ClassKit and Schoolwork

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Education App Idea!

*Everyone Loves
Early Nineteenth Century
Presidential Elections!*

App UI

Election Quizzer

1812

The winner was:

James Madison

Who was the loser?

Dewitt Clinton

Charles Pinckney

Andrew Jackson

Did Massachusetts vote for the winner?

Yes

No

Done

Choose the year
Choose the year for your quiz

1804

1808

1812

1816

1820

1824

Show to a teacher

- How do students know what quiz to take?

- What happens if different students need to take different quizzes?

- How does the teacher get quiz results?

Create a back-end!

- Create student accounts

- Create teacher accounts

- Create classes to associate students and teachers

- Create student UI to handle assignments

- Create teacher UI to handle assignments & results

- Create database to store it all

- Easy!

Show the teacher

- Teacher needs a new login for yet another service

- Students - little kids - need a new login for yet another service

- Teacher mumbles something about student privacy laws…

Talk to a lawyer

- YEARGHH!

- https://studentprivacy.ed.gov/security

Protecting Student Privacy
U.S. DEPARTMENT OF EDUCATION
A Service of the Privacy Technical Assistance Center and the Family Policy Compliance Office

Search

RESOURCES • TRAINING • BROWSE BY AUDIENCE • FAQs   ABOUT US • CONTACT   FILE A COMPLAINT

Data Security: K–12 and Higher Education

The Department of Education is committed to helping the education community better safeguard the security of student data in schools at all levels. While FERPA does not require institutions to adopt specific security controls, it does require the use of "reasonable methods" to safeguard student records (34 CFR § 99.31). Despite this requirement, hundreds of educational data breaches happen every year. Not only does the disclosure of this information potentially violate FERPA, but disclosures can expose students to a host of negative consequences such as identity theft, fraud, and extortion.

his page is a portal to recent PTAC guidance and best practice resources for the educational community to use to enhance the security of their information systems. While these resources are principally geared to K-12 agencies and institutions, the security principles are the same regardless of grade level. Post-secondary institutions should refer to the FSA Cyber Security page for additional requirements.

Title IV Participating Institutions are subject to Gramm Leach Bliley Act (GLBA) data security requirements and, pursuant to the Participation Agreement, are required to report data breaches to FSA. Information specific to these requirements can be found on the FSA Cyber Security page.

Cyber Advisory - New Type of Cyber Extortion / Threat Attack

W 2 Phishing Scam

What Parents Need to Know about their Student's Data

FEATURED RESOURCES

Integrated Data Systems and Student Privacy

This guidance document provides background information on what an Integrated Data System (IDS) is and why educational authorities may choose to participate in one, and clarifies how such authorities can participate in an IDS while ensuring student privacy in compliance with FERPA.
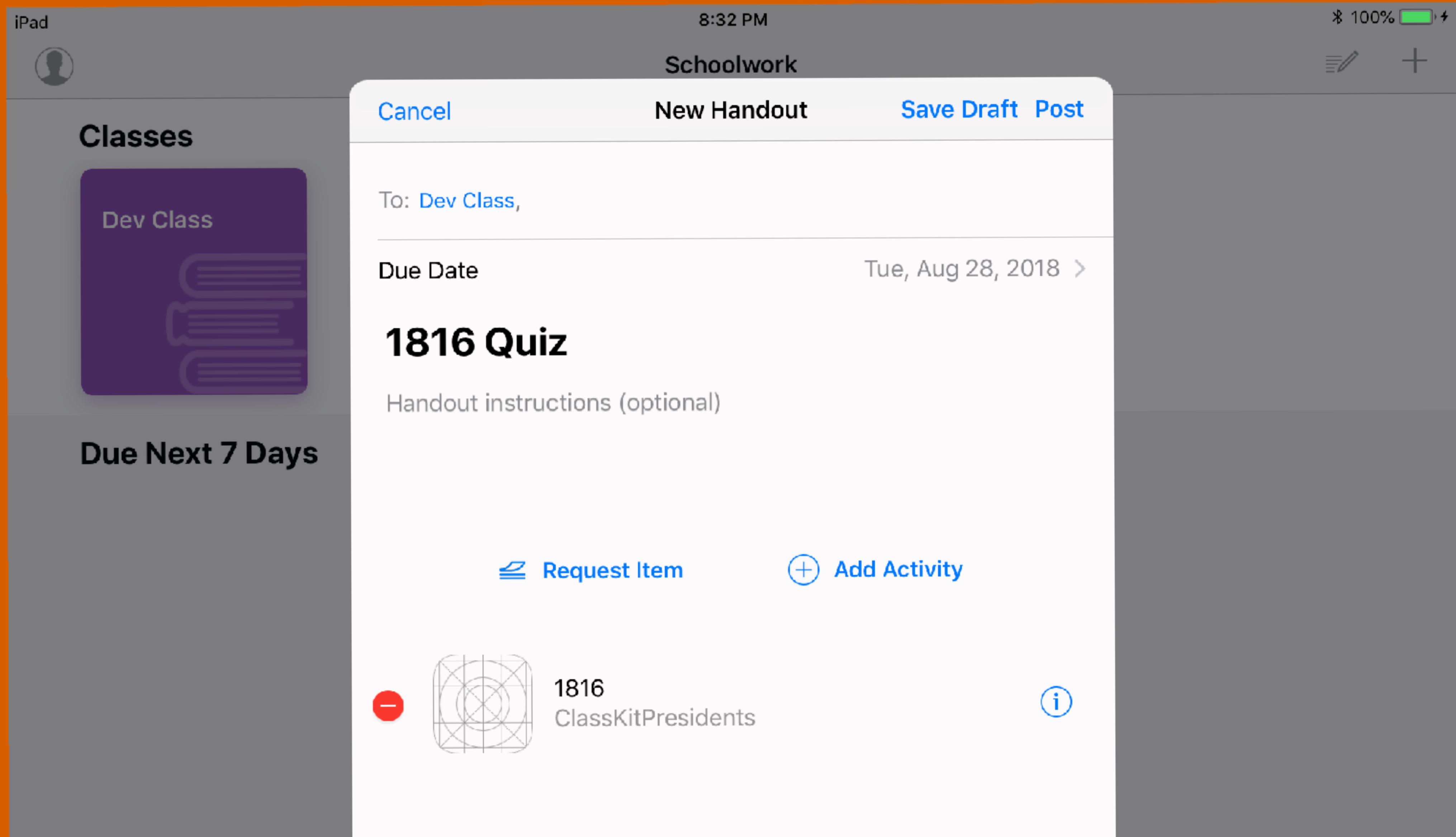
ClassKit/Schoolwork solve this

- ClassKit is the iOS Framework

- Schoolwork is Apple-provided app

- No back end needed at all

- Uses iCloud for device logins. No app logins at all.

- Shared iPad support

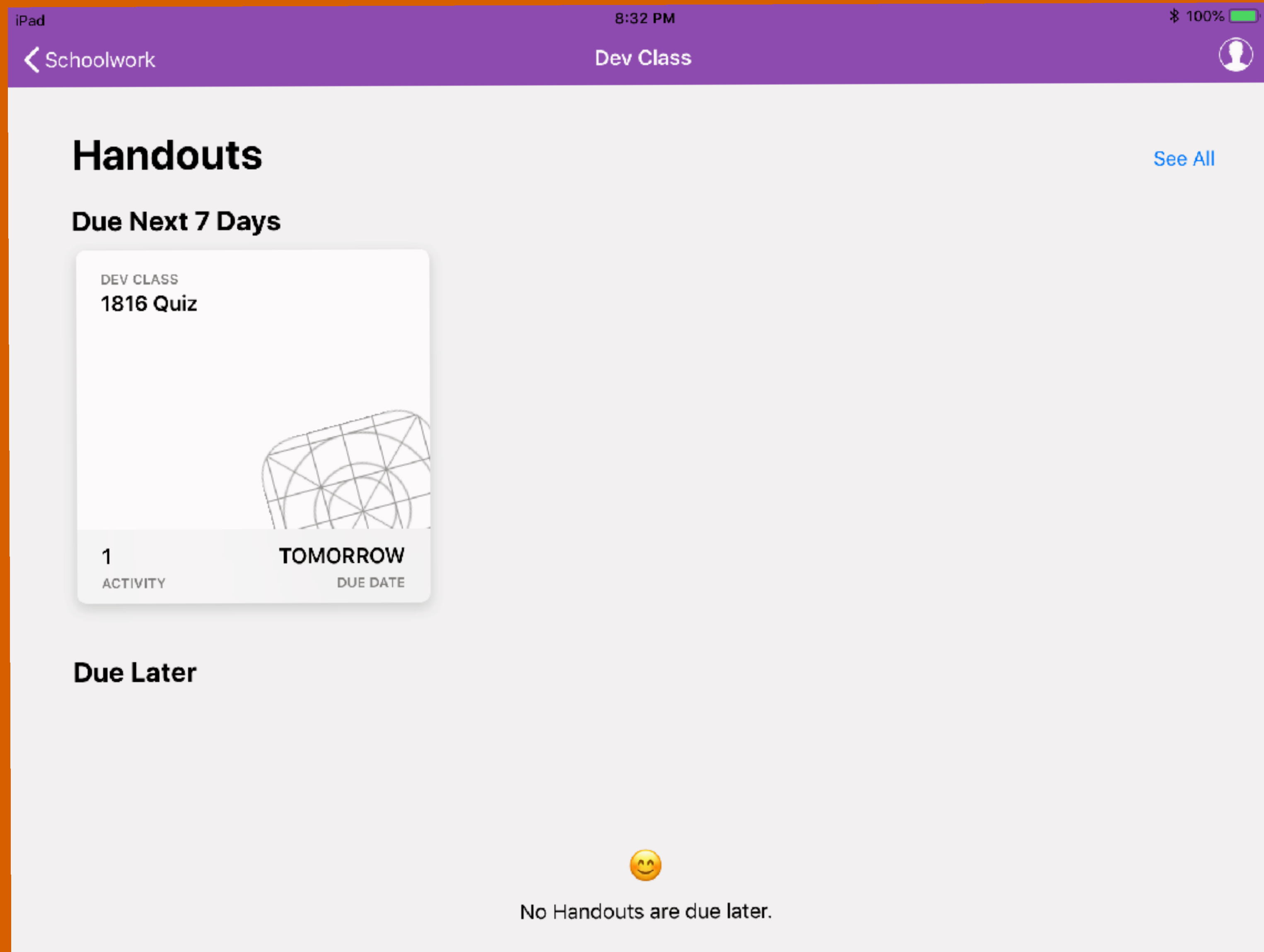- Must store all data in iCloud Drive and/or Keychain

Schoolwork

- Teachers use it to assign work to students, and to review completed work

- Students use it to see work assigned to them, and open apps via deep links

Schoolwork teacher view

iPad 8:32 PM ∗ 100% 🔋⚡

Schoolwork

Classes

Dev Class

Due Next 7 Days

Cancel **New Handout** Save Draft **Post**

To: **Dev Class,**

Due Date Tue, Aug 28, 2018 ›

1816 Quiz

Handout instructions (optional)

≦ **Request Item** ⊕ **Add Activity**

➖ **1816**
ClassKitPresidents ⓘ

Schoolwork student view

Apple School Manager

Apple School Manager

School

Institution

Activity

Locations

People

Accounts

Classes

Roles

Devices

MDM Servers

Device Assignments

Assignment History

Content

Apps and Books

iTunes U

Search Accounts

Sort by Last Name

22 Accounts
All Accounts

Student

Core5 Level3
Student

Rob
Administrator

Robbie Pearl
Student

Core5 Staff
Staff

Apple Student
Student

Mitch Student
Student

Mitch

MS

Mitch Student

Student

hello
Reset Password

Verification Code

Inspect

Edit

Name
Mitch Student

Managed Apple ID ?
mcohen@appleid

Account Status

Current ClassKit Limitations

- Get ready to cry

- Only works on iPads

- Only works on iPads with iCloud logins created in Apple School Manager

- Only schools can use Apple School Manager

- Not all schools with iPads use Apple School Manager

This is just v1

Fingers crossed Apple will remove limitations

Development - Fake it

- Developer access on iPad

- Limited to one class, one teacher, one student

- None of this works in simulator

- Education developers can get access to ASM

Require 11.4

```
@available(iOS 11.4, *)
```

Sort of works in 11.3

Entitlement

Also *required* to have a Privacy Policy

ClassKit initialization

```swift
class ClassKitManager: NSObject, CLSDataStoreDelegate {


func setupClassKit() {
    CLSDataStore.shared.delegate = self
  }



}
```

ClassKit Contexts

- Assignable content within your app

  - Quiz

  - Stuff to read (Chapter, Section, Page…)

  - Video and Audio

  - Almost anything your app can do

Create ClassKit Contexts

```swift
func createContexts() {
    let years = [1804,1808,1812,1816,1820,1824]
    for year in years {
        if let yearString = year as? String {
            CLSDataStore.shared.mainAppContext.descendant(
                    matchingIdentifierPath: ["Elections", yearString]) {
                (context, error) in
                if error != nil {
                    print("Error finding context! \(error?.localizedDescription ?? "")")
                }
            }
        }
    }
}
```

Create ClassKit Contexts

```swift
func createContext(forIdentifier identifier: String,
                   parentContext: CLSContext,
                   parentIdentifierPath: [String]) -> CLSContext? {

    let context = CLSContext.init(type: .quiz,
                                  identifier: identifier,
                                  title: identifier);

    context.topic = CLSContextTopic.socialScience

    if identifier != "Elections" {
        context.universalLinkURL = URL(string: "com.mitch.electionquiz://\(identifier)")
    }

    return context;
}
```

Using the App's Custom URL

```objc
-(BOOL)application:(UIApplication *)app openURL:(NSURL *)url
           options:(NSDictionary<UIApplicationOpenURLOptionsKey,id> *)options {
    NSString *urlString = url.absoluteString;
    NSString *yearString = [urlString
                               stringByReplacingOccurrencesOfString:@"com.mitch.electionquiz://"
                                                         withString:@""];
    [ClassKitManager.sharedInstance configureCurrentContextWithYear:yearString];
    return YES;
}
```

Set the Current Context

```swift
var currentContext:CLSContext?

func configureCurrentContext(year:String) {
    CLSDataStore.shared.mainAppContext.descendant(
        matchingIdentifierPath: ["Elections", year])
    { (context, error) in
        self.currentContext = context
        self.currentContext?.becomeActive()
    }
}
```

ClassKit Activities

```swift
var currentActivity:CLSActivity?


@objc public func startActivityForContext(context:CLSContext) {
    self.currentActivity = context.createNewActivity()
    self.currentActivity?.start()
}
```

ClassKit ActivityItem

```swift
func setScore(score:Double) {
    let scoreItem = CLSScoreItem(identifier: self.year,
                                 title: "score",
                                 score: score,
                                 maxScore: 1)
    self.currentActivity?.primaryActivityItem = scoreItem
}
```

Save The Activity!

```swift
func saveActivity() {
    self.currentActivity?.stop()
    self.currentContext?.resignActive()
    CLSDataStore.shared.save { (error) in
        if error != nil {
            print("Error! \(error?.localizedDescription ?? "")")
        }
    }
}
```

Send arbitrary file (PDF)

- User does this through standard UIActivityViewController to share to Schoolwork

- Needs a real Apple school manager account

- Magically gets to teacher's iCloud Drive, with link in Schoolwork

- Student worksheet, etc.

Demo

File Radars!

- Support ClassKit outside Apple School Manager

- Support Shared iPad on all iPad's, not just Education

Thanks!

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