

CS473 DE - Mobile Device Programming

FINAL EXAM – REVIEW

Lessons included for Final Examination

Lesson-8- Shared Preferences, WebView and JSON

Lesson – 9 - Multimedia in Android

Lesson – 10 – Android Jetpack

Lesson – 11– Sensors

Lesson – 12 – Localization

Course Resources : www.online.cs.miu.edu

Reading Resources : Lecture PPT and Demo Code

Important points about Exam

1. The Final examination held on 01/21/2023 – Saturday.

"it is available" – 01/21/2023 12:00PM

"it is due" – 01/21/2023 3:00PM

"time limit" – 2 hours

"Number of Submissions" = 1 time

All times are based on Central Time (CT).

2. Midterm should be closed book

3. No mobile phone usage and Rest room break.

4. Requires Face scan, complete room scan and student ID scan.

5. Final should be closed book.

6. The final exam contains the following

a. True or False

b. Multiple Choice Questions

c. Questions will be multiple choice. Pick the right code segments for the problem requirements. Able to know how to write implementation.

i. SharedPreferences operations Read and Write.

(Demo folders: SharedPreferencesDemo, SPFLoginRegister, GSONSPFDemo)

ii. How to use WebView UI for the given URL.(Refer – WebViewTest). Not navigating Page history.

iii. How to play the Video using VideoView and Media Controller. (Refer: VideoPlayer-Slide-33)

- iv. How to Record audio using Media Recorder and play the audio using Media Player. (Refer – AudioRecordPlay – code from fun playAudio(view: View) and fun recordAudio(view: View).
- v. Sensor Programs (Refer the Demo Codes)

Review Questions

Lesson-8- Shared Preferences, WebView and JSON

1. What is WebView?
2. How to work with WebView?
3. WebView operations.
4. What is the use of WebViewClient class?
5. How to Navigate webpages history?
6. Various kinds of Android storage types.
7. Applications of Shared Preferences.
8. What is JSON?
9. Need to know how to write given XML format data in to JSON format.
10. Third party JSON Parsing libraries.
11. Need to know the abbreviations for the terms JSON, XML, POJO, POKO, REST, SOAP.
12. What is Retrofit?
13. Why do we need to use Kotlin Coroutines?

Lesson – 9-Multimedia

1. About Android Permission before Marshmallow(Android 6.0) and from Android 6.0.
2. Different types of Android permissions and examples for each category.
3. What is the use of VideoView and MediaController.
4. Useful classes for Audio Playback in Android. (Slide 42)
5. Names of Implicit Intent used for Image capture, access Gallery Image and Video capture.
6. What is the use of MediaRecorder API? (Slide – 42)

Lesson-10 – Android JetPack

1. What is Android Jetpack?
2. What are four categories of Jetpack components. (Slide – 6)
3. Write the libraries of Jetpack architectural components.
4. What is the use of ViewModel? (Slide – 8)

5. About LiveData? (slide-16)
6. Advantages of LiveData. (slide-17)
7. Benefits of Navigation Component. (Slide – 22)
8. Three Key parts of Navigation Components. (slide-23)
9. What is Room DB and advantages of using Room DB. (Slide – 44)
10. Three major components of Room? (Slide -45)
11. Need to the annotations used in the Room DB and its purpose.
(Refer: @Entity, @DAO, @ Database, @INSERT, @UPDATE, @QUERY, @DELETE
@Volatile, etc.,)
12. What is the use of launch function in Coroutine scope? (Slide – 64)
13. About suspend keyword. (Slide 65)

Lesson – 11 - Sensors

1. What is Motion, Environment and Position Sensors? (slide – 7)
2. About Sensor Framework. (Slide 9 & 10)
3. Sensor Implementation Template. (Slide number 11)
4. How to work with Sensors? (Slide 12 to 16)

Lesson – 12

1. What is Localization and why do we need Localization? (Slide -5)
2. How strings.xml used for multiple languages? (slide 6 to 8)