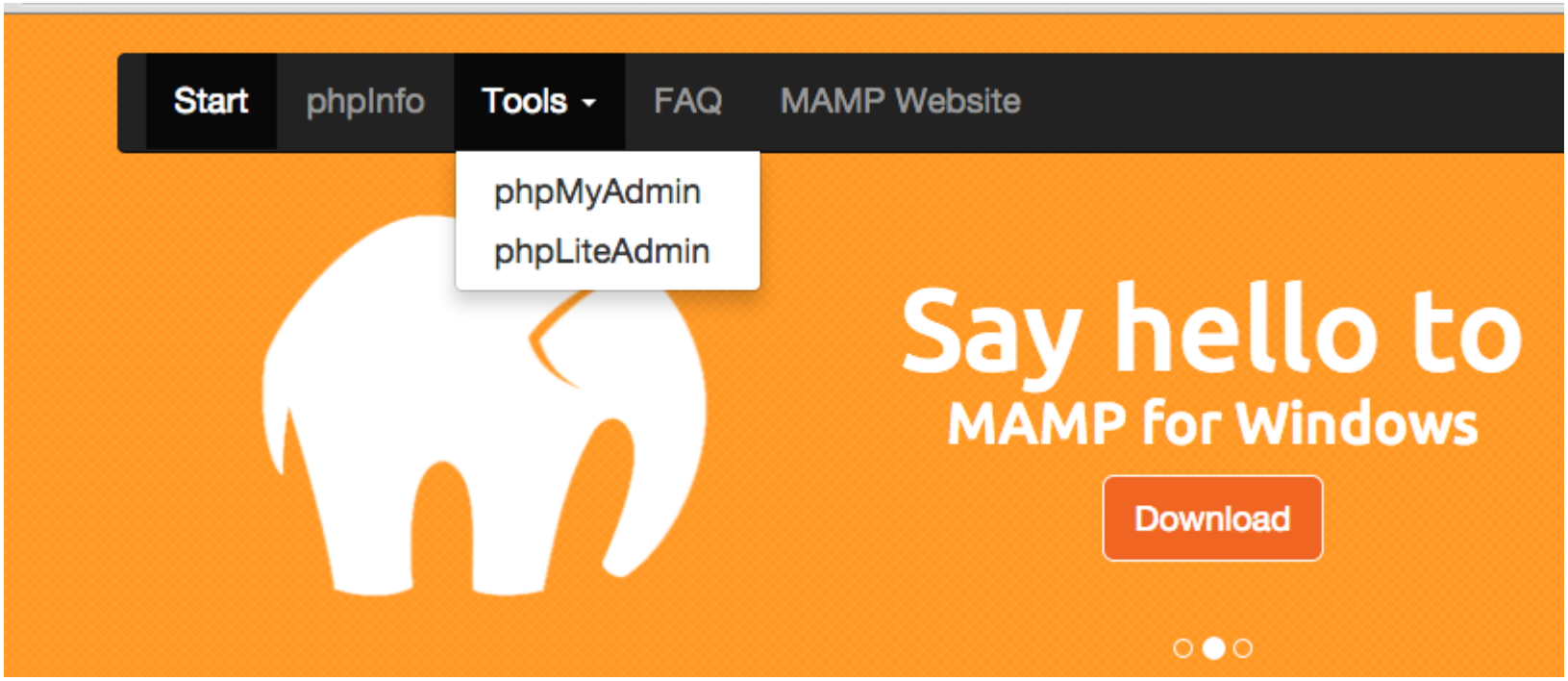
MAMP Server Setup

- MAMP Server is running on port 8888 and use the Panel to control its running status



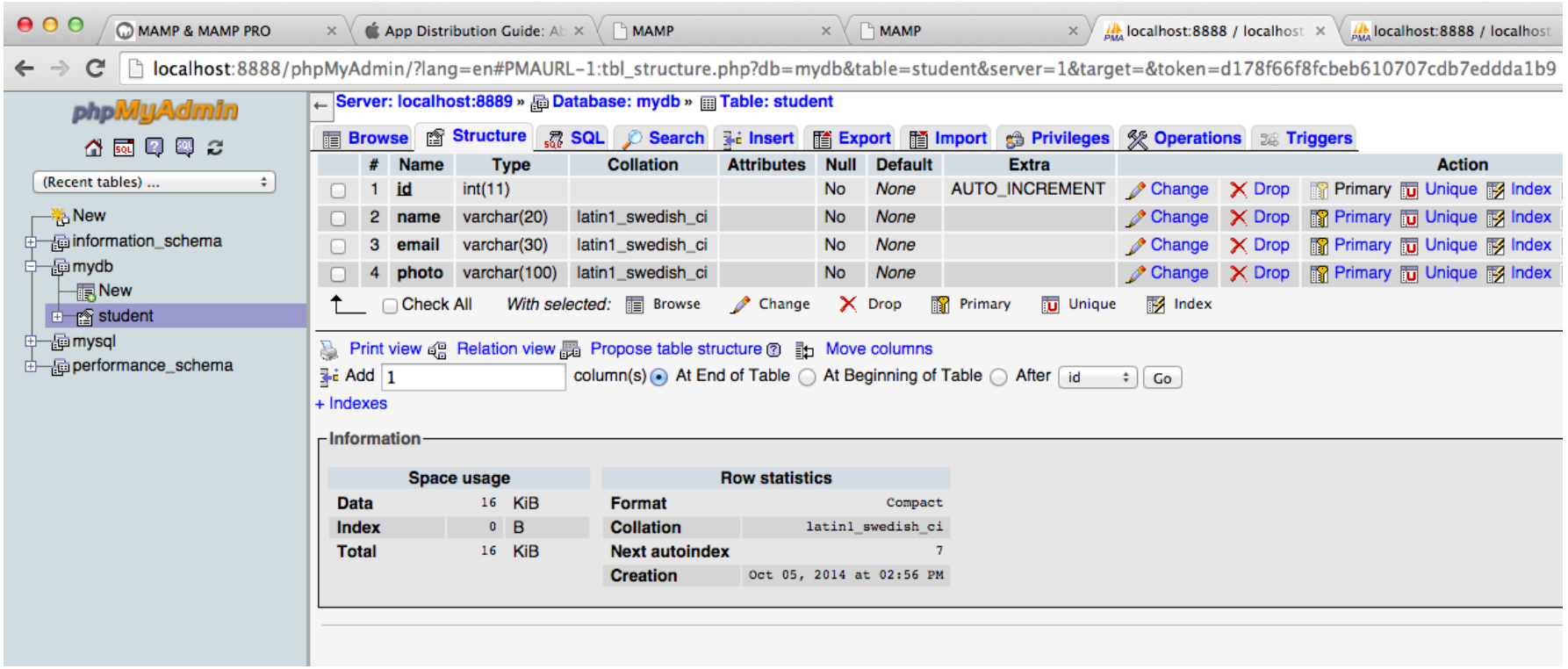
MAMP Server

- Can use the phpMyAdmin tool to create the database on the server



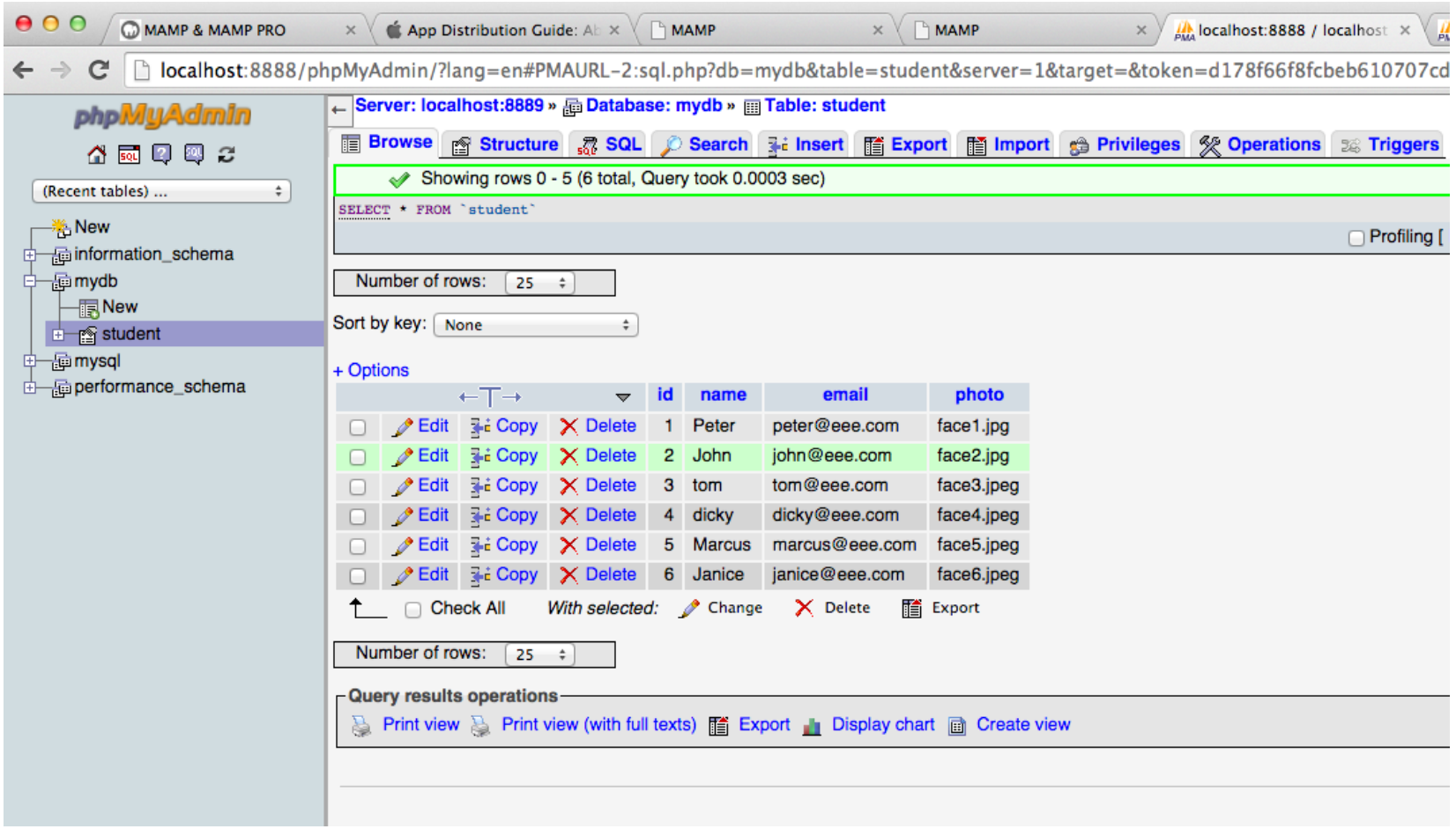
MAMP Server Setup

- A sample database called mydb is built as follows. It has a table called student.



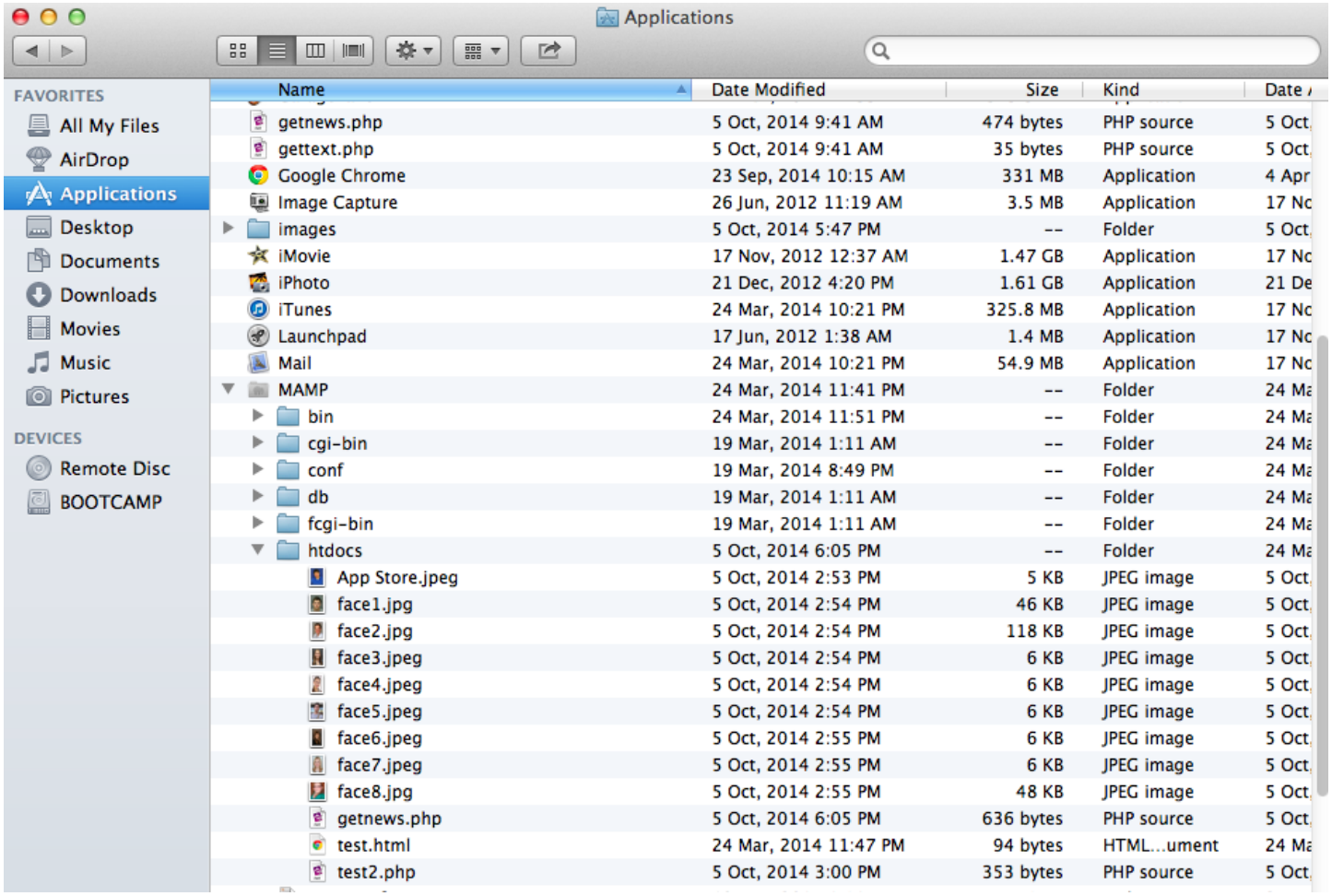
MAMP Server Setup

- It has some sample records



MAMP Server Setup

- Put some images into the root folder



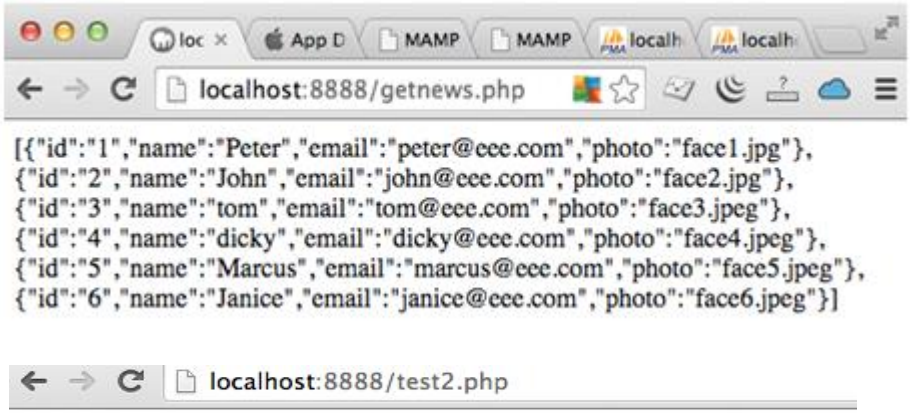
MAMP Server Setup

- Write a PHP script to output the table in JSON format.

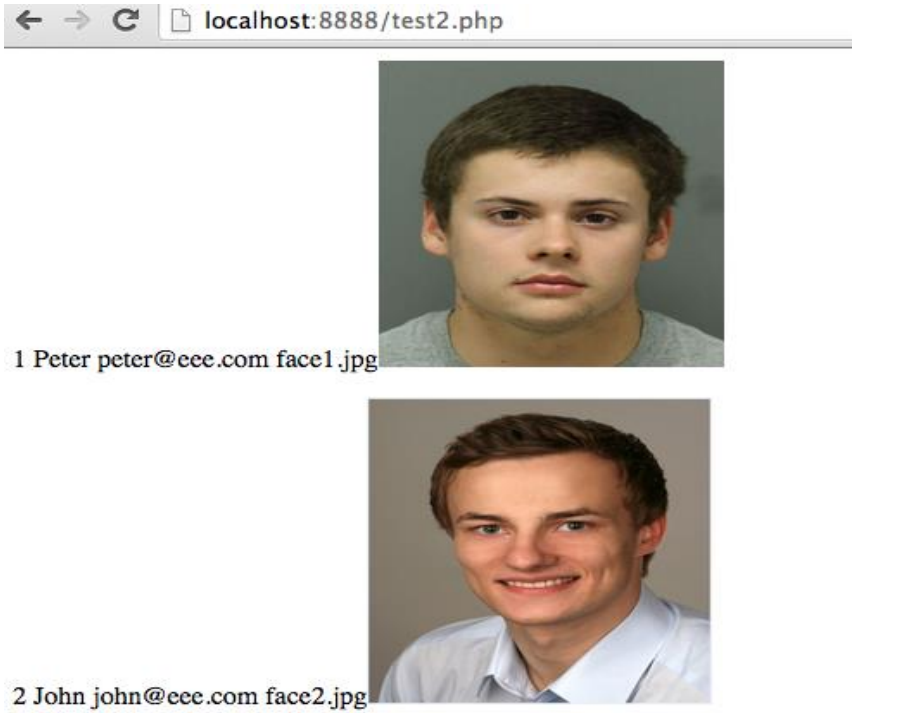
```php
<?php

    $id = $_GET['id'];

    $con = mysql_connect("localhost","root","root");

    mysql_select_db("mydb",$con);

    if(isset($id)) {

      $sql = "Select * from student where id=" . $id;

    } else {

      $sql = "Select * from student";
    }

    $result = mysql_query($sql,$con);

    $rows = array();

    while($row = mysql_fetch_assoc($result)) {

        $rows[] = $row;

      //      echo $row['id'] . " " . $row['name'] . " " .
$row['email'] .  "<img src='$row[photo]' width='200px' height='200px' /
><p>";


    }

     echo json_encode($rows);
?>
```

MAMP Server Setup

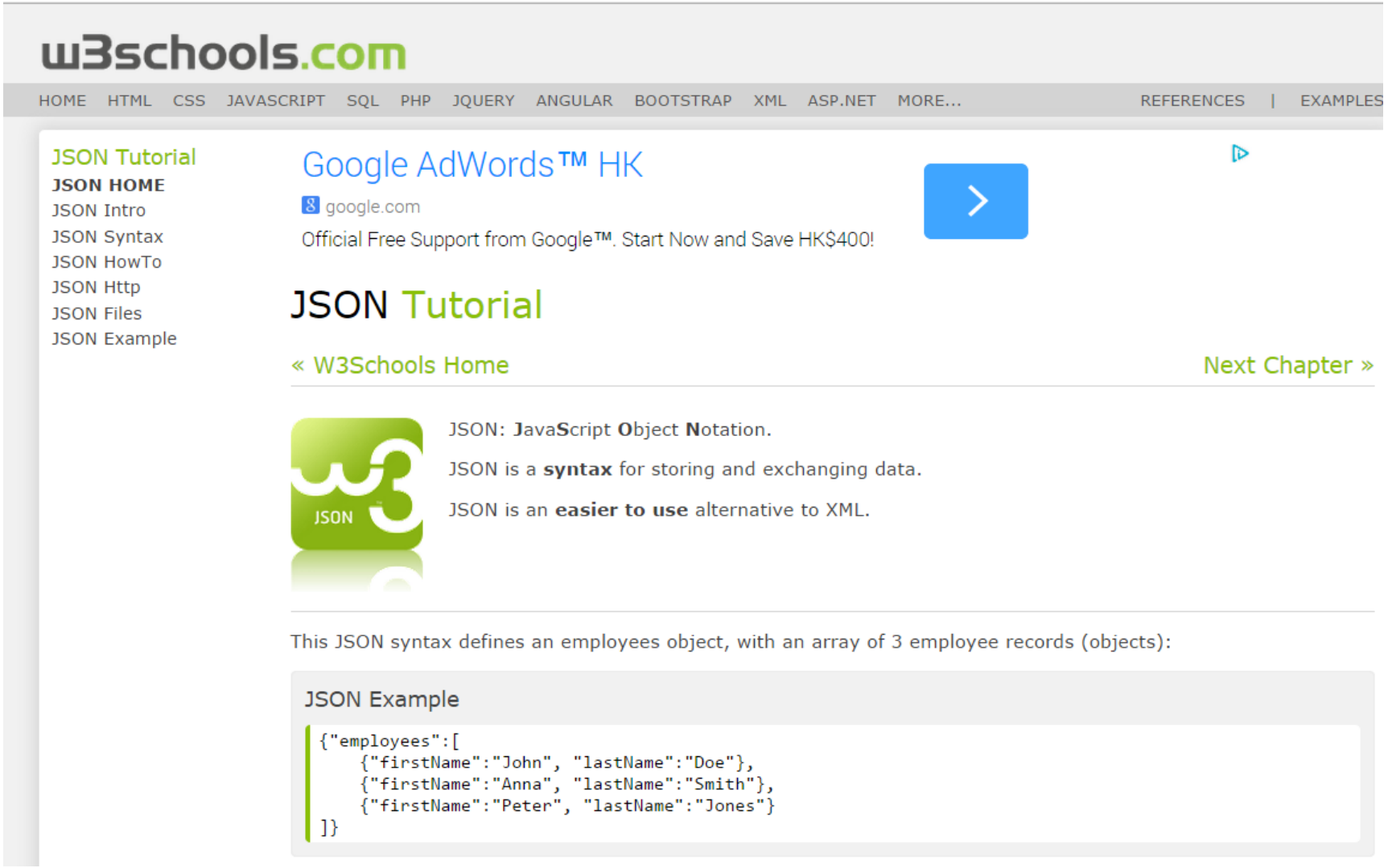
- JSON output



- Normal output

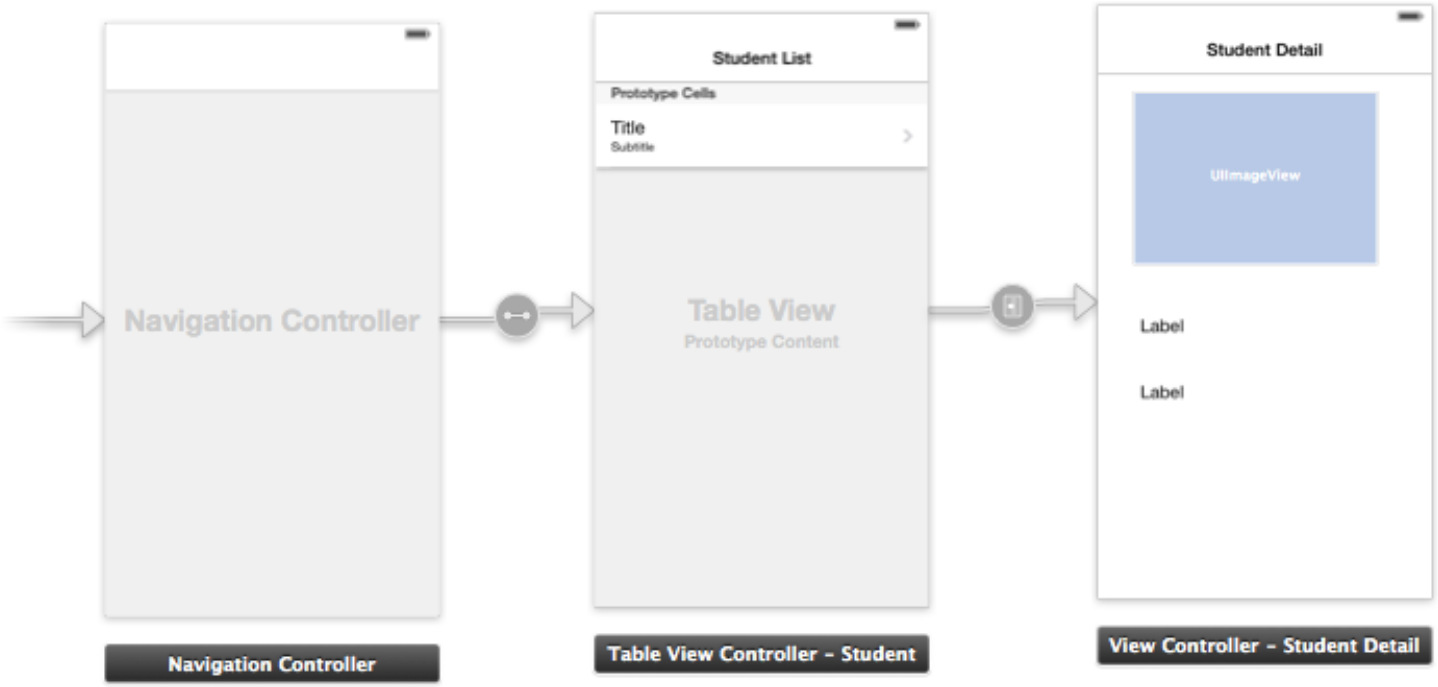


JSON reference



Apps for accessing Internet Data

- Create a new Project and build the storyboard as follows. Do the necessary setup



Apps for accessing Internet Data

- Add a mutable array in TableViewController

```
//
//  TableViewController.h
//  WebAccess8
//
//  Created by Dannis Mok on 7/10/14.
//  Copyright (c) 2014 com.uec. All rights reserved.
//

#import <UIKit/UIKit.h>

@interface TableViewController : UITableViewController {

    NSMutableArray *students;

}

@property NSMutableArray *students;


@end
```

Declare an array

Apps for accessing Internet Data

```
- (void)viewDidLoad
{
    [super viewDidLoad];

    students =[[NSMutableArray alloc]init];

    NSURL *myURL = [NSURL URLWithString:@"http://localhost:8888/getnews.php"];


    NSMutableURLRequest *request = [NSMutableURLRequest requestWithURL:myURL cachePolicy:
        NSURLRequestReloadIgnoringLocalCacheData timeoutInterval:60];


    [NSURLConnection sendAsynchronousRequest:request queue:[NSOperationQueue mainQueue]

                           completionHandler:^(NSURLResponse *response, NSData *data, NSError *
                               error) {

                               NSLog(@"Finished with status code: %i", [(NSHTTPURLResponse *)
                                   response statusCode]);
                               id jsonObject = [NSJSONSerialization JSONObjectWithData:data
                                   options:NSJSONReadingAllowFragments error:nil];


                               NSLog(@"jsonObject=%@",jsonObject);

                               students =[jsonObject mutableCopy];

                               [self.tableView reloadData];
                           }];

    NSLog(@"myURL=%@",myURL);


}
```

Type the location

Use asynchronous request to download data

Apps for accessing Internet Data

- Modify the TableView related methods

```
#pragma mark - Table view data source

- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
{
#warning Potentially incomplete method implementation.
    // Return the number of sections.
    return 1;
}

- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
{
#warning Incomplete method implementation.
    // Return the number of rows in the section.
    NSLog(@"%d",[students count]);
    return [students count];
}
```

Change to 1

Change to the array size

Apps for accessing Internet Data

```
- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)
    indexPath
{
    UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:@"Cell" forIndexPath:
        indexPath];

    id obj = [students objectAtIndex:indexPath.row];

    cell.textLabel.text =[obj valueForKey:@"name"];
    cell.detailTextLabel.text =[obj valueForKey:@"email"];

    NSMutableString *webpath = [NSMutableString stringWithString: @"http://localhost:8888/"];

    [webpath appendString: [obj valueForKey:@"photo"]];

    NSURL *myurl = [NSURL URLWithString:webpath];

    NSData *mydata = [NSData dataWithContentsOfURL:myurl];

    UIImage *myImage = [UIImage imageWithData:mydata];

    cell.imageView.image = myImage;

    return cell;
}
```

Modify to access data from the array and access the photo from the Internet for each cell

Apps for accessing Internet Data

```
#pragma mark - Navigation

// In a storyboard-based application, you will often want to do a little preparation before
    navigation
- (void)prepareForSegue:(UIStoryboardSegue *)segue sender:(id)sender
{
    // Get the new view controller using [segue destinationViewController].
    // Pass the selected object to the new view controller.

    if ([segue.identifier isEqualToString:@"segueToDetail"]) {
        NSIndexPath *indexPath = [self.tableView indexPathForSelectedRow];
        ViewController *destViewController = segue.destinationViewController;

        id obj = [students objectAtIndex:indexPath.row];
        destViewController.name =[obj valueForKey:@"name"];
        destViewController.email =[obj valueForKey:@"email"];

        NSMutableString *webpath = [NSMutableString stringWithString: @"http://localhost:8888/"];

        [webpath appendString: [obj valueForKey:@"photo"]];

        NSURL *myurl = [NSURL URLWithString:webpath];

        NSData *mydata = [NSData dataWithContentsOfURL:myurl];

        UIImage *myImage = [UIImage imageWithData:mydata];

        destViewController.image = myImage;


    }


}
```

Modify to pass data to the DetailViewController

Apps for accessing Internet Data

- Setup the variables in the DetailViewController

```
//
//  ViewController.h
//  WebAccess8
//
//  Created by Dannis Mok on 7/10/14.
//  Copyright (c) 2014 com.uec. All rights reserved.
//

#import <UIKit/UIKit.h>

@interface ViewController : UIViewController


@property (weak, nonatomic) IBOutlet UIImageView *myImageView;

@property (weak, nonatomic) IBOutlet UILabel *nameLabel;

@property (weak, nonatomic) IBOutlet UILabel *emailLabel;

@property (weak, nonatomic) NSString *name;
@property (weak, nonatomic) NSString *email;
@property (weak, nonatomic) UIImage *image;


@end
```

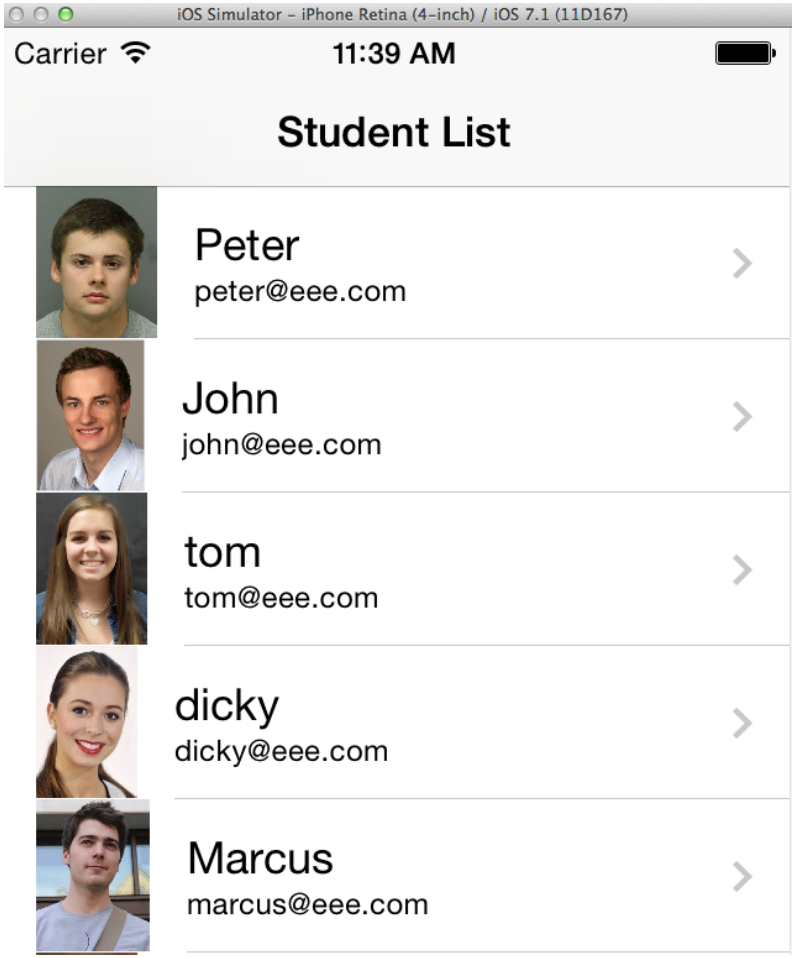
Create variables to store transferred data

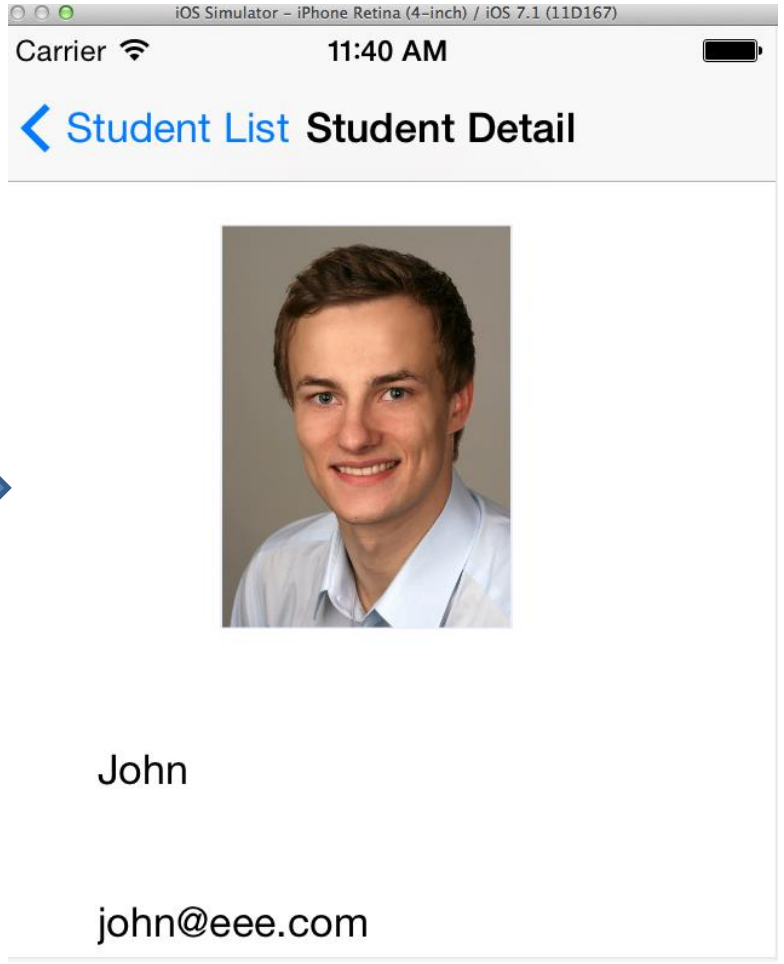
Apps for accessing Internet Data

```
//
//  ViewController.m
//  WebAccess8
//
//  Created by Dannis Mok on 7/10/14.
//  Copyright (c) 2014 com.uec. All rights reserved.
//

#import "ViewController.h"

@interface ViewController ()

@end

@implementation ViewController

- (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
{
    self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
    if (self) {
        // Custom initialization
    }
    return self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];

    self.nameLabel.text = self.name;

    self.emailLabel.text = self.email;

    [self.myImageView setImage:self.image];

}
```

Show the values in the screen

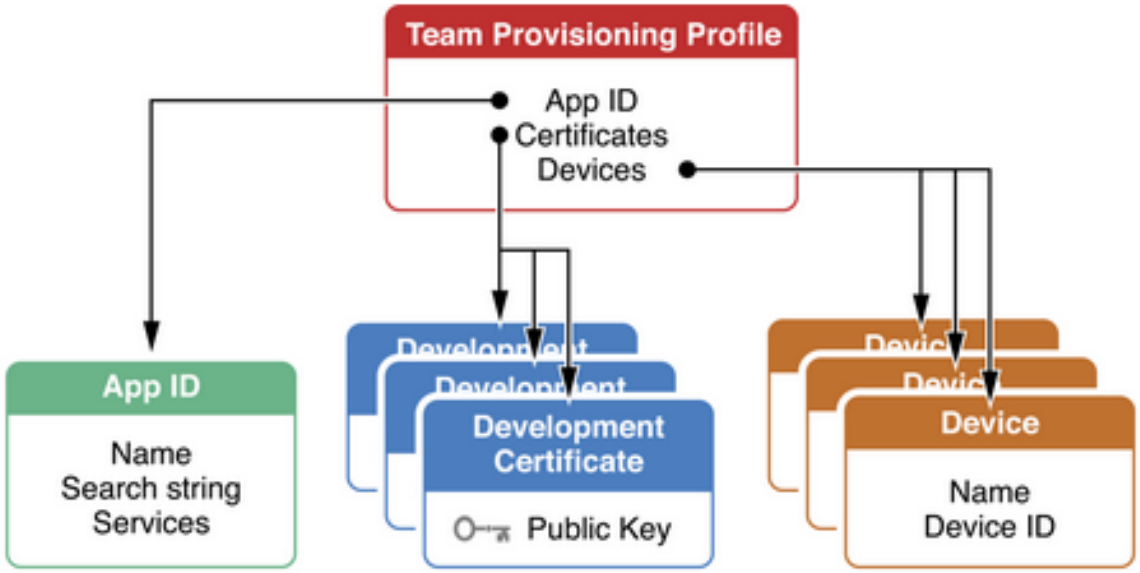
Apps for accessing Internet Data





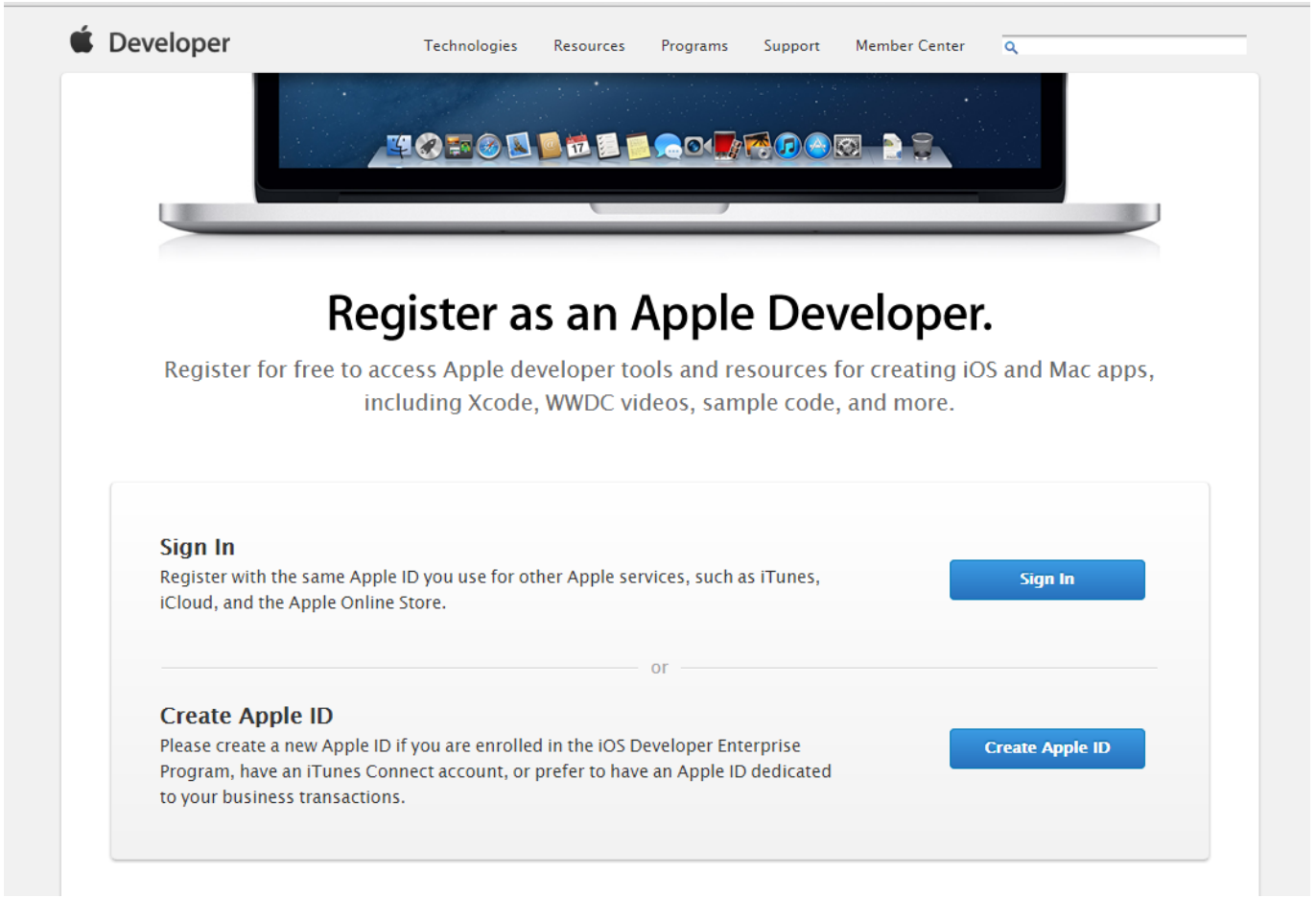
Deploy apps to real device

- Need to create a provisioning profile which contains the certificate, device id and app id and then install it onto the device



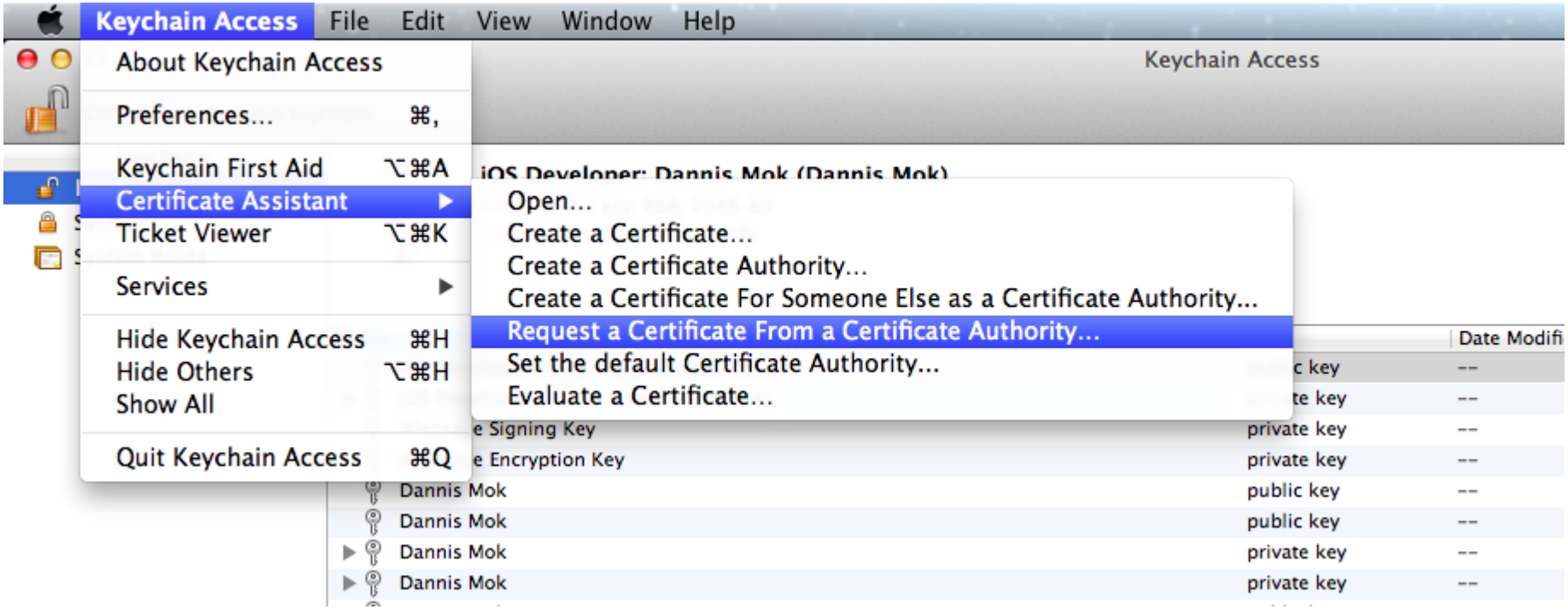
Deploy apps to real device

- Need to pay US$99 to become an Apple Developer (developer.apple.com).

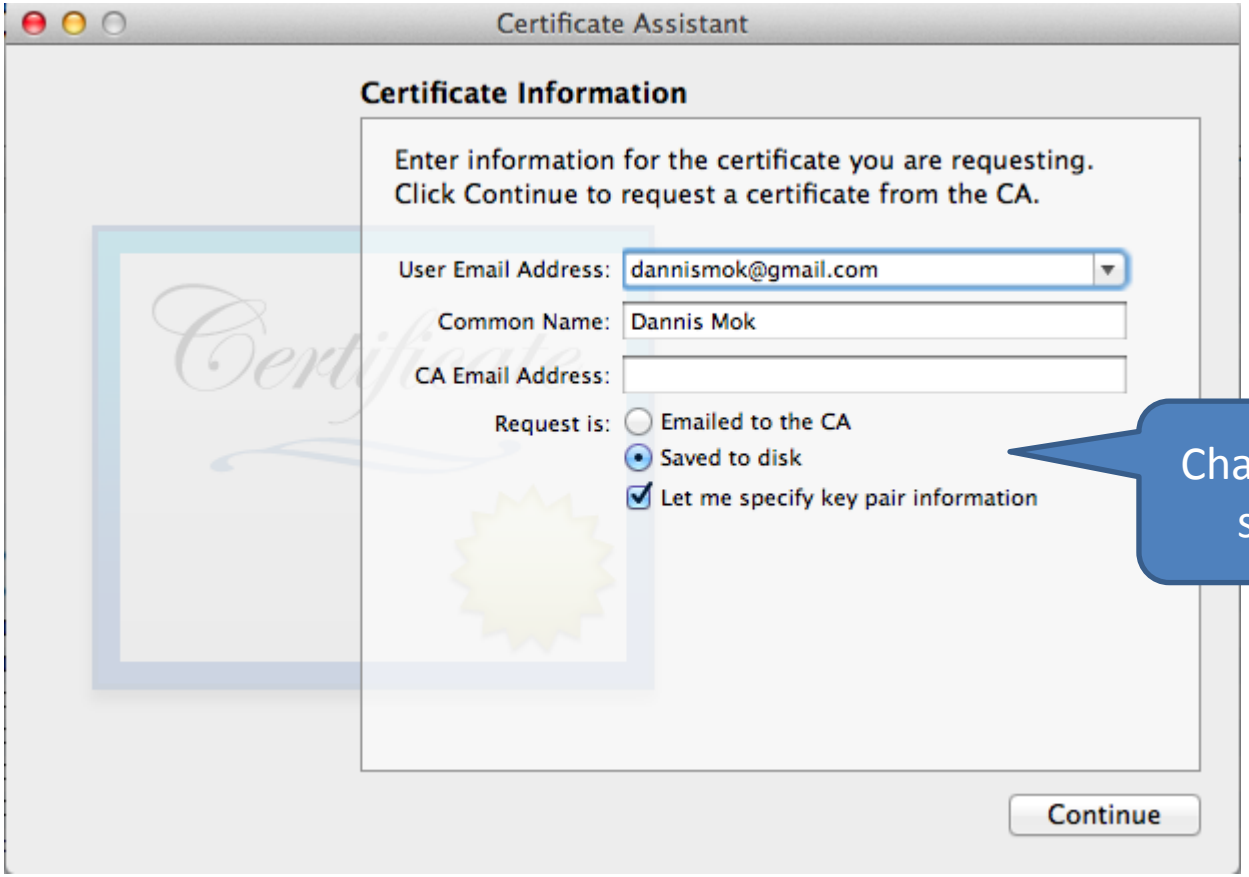


Deploy apps to real device

- Use the KeyChain tool to create a Certificate Request and then submit to Apple for applying signed digital certificate.



Deploy apps to real device



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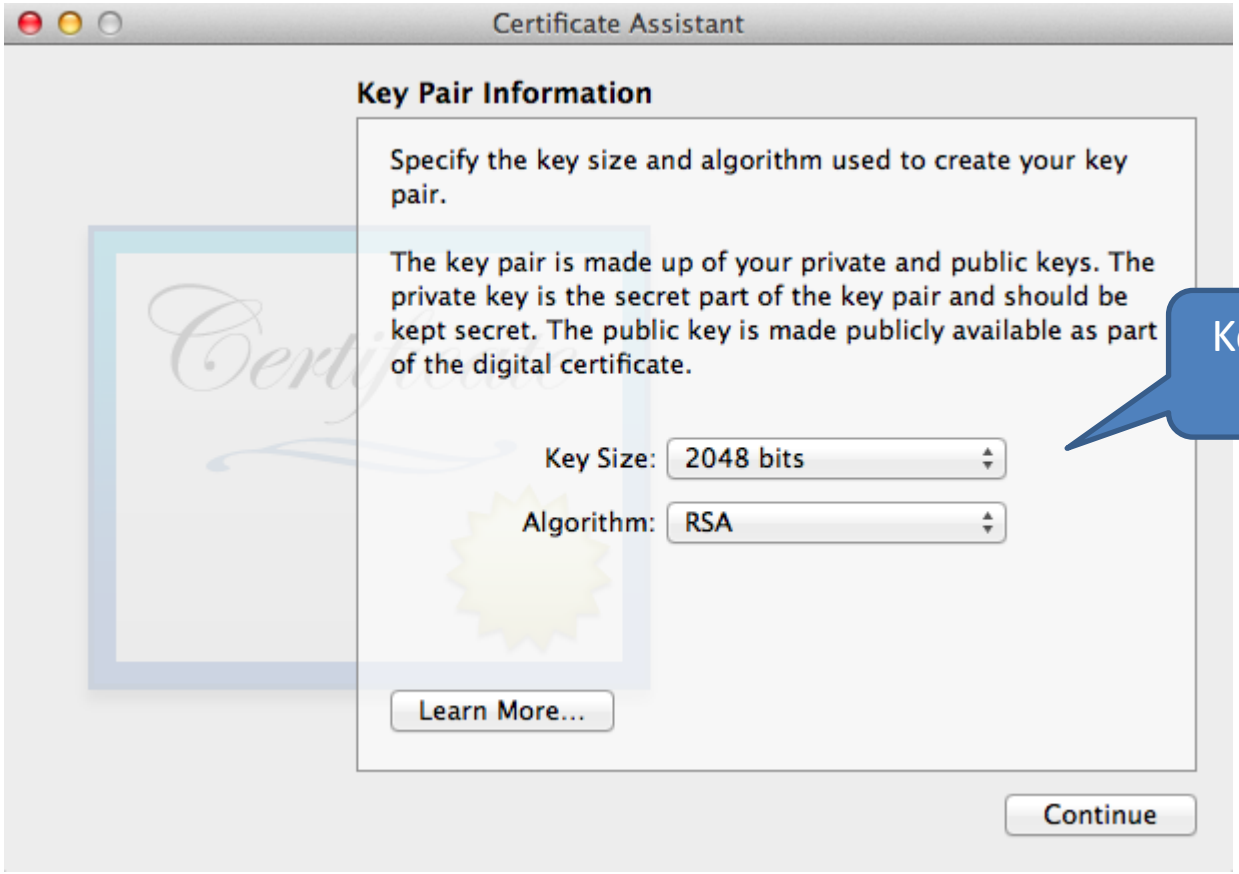

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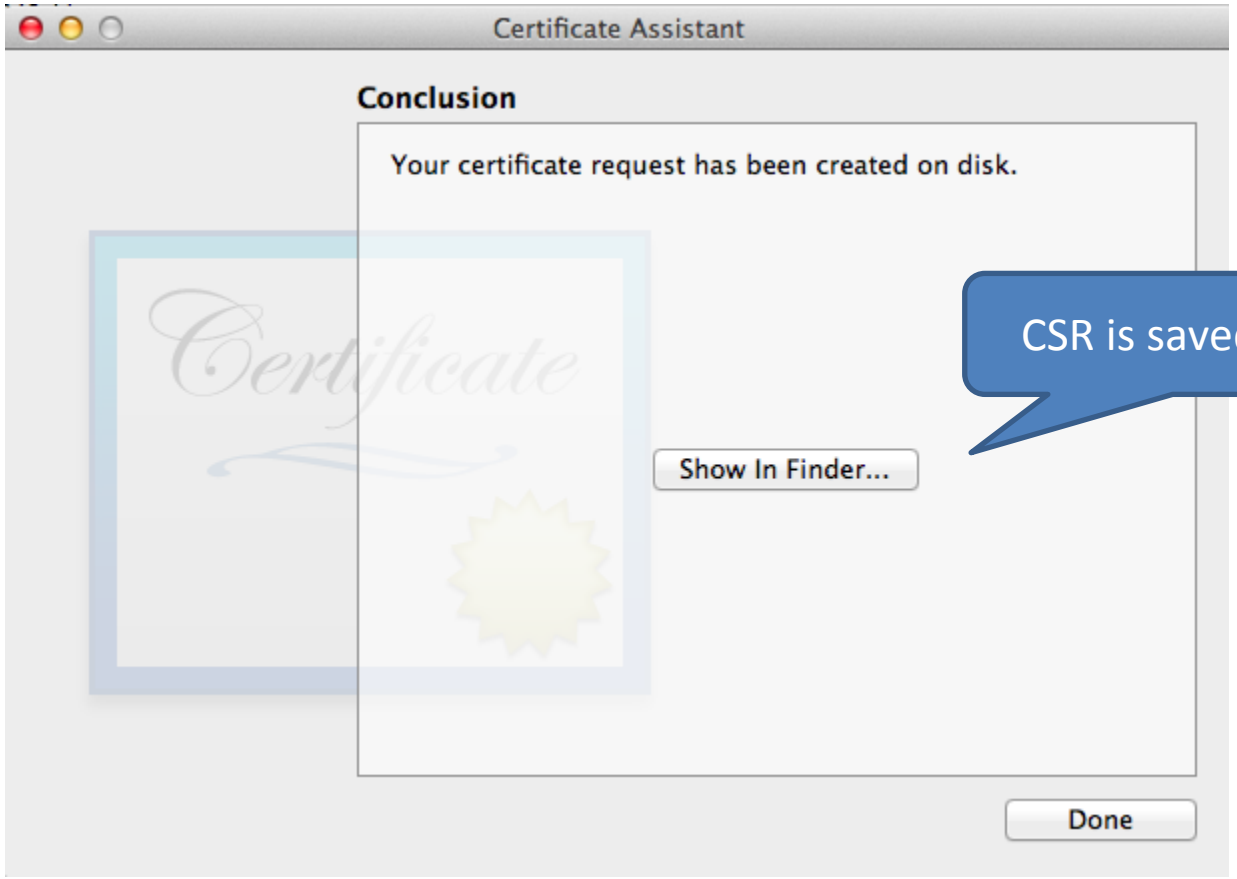
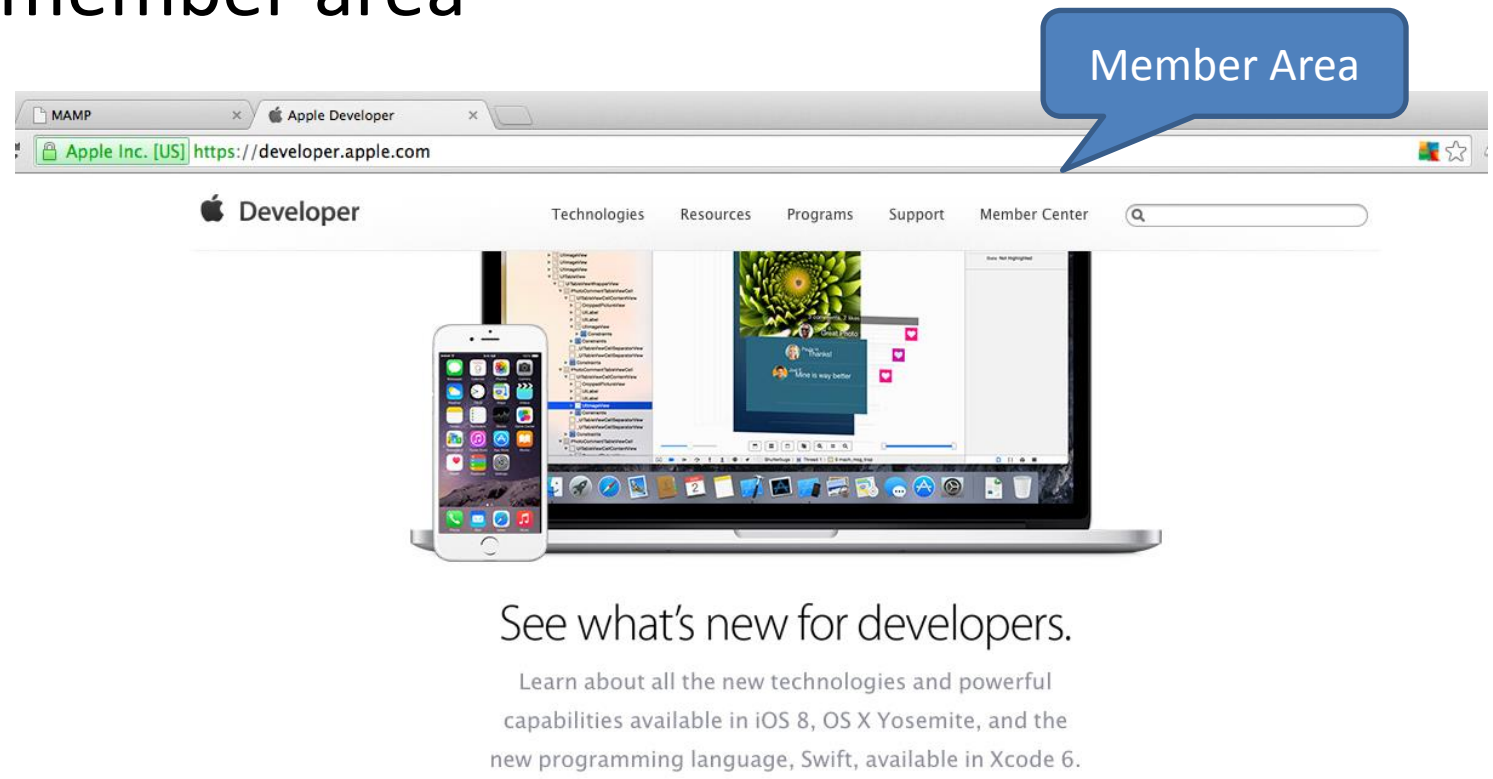


Deploy apps to real device

- Go to the developer.apple.com to login the member area



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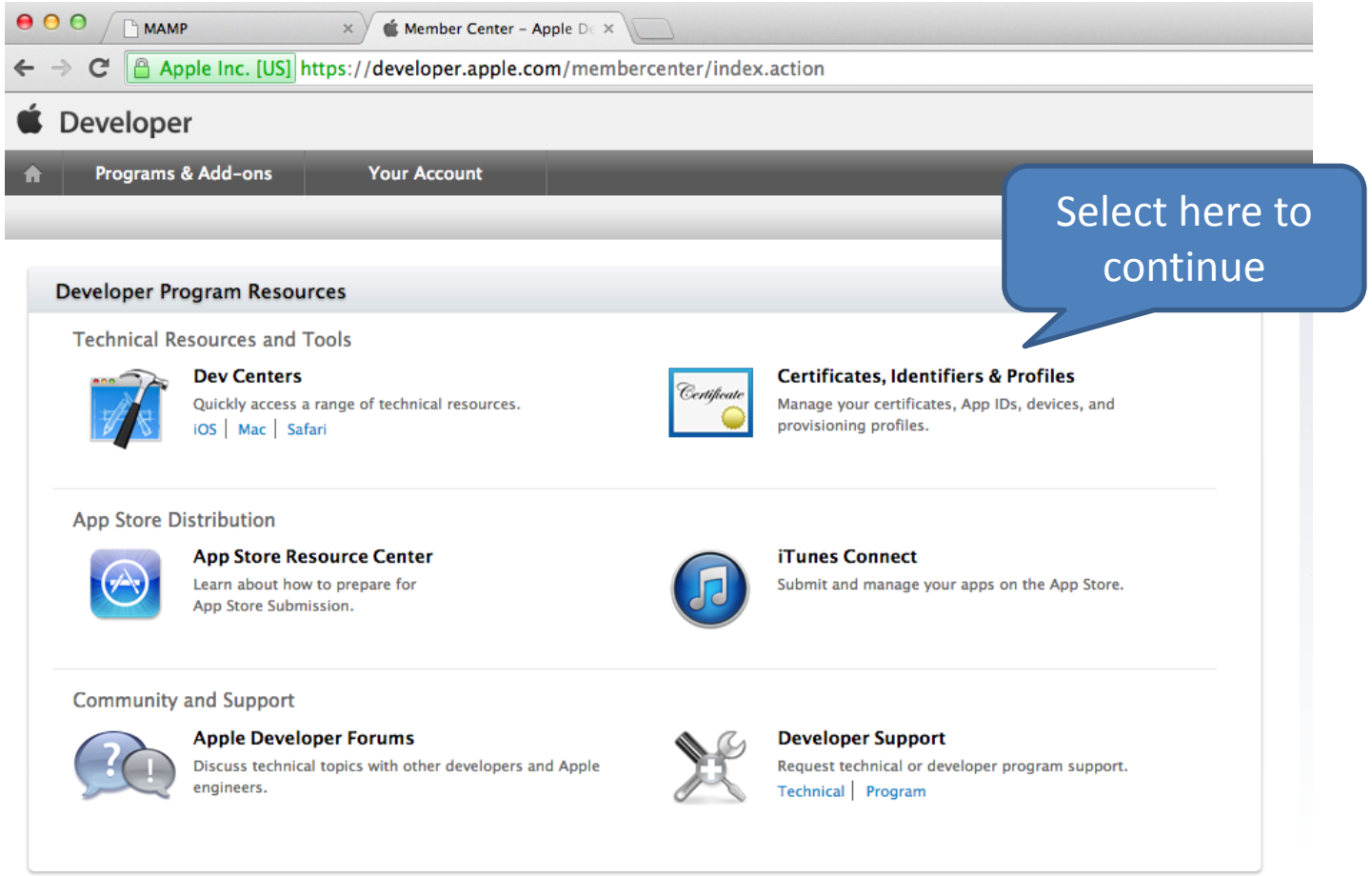

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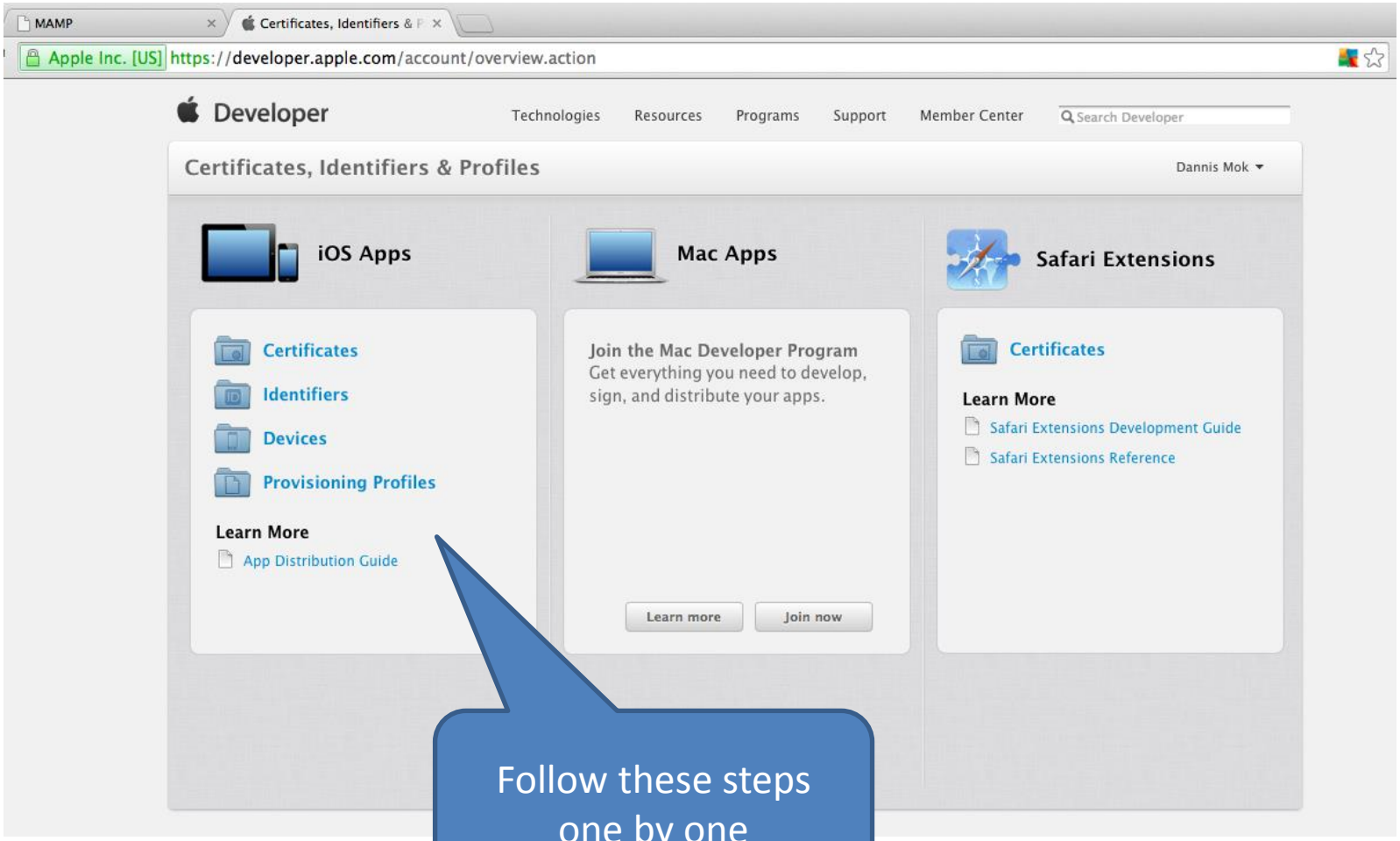

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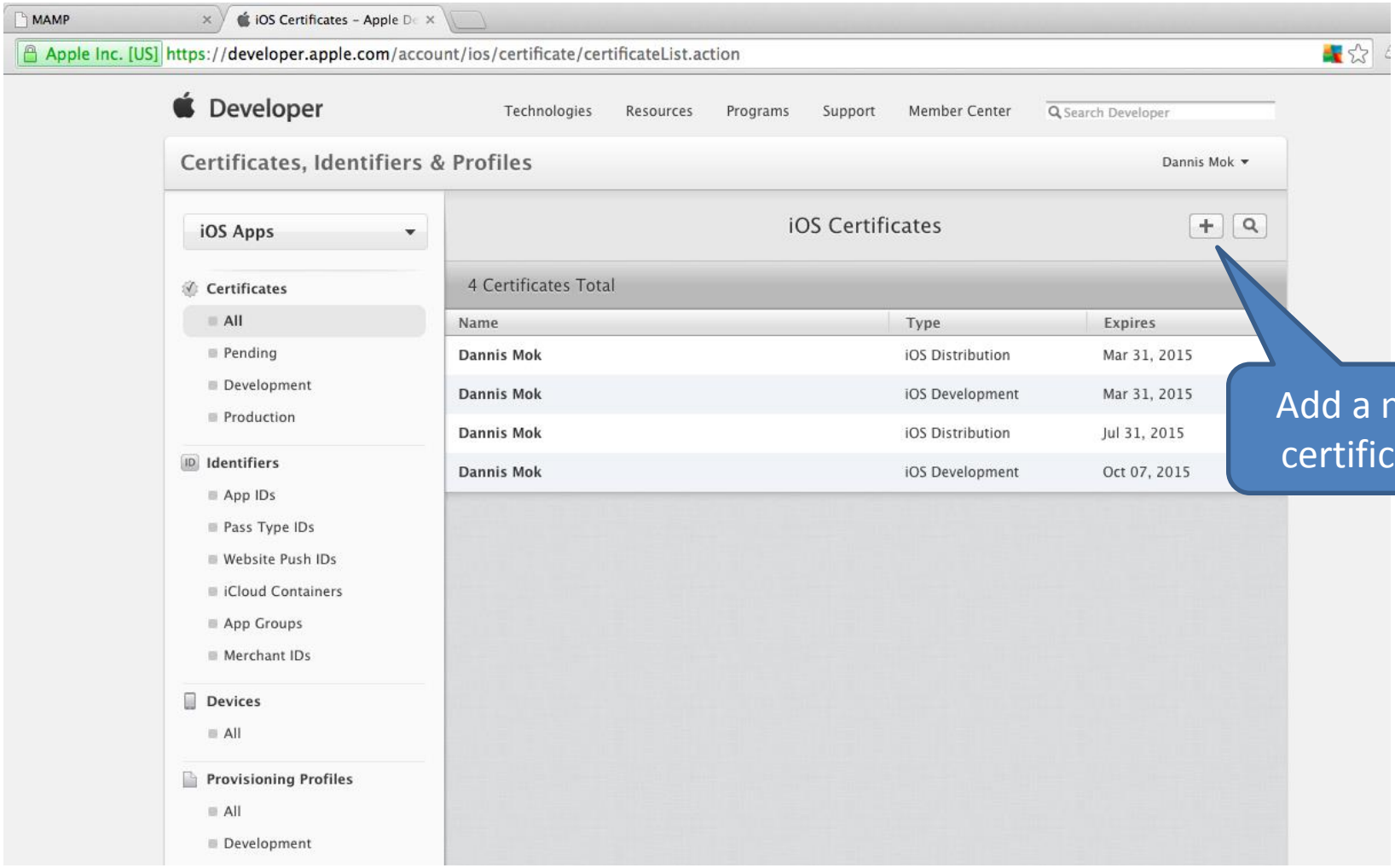

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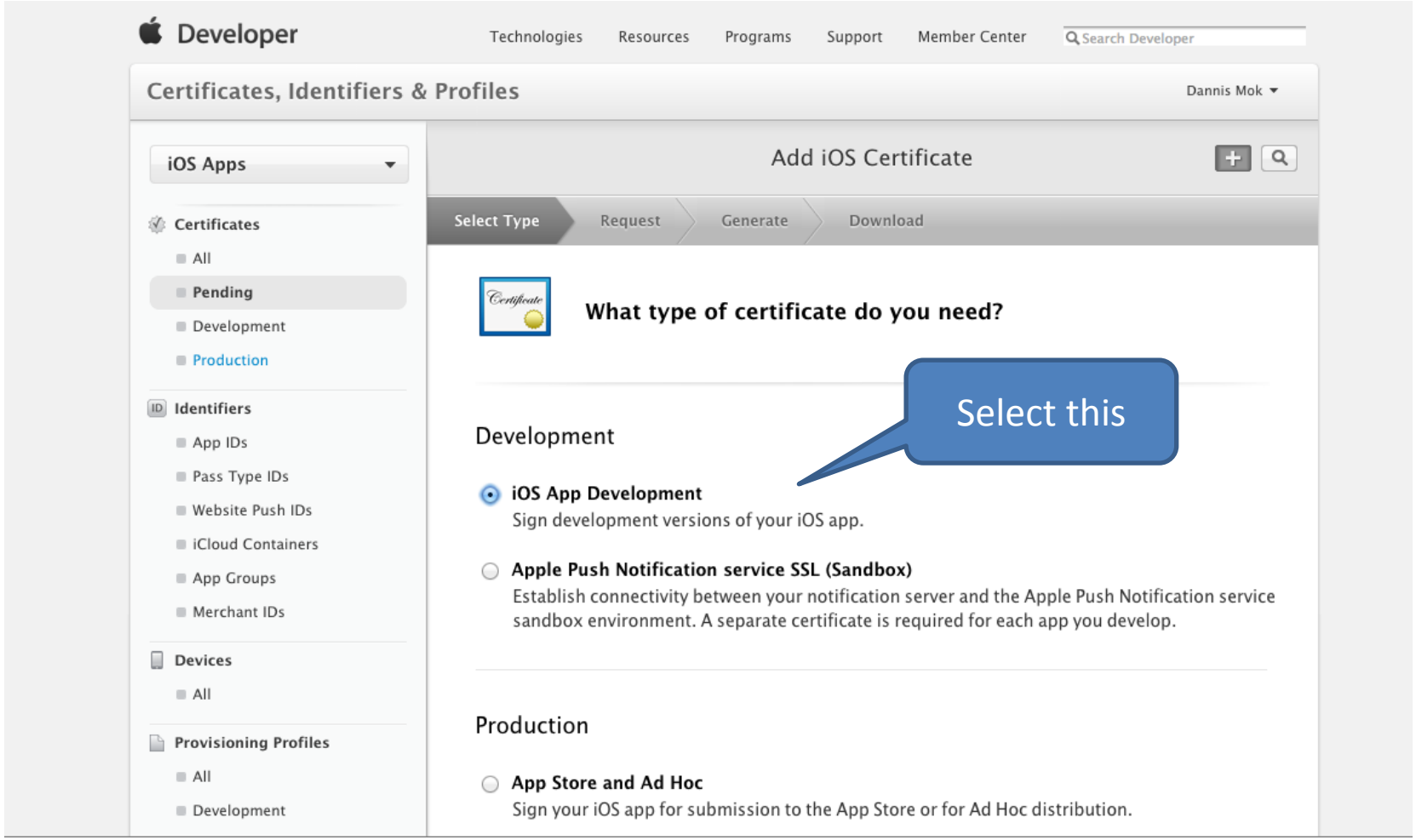

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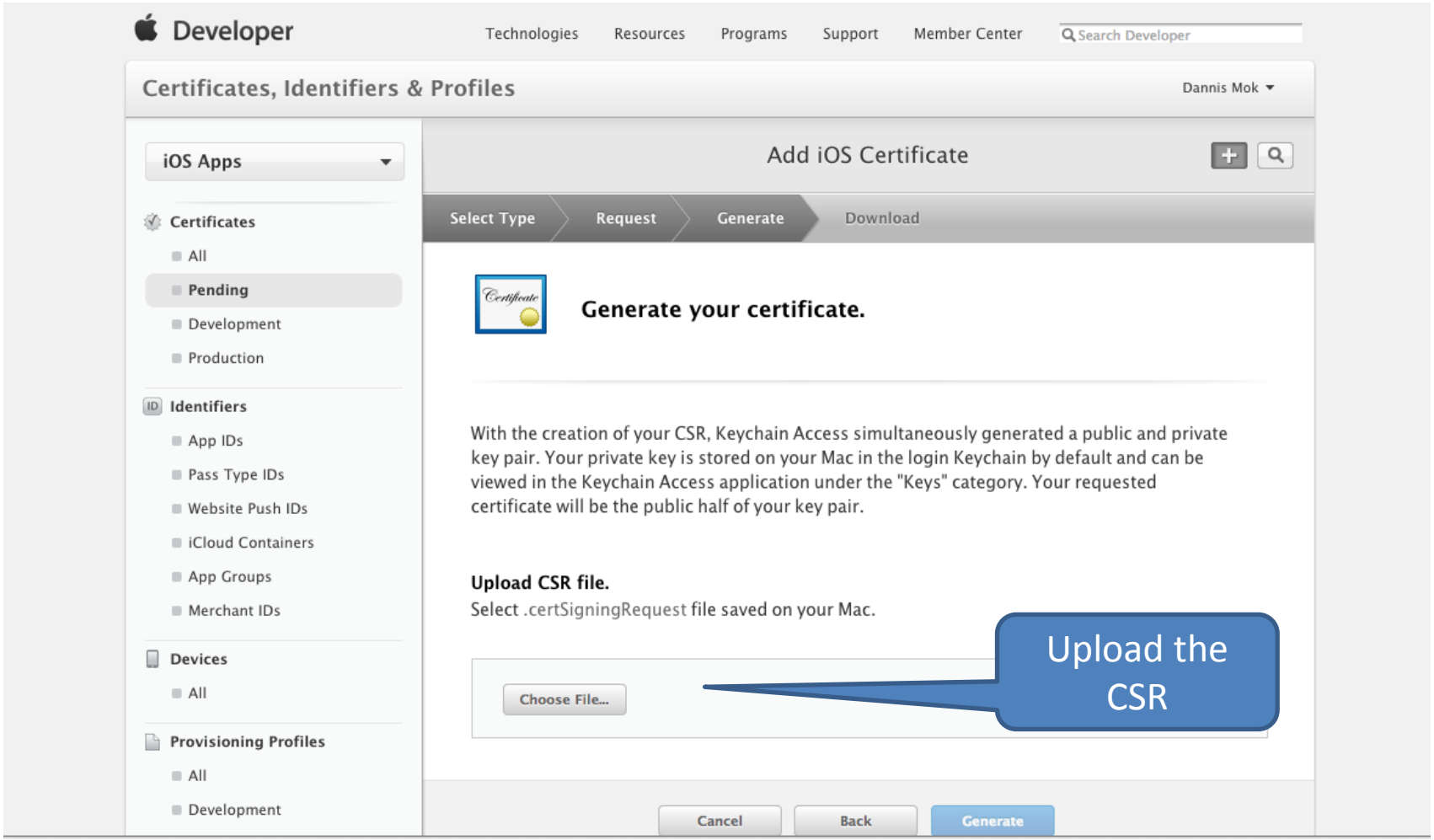

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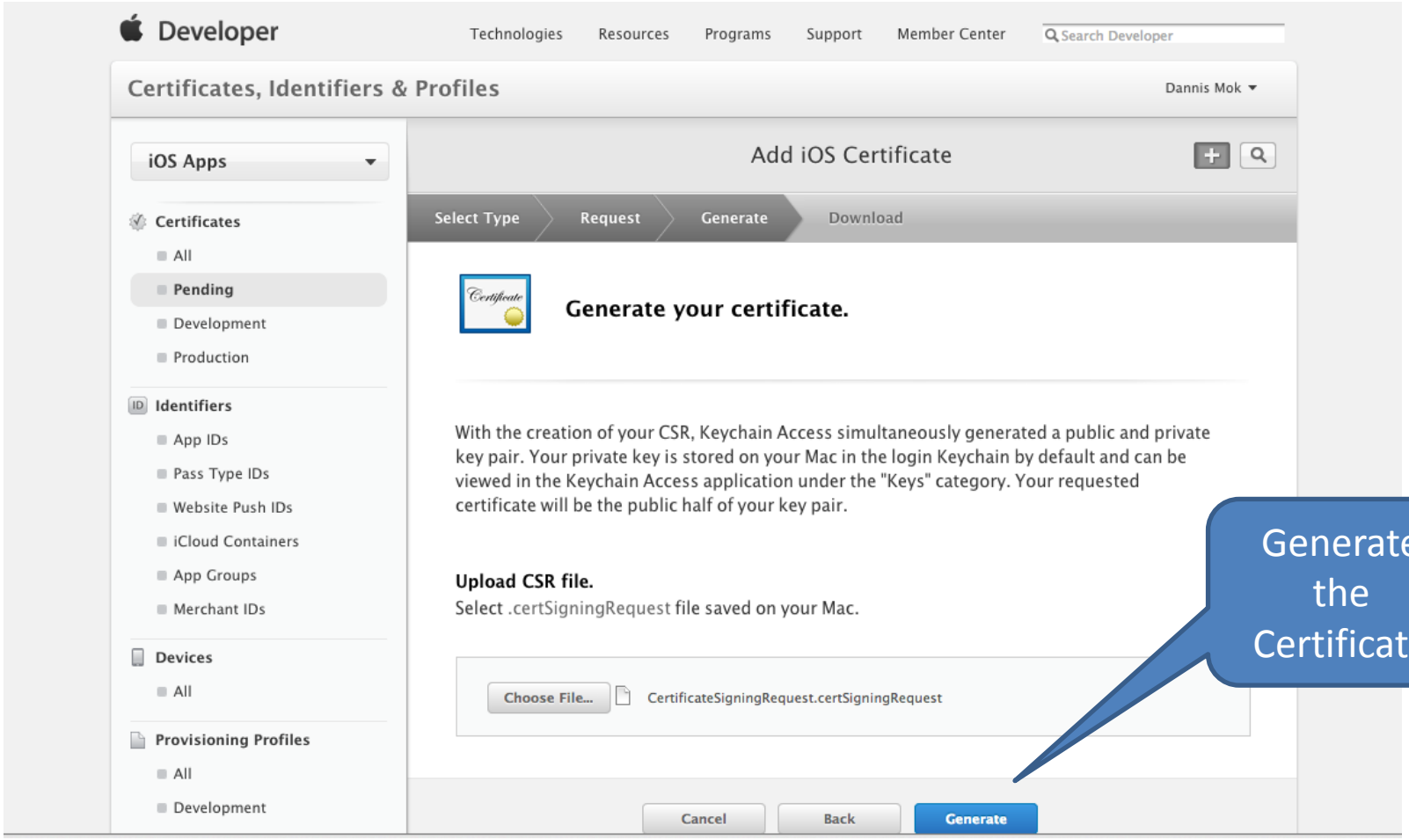

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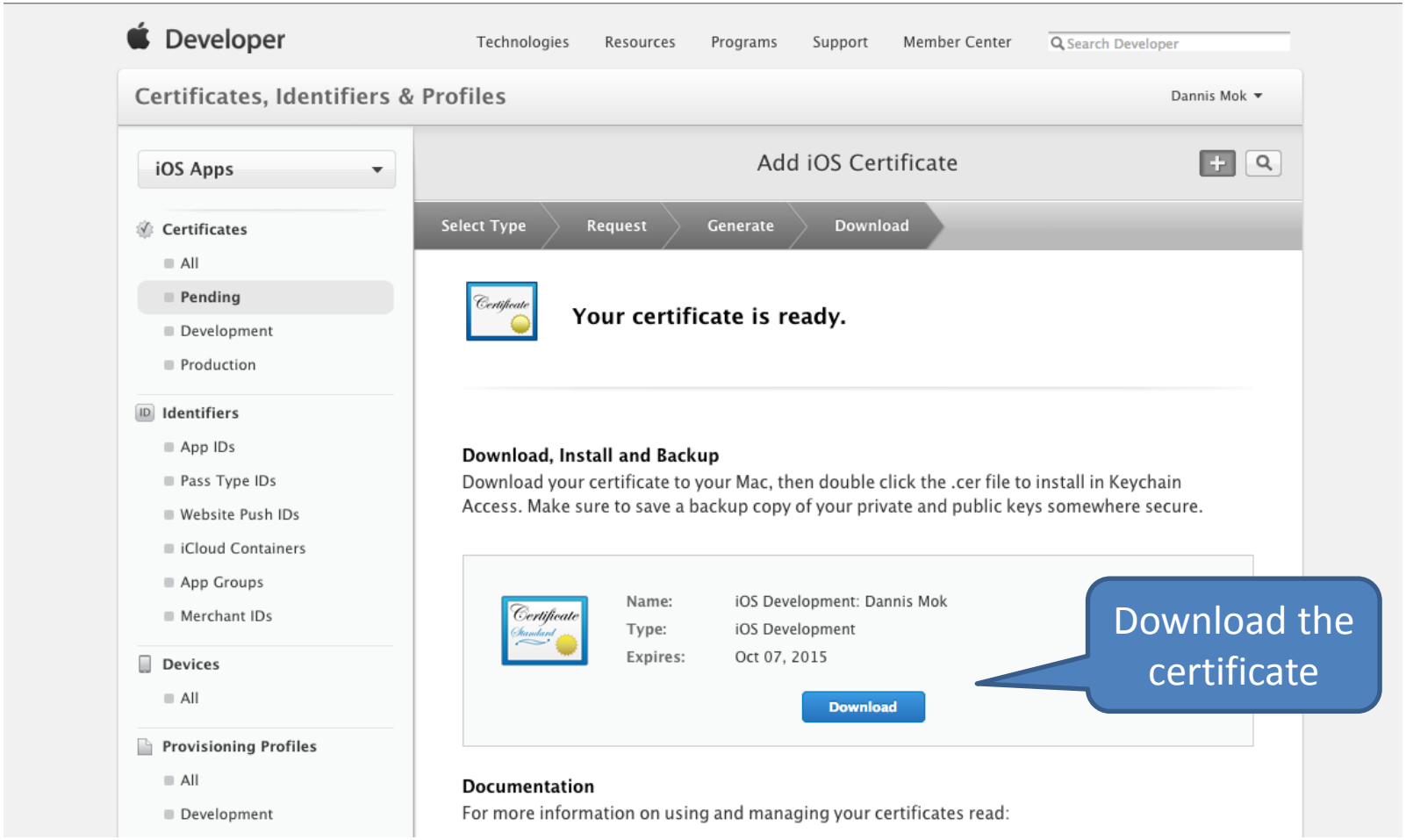

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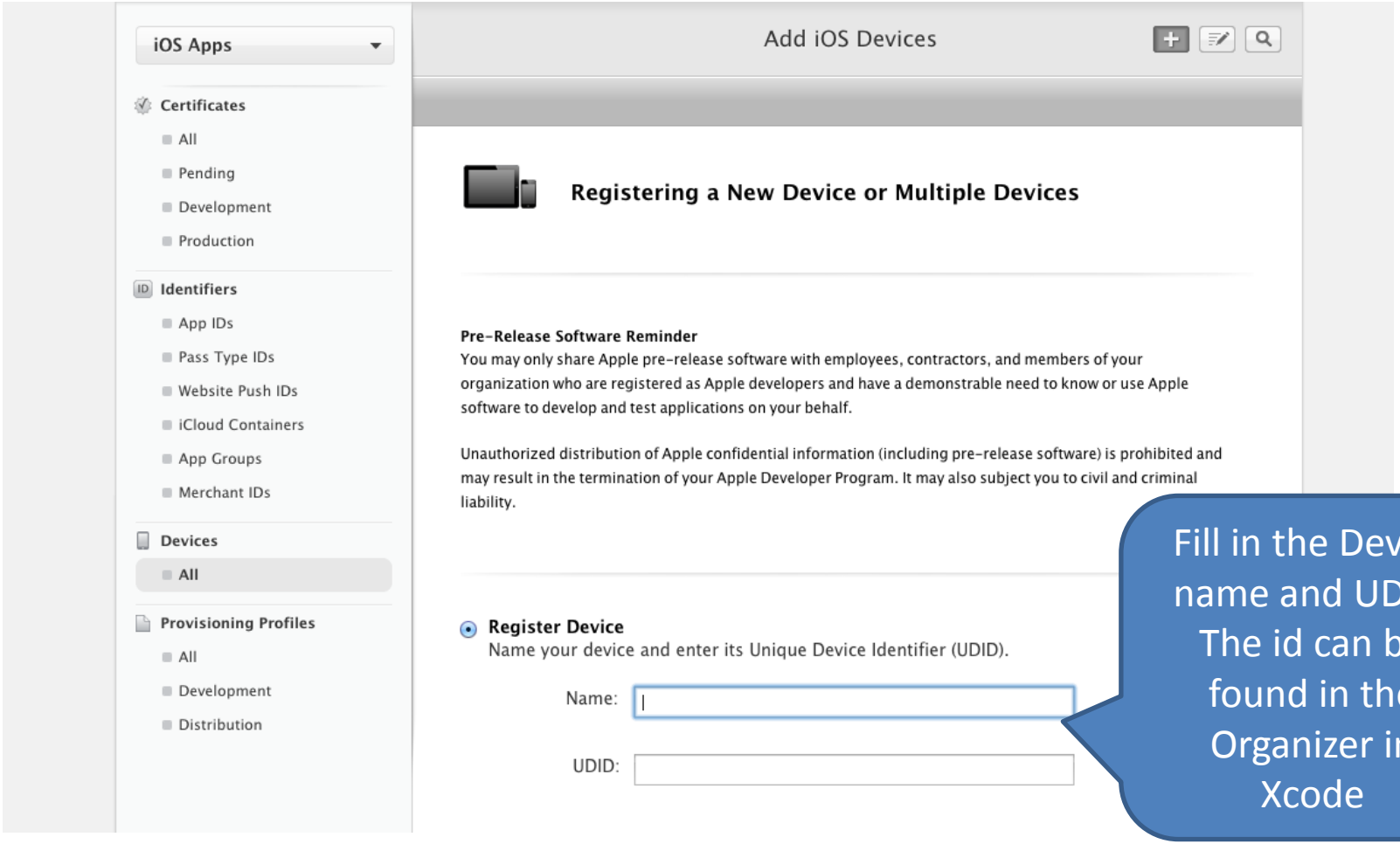

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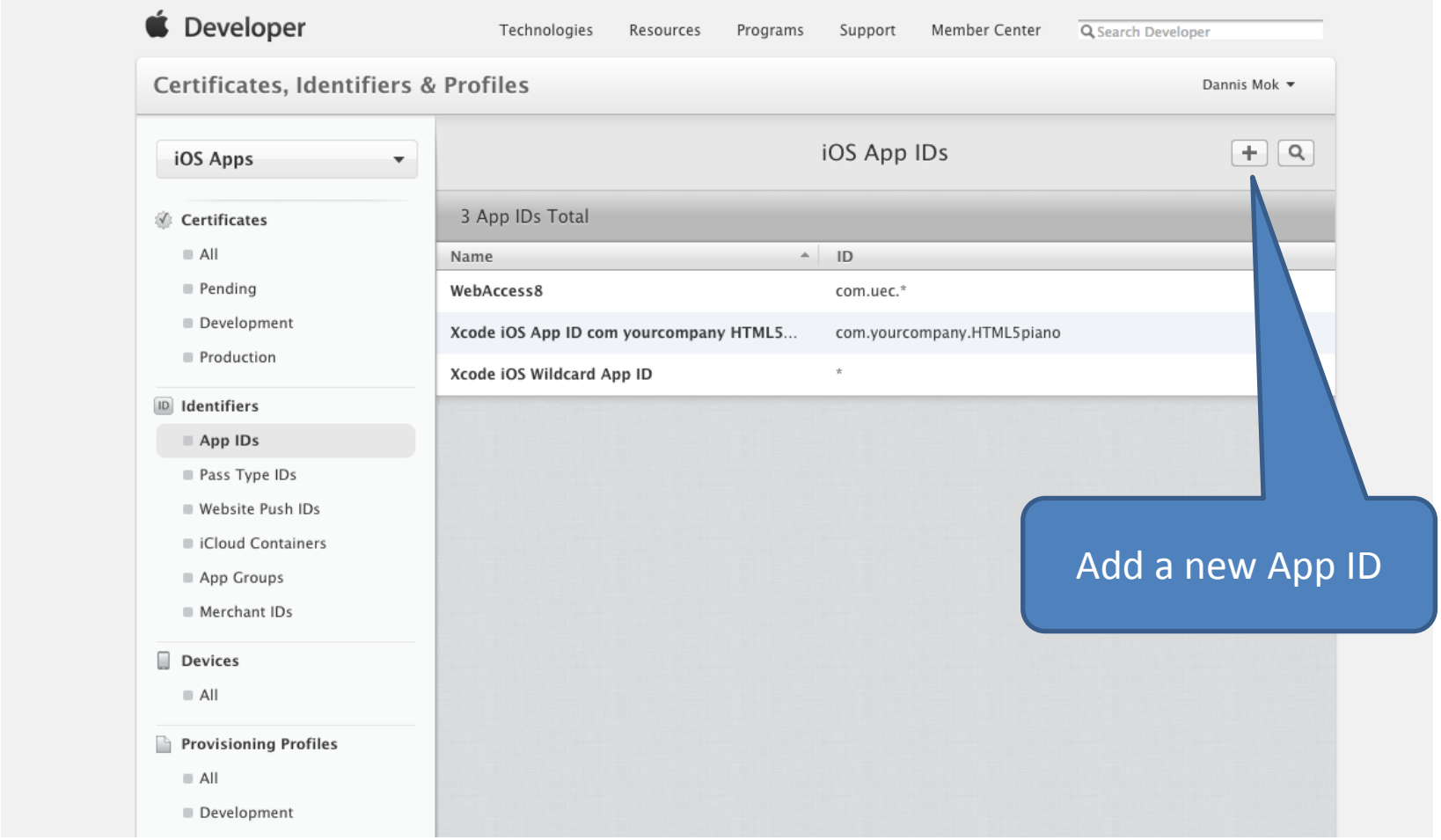

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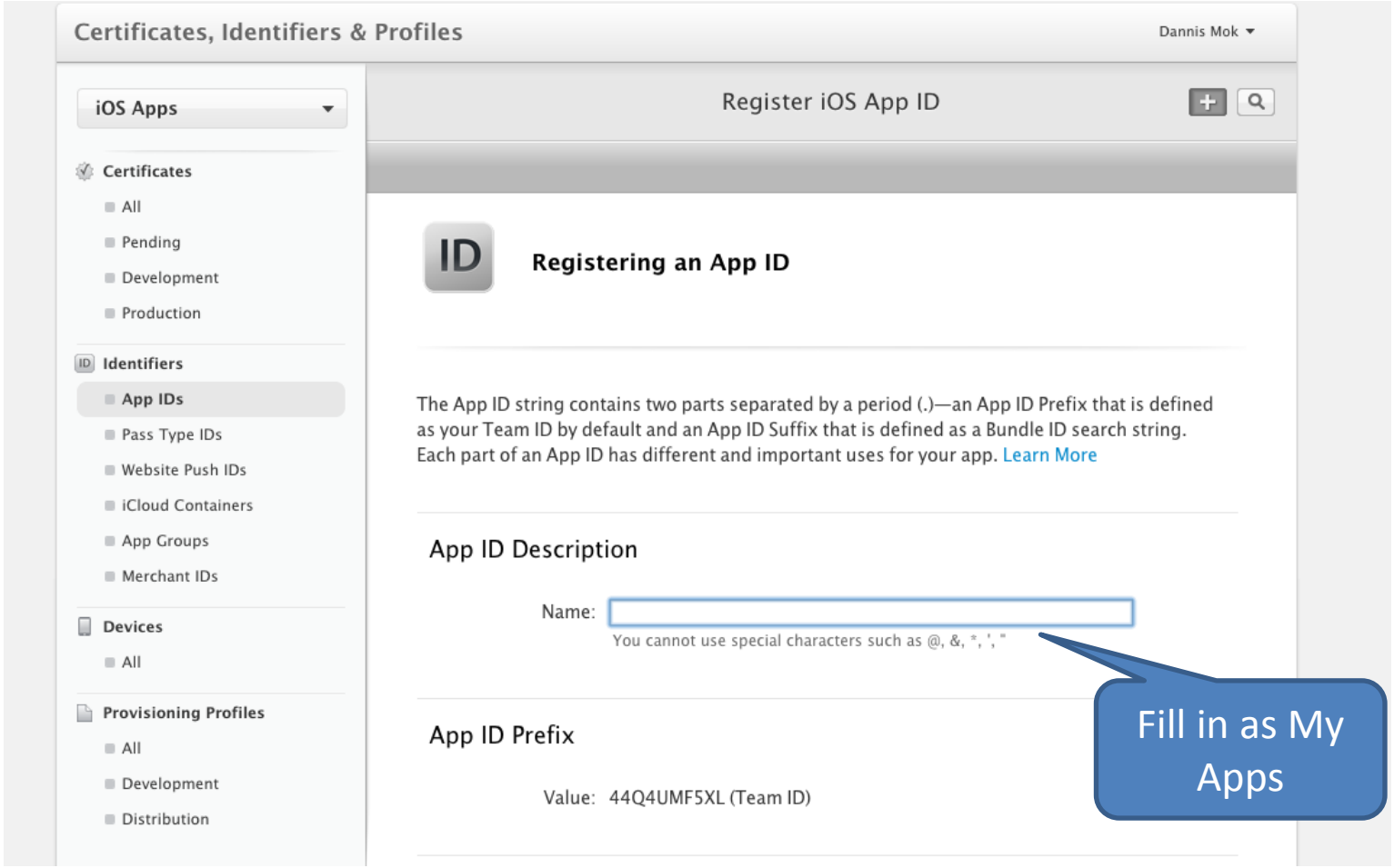


App ID Suffix

Explicit App ID

If you plan to incorporate app services such as Game Center, In-App Purchase, Data Protection, and iCloud, or want a provisioning profile unique to a single app, you must register an explicit App ID for your app.

To create an explicit App ID, enter a unique string in the Bundle ID field. This string should match the Bundle ID of your app.

Bundle ID:

We recommend using a reverse-domain name style string (i.e., com.domainname.appname). It cannot contain an asterisk (*).

Wildcard App ID

This allows you to use a single App ID to match multiple apps. To create a wildcard App ID, enter an asterisk (*) as the last digit in the Bundle ID field.

Bundle ID: com.uec.*

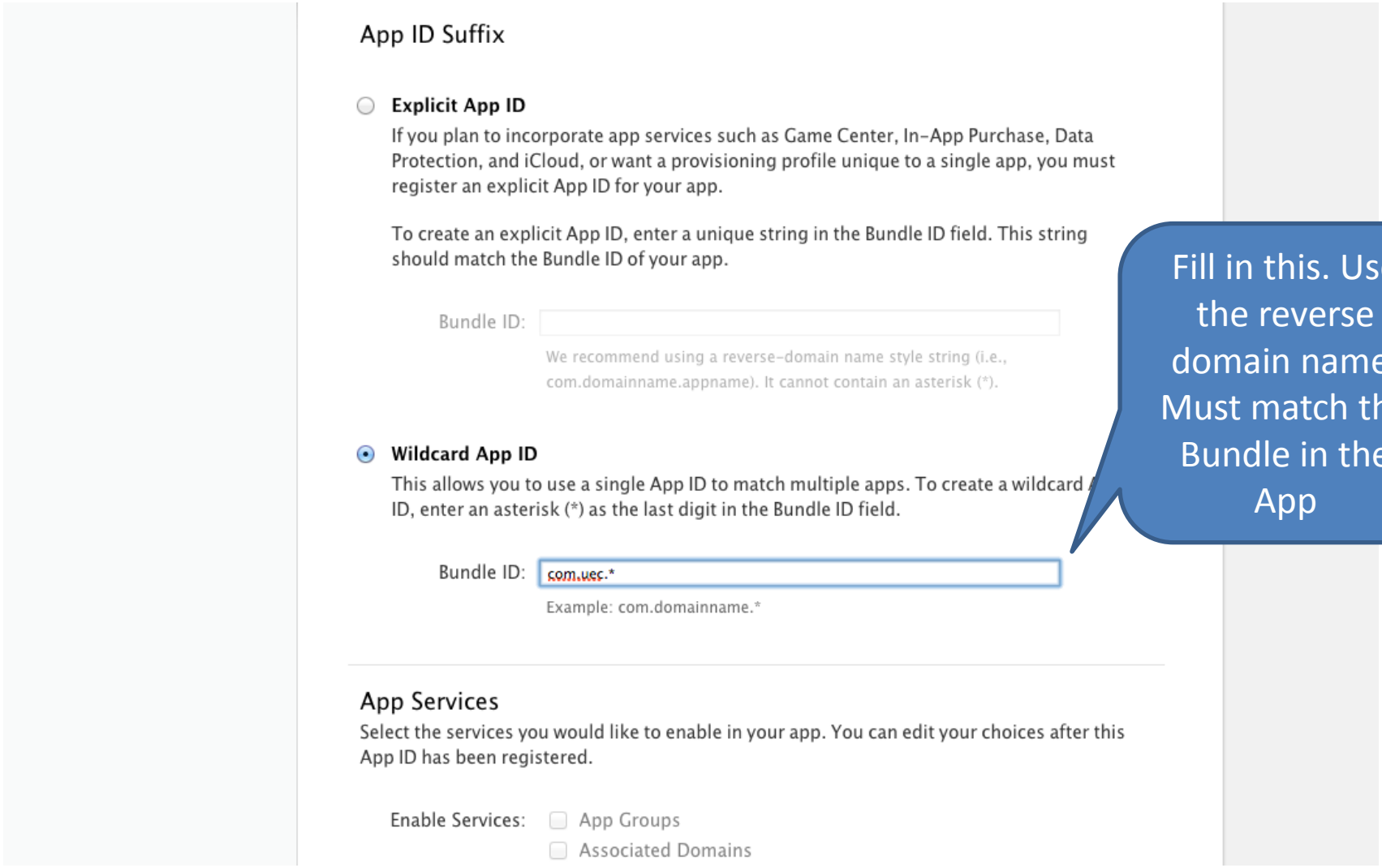
Example: com.domainname.*

App Services

Select the services you would like to enable in your app. You can edit your choices after this App ID has been registered.

Enable Services:
- App Groups
- Associated Domains

Deploy apps to real device



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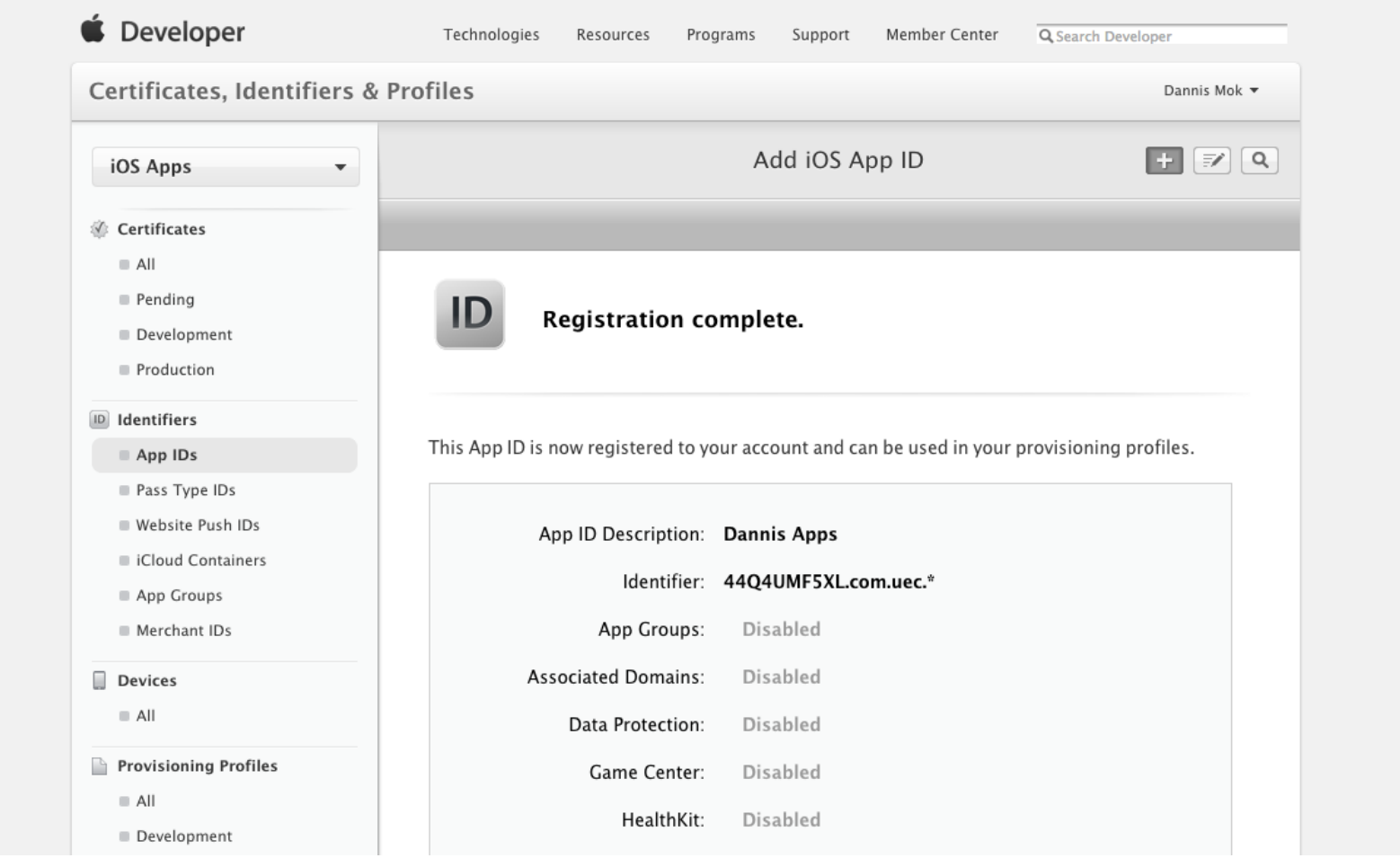

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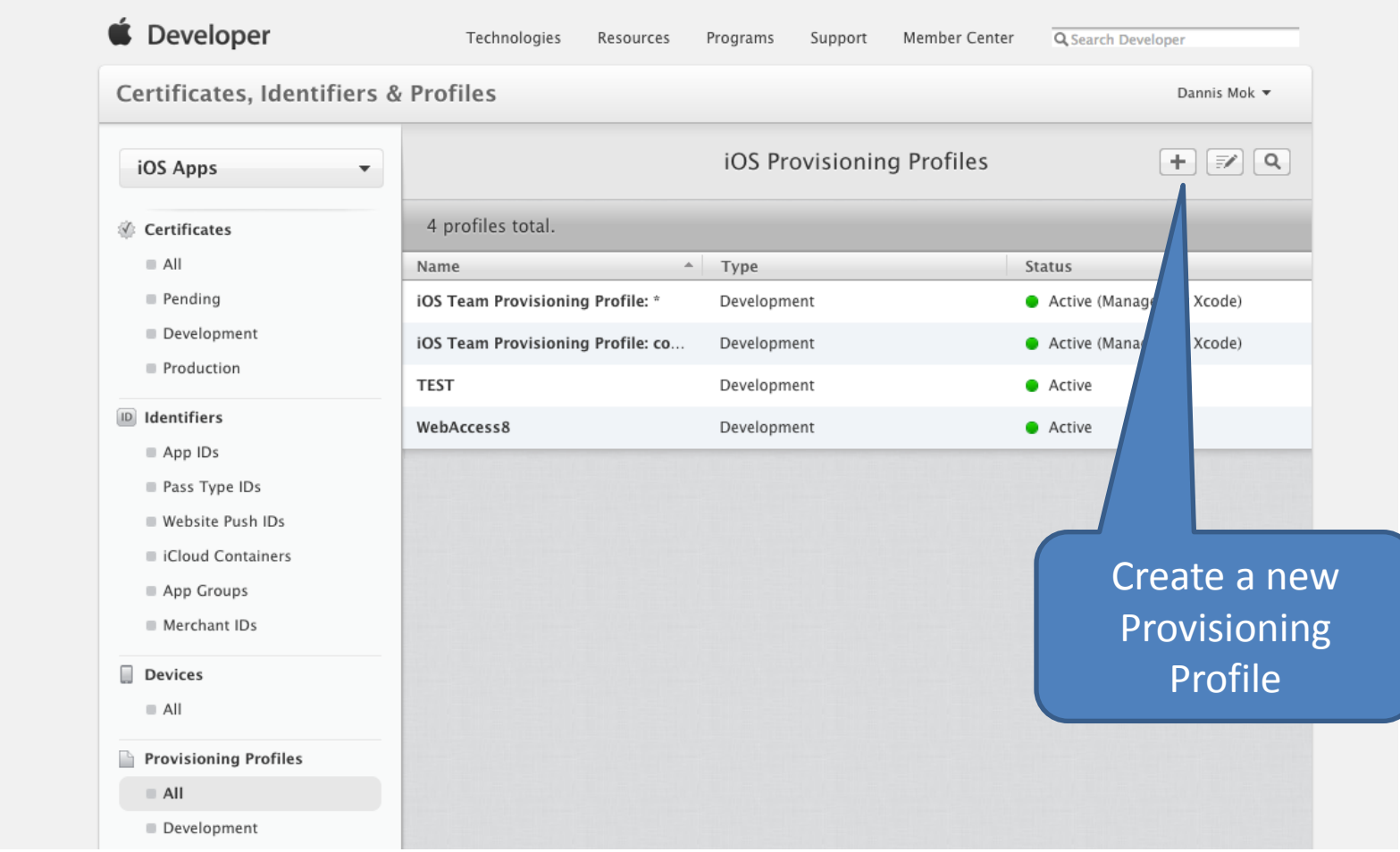
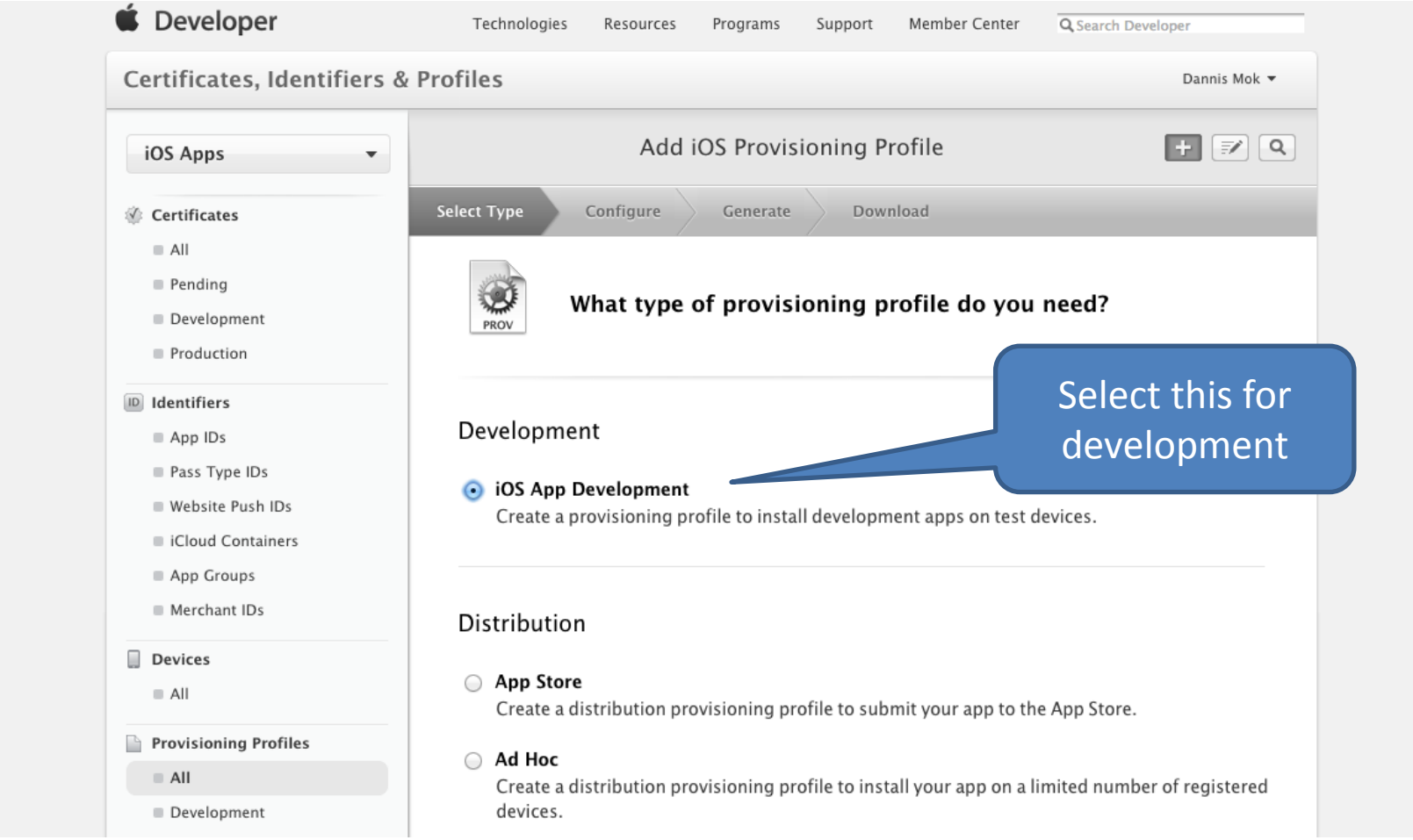


Deploy apps to real device



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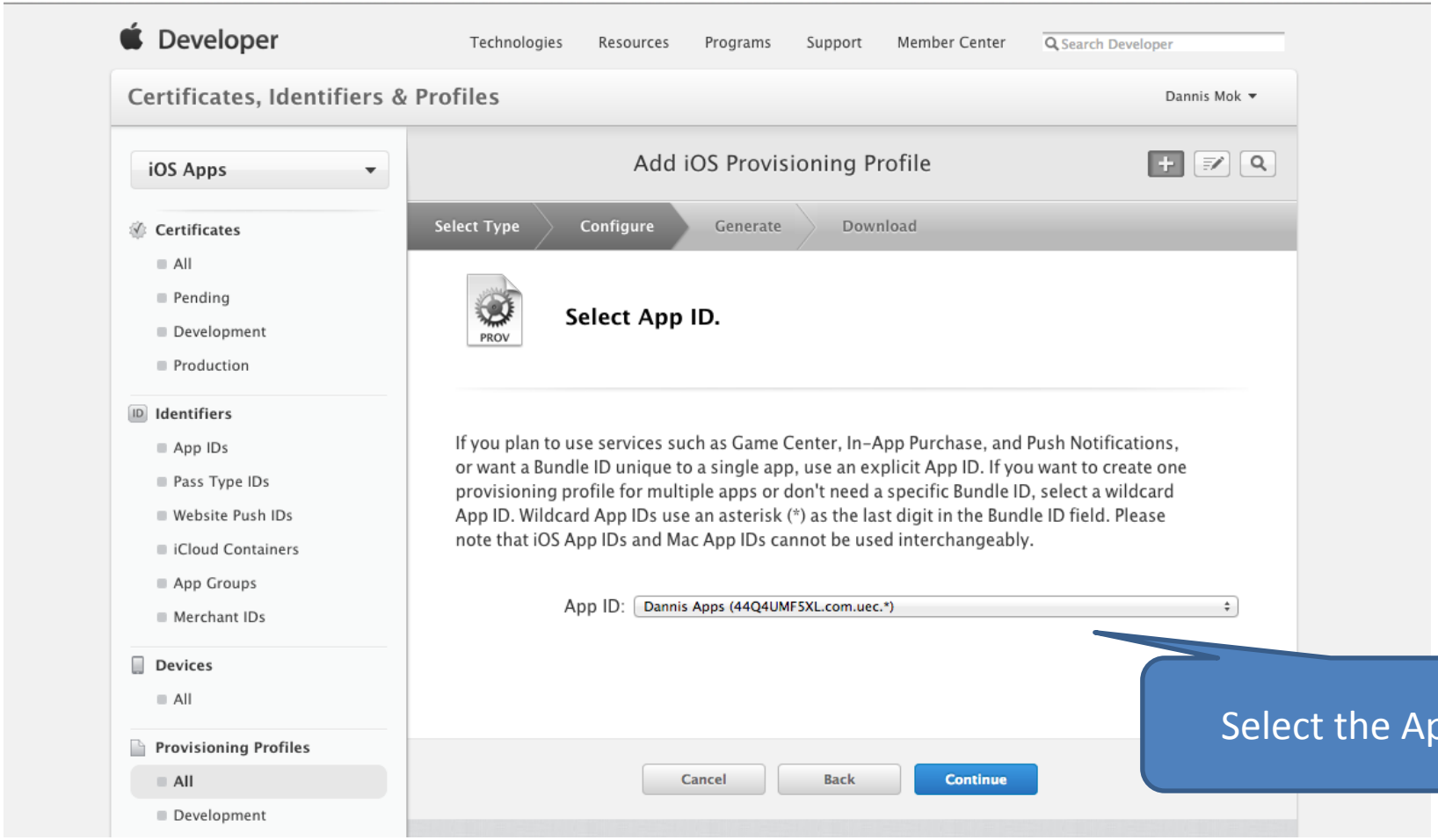

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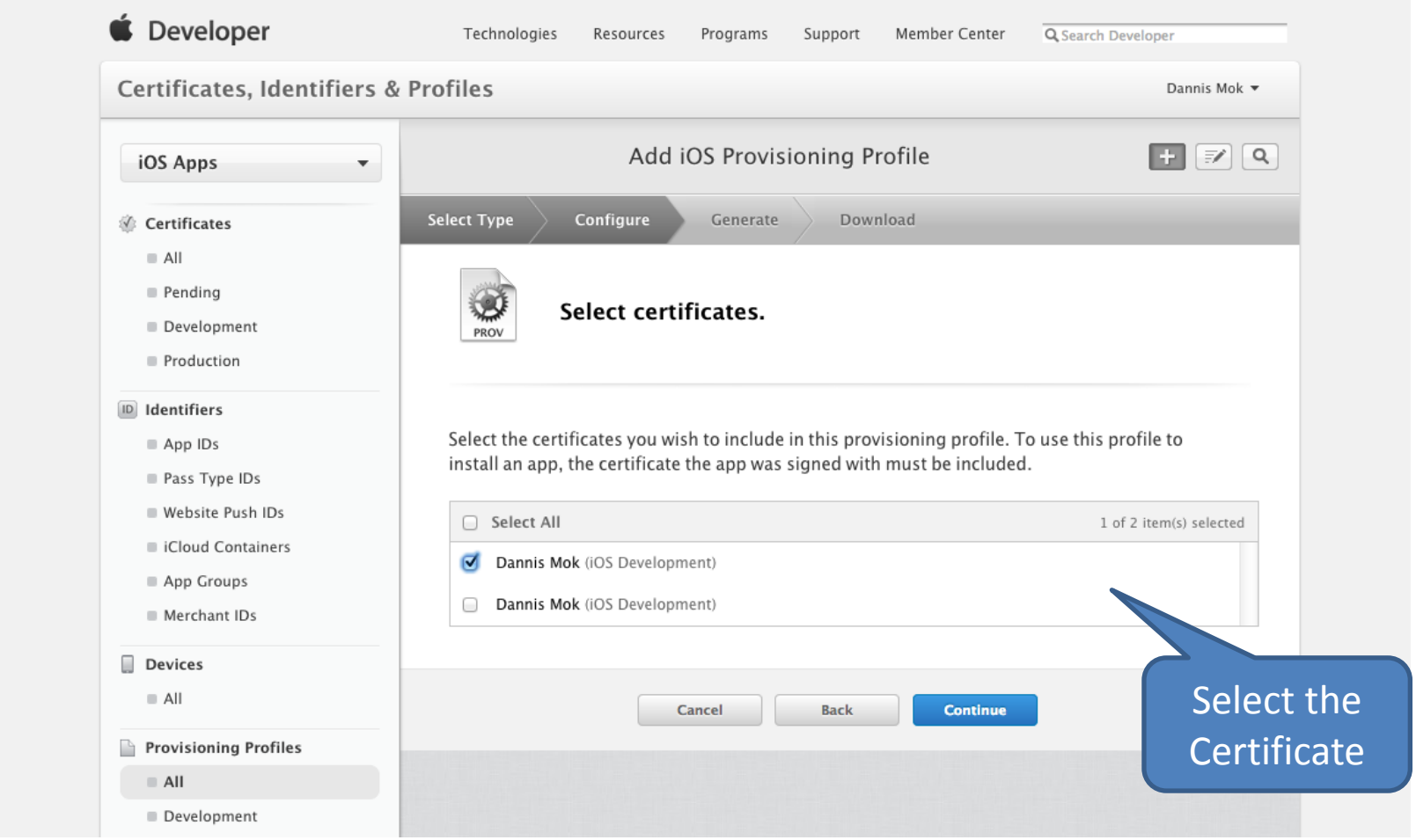

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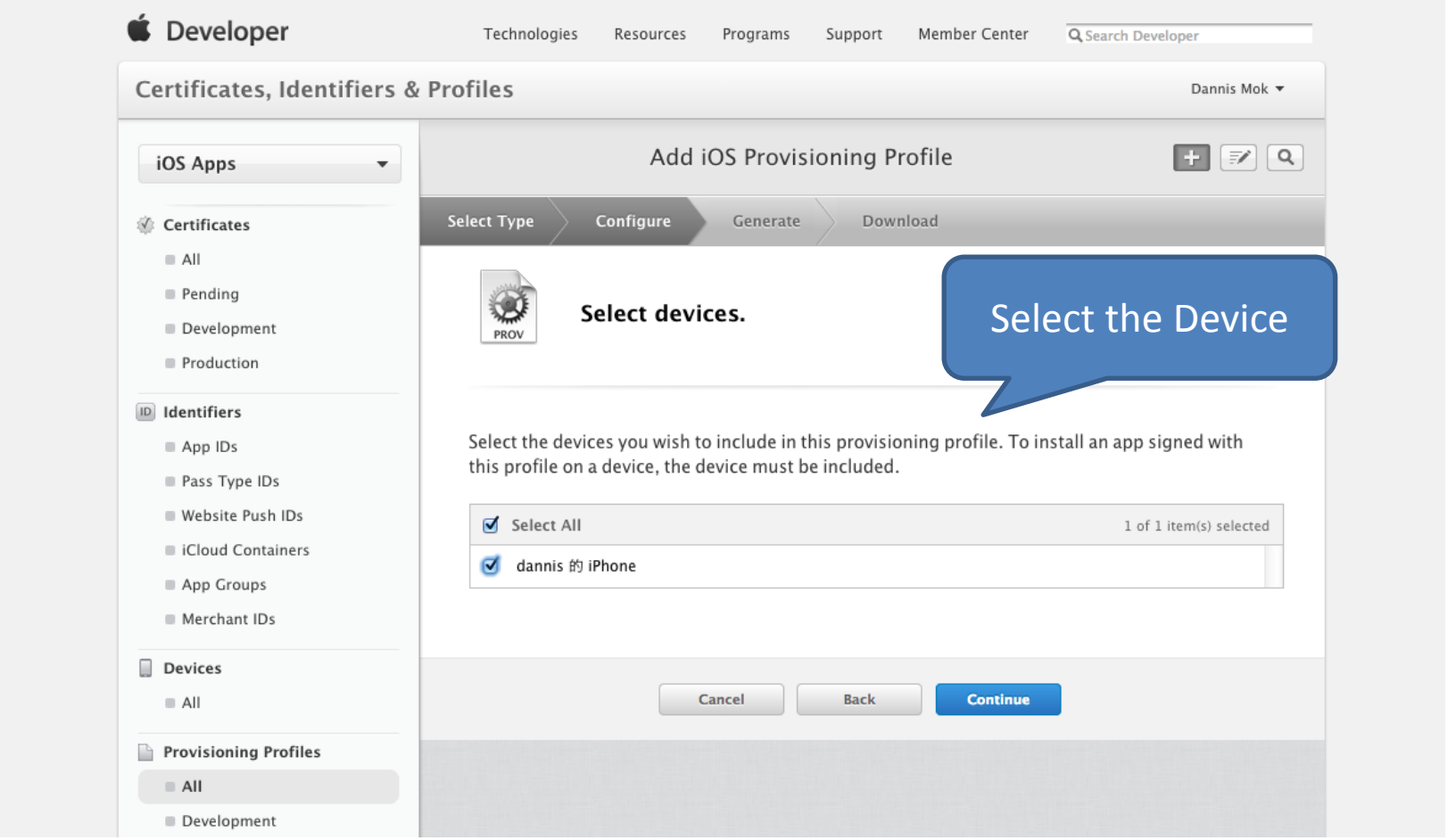

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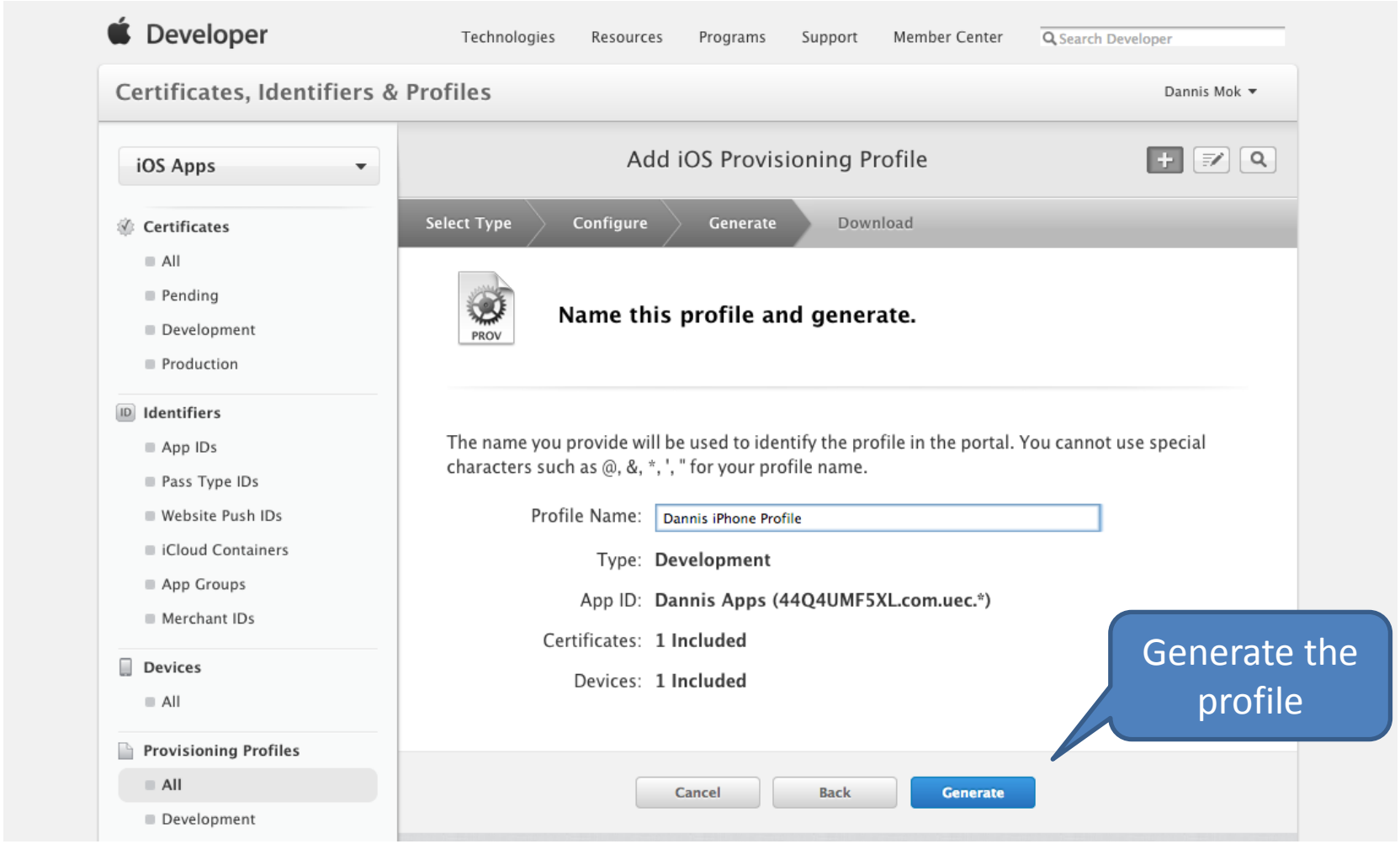

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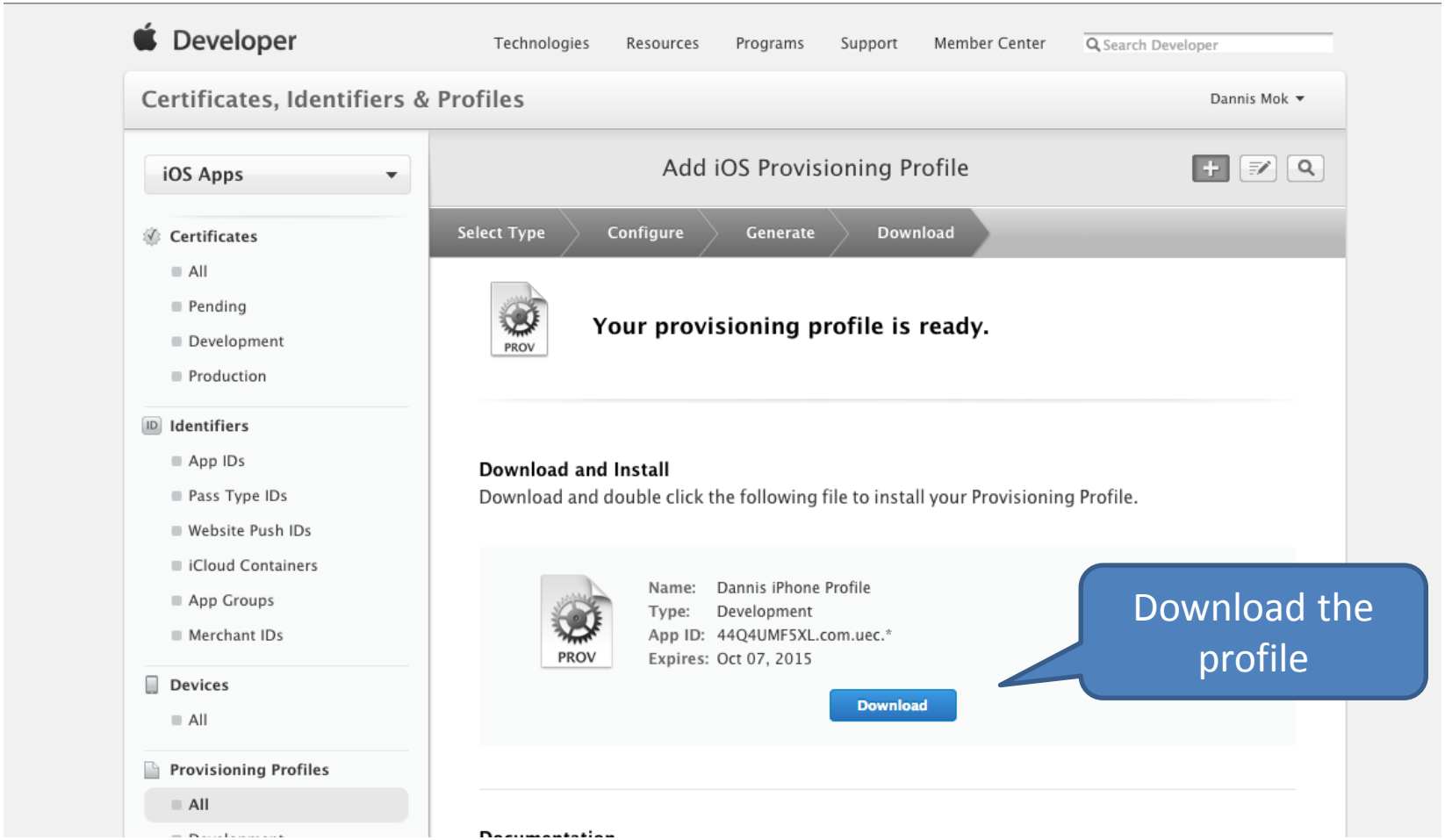

Deploy apps to real device