Topic	CAPSTONE CLASS: PUBLISHING THE APP (Self-Designed App)	
Class Description	Students complete coding for all the app functionality. Students learn how to publish their app so that anyone can test them using the expo client app. Students also generate the apk for their app and learn how to publish it on playstore. Students complete the self-designed app and generate an APK file to make it publishable on Playstore.	
Class	C96	
Class time	45 mins	
Goal	● Complete coding for all the functionalities of the app ● Use expo publish to publish the app link ● Generate app apk and learn to publish it on playstore	

Resources Required	● Teacher Resources
	  ○ Laptop with internet connectivity
	  ○ Earphones with mic
	  ○ Notebook and pen
	  ○ Android/iOS Smartphone with Expo App installed
	
	● Student Resources
	  ○ Laptop with internet connectivity
	  ○ Earphones with mic
	  ○ Notebook and pen
	  ○ Android/iOS Smartphone with Expo App installed	

Class structure	Warm Up Teacher-led Activity Student-led Activity Wrap up	5 mins 15 mins 15 mins 05 mins

WARM-UP SESSION - 05 mins

CONTEXT
● **Complete walk through of the app developed so far.**

Teacher starts slideshow **from slides 1 to 7**
Refer to speaker notes and follow the instructions on each slide.

Activity details	Solution/Guidelines
Hey <student's name>. How are you? It's great to see you! Are you excited to learn something new today? **Run the presentation from slide 1 to slide 4** **Following are the WARM-UP session deliverables:** ● **Greet the student.** ● **Revision of previous class activities.** ● **Quizzes**	**ESR**: Hi, thanks, Yes I am excited about it! Click on the slide show tab and present the slides

Display the WARM-UP Quiz session

Activity details	Solution/Guidelines
Run the presentation from slide 5 to slide 7 to set the problem statement. **Following are the WARM-UP session deliverables:** ● Appreciate the student. ● Discuss publishing app.	Narrate the story by using hand gestures and voice modulation methods to bring in more interest in students.

Teacher ends slideshow

TEACHER-LED ACTIVITY - 15 mins

Teacher Initiates Screen Share

CHALLENGE		
● **Complete the remaining functionalities of the app.**		

Step 2: Teacher-led Activity (15 min)	*Guide the student to code for the remaining app functionality.*	*Teacher and the student work together to code for the remaining app functionalities.*
Teacher Stops Screen Share		
	Now it's your turn. Please share your screen with me.	
STUDENT-LED ACTIVITY - 20 mins		
● **Ask Student to press ESC key to come back to panel** ● **Guide Student to start Screen Share** ● **Teacher gets into Fullscreen**		
ACTIVITY		
● **Use expo publish to publish the app URL which can be opened from expo client** ● **Learn to generate the app apk**		
Teacher starts slideshow **from slides 8 to 10** Refer to speaker notes and follow the instructions on each slide.		
	Now it's your turn. Please share your screen with me.	
Teacher ends slideshow		

Step 3: Student-Led Activity (15 min)	We have been scanning the code on our browser and opening it using the expo client on your phone. What was the limitation of that?	**ESR:** Our phone and machine which runs the project should be on the same network.
	Do know you can get others to use your app on their phones without having to install your app!	**ESR:** How can we do that?
	We have a feature in expo where you can publish your app on a unique URL online. Users can use the expo app to scan the URL and open your app within Expo Client App. Also they don't have to be on the same Wifi network! Let's see how: 1. Navigate to your **expo** project directory on your terminal. 2. Use "expo publish" to publish your app. It will generate a link after publishing your app. 3. Open the link on your browser. 4. Scan the QR code through the expo client app (for Android users) and using Camera (for iOS users).	*The student uses* **expo** *publish to publish their app and then open it on their phone from the* **expo** *client. Student Activity 1.*

```
File  Edit  View  Search  Terminal  Help
Welcome to fish, the friendly interactive shell
          ~> cd Documents/
          ~/Documents> cd book-santa-stage-13
          ~/D/book-santa-stage-13> expo publish
```

	You already know how to generate apk (for Android) and ipa (for iOS). Remember we did that for earlier classes? What did we use? *Teacher can guide through the instructions on how to generate app executables.*	*The student goes through the documentation for building standalone apps from Student Activity 2.* *ESR:* *We used expo build to publish the app.*

To Build Android App:


```
File  Edit  View  Search  Terminal  Help
Welcome to fish, the friendly interactive shell
          ~> cd Documents/
          ~/Documents> cd book-santa-stage-13
          ~/D/book-santa-stage-13> expo build:android
```

To Build IOS App:

```
File Edit View Search Terminal Help
Welcome to fish, the friendly interactive shell
rajeev@atlantis ~> cd Documents/
rajeev@atlantis ~/Documents> cd book-santa-stage-13
rajeev@atlantis ~/D/book-santa-stage-13> expo build:ios
```

Teacher Guides Student to Stop Screen Share

WRAP-UP SESSION - 05 Mins

FEEDBACK
- **Encourage the student to follow instructions to publish the app**

Teacher starts slideshow **from slide 11 to slide 20**

Activity details	Solution/Guidelines
Run the presentation from slide 11 to slide 20 **Following are the wrap-up session deliverables:** ● **Explain the facts and trivias** ● **Next class challenge** ● **Project for the day** ● **Additional Activity**	Guide the student to develop the project and share with us.

Quiz Time - Click on In-Class Quiz

	You get a "hats off".	Make sure you have given at least 2 Hats Off during the class for:

	Congratulations! **You have accomplished a new milestone!** In this Capstone project, you have to complete coding for all the functionalities of the app. Later, use expo to publish the app link. Lastly, you have to generate the app apk and publish it on Playstore.	
Project Overview	*This Project will take only 30 mins to complete. Motivate students to try and finish it after class only.* ## My Independent App **Goal of the Project:** Congratulations on getting one step closer to the **Purple Hat**. In class 96, we published the app on Google Play. In this project, you'll have to: ● complete coding for all the functionalities of the app ● use expo publish to publish the app link ● generate app apk and publish it on Google Play. ** This is a continuation of the project we did for Classes 91 to 95. Please	

	complete those projects before attempting this project ** **Story**: You have come a long way in developing an app for Riya. Now as the final stage, publish the app on the play store so that people can download and use it. I am very excited to see your project solution and I know you will do really well. Bye Bye!	
Teacher Clicks	❌ End Class	
Additional Activities	*Get the student to continue working on the pending app functionalities. Help them test, debug and run the app.*	*Student codes for the adding other functionalities in the app.* *The student runs, tests and debugs the app.*

Activity	Activity Name	Links
Teacher Activity 1	Publishing An App Reference	https://s3-whjr-curriculum-uploads.whjr.online/27346945-f855-42e7-a222-a25e14c94448.pdf
Student Activity 1	Instruction on Generating App Executable	https://docs.expo.io/workflow/publishing/
Student Activity 2	Building Standalone Apps Reference	https://docs.expo.io/distribution/building-standalone-apps/
Student Activity 3	Publishing An App Reference	https://s3-whjr-curriculum-uploads.whjr.online/a1e38256-42a9-4c4a-b334-3fd07dabe92b.pdf
Project Solution	My Independent App	*As it is an open-ended project, there is no specific solution.*
Teacher Ref. Visual Aid Link	Visual Aid link	https://curriculum.whitehatjr.com/Visual+Project+Asset/PRO_VD/PRO_C96_withcues.html
Teacher Ref. In-Class Quiz	In-Class Quiz	https://s3-whjr-curriculum-uploads.whjr.online/bf99381a-ceff-48dc-8516-b03c73d8ae48.pdf