










Topic	DATABASE	
Class Description	Student designs for the database structure for the app.	
Class	C93	
Class time	45 mins	
Goal	<ul style="list-style-type: none"> • Install firebase library into their project • Think through the database structure for the app • Create and connect to the database through the app 	
Resources Required	<ul style="list-style-type: none"> • Teacher Resources <ul style="list-style-type: none"> ○ Laptop with internet connectivity ○ Earphones with mic ○ Notebook and pen ○ Android/iOS Smartphone with Expo App installed • Student Resources <ul style="list-style-type: none"> ○ 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	05 mins 15 mins 15 mins 05 mins
WARM-UP SESSION - 05 mins		
CONTEXT <ul style="list-style-type: none"> • Talk about the database structure for the app 		
<div>  </div> <p>Teacher starts slideshow from slides 1 to 7</p> <p>Refer to speaker notes and follow the instructions on each slide.</p>		

Activity details	Solution/Guidelines
<p><i>Hey <student's name>. How are you? It's great to see you! Are you excited to learn something new today?</i></p> <p>Run the presentation from slide 1 to slide 3</p> <p>Following are the WARM-UP session deliverables:</p> <ul style="list-style-type: none"> • Greet the student. • Revision of previous class activities. • Quizzes 	<p>ESR: Hi, thanks, Yes I am excited about it!</p> <p>Click on the slide show tab and present the slides</p>
Display the WARM-UP Quiz session	
Activity details	Solution/Guidelines
<p>Run the presentation from slide 4 to slide 7 to set the problem statement.</p> <p>Following are the WARM-UP session deliverables:</p> <ul style="list-style-type: none"> • Appreciate the student. • Discuss database. 	<p>Narrate the story by using hand gestures and voice modulation methods to bring in more interest in students.</p>
<p>Teacher ends slideshow </p>	
TEACHER-LED ACTIVITY - 15 mins	
Teacher Initiates Screen Share	
<p><u>CHALLENGE</u></p> <ul style="list-style-type: none"> • Identify the collections and documents which need to be created for the app database • Identify the structure of the documents and the data fields which we want to store in each document 	

Step 2: Teacher-led Activity (15 min)	What should be the structure for our app database? Have you spent any time thinking about it?	ESR: varied
	Can you list down all the information which we want to store for complete functioning of our app.	<i>The student lists down all the information which they would like to store for the users in the app.</i>
	We know we will be using a firestore database for our app. The Firestore database has collections which can store documents. Each document has a JSON type data structure. Also each document can also contain a collection. Can you organize all this information in terms of collections and documents?	ESR: Yes!
	<i>Help the student organize the information which they would like to store in their app in the form of collections and documents.</i>	<i>The student comes up with the database structure for the app.</i>
Teacher Stops Screen Share		
	Now it's your turn. Please share your screen with me.	
STUDENT-LED ACTIVITY - 20 mins		
<ul style="list-style-type: none"> ● Ask Student to press ESC key to come back to panel ● Guide Student to start Screen Share ● Teacher gets into Fullscreen 		

<p align="center"><u>ACTIVITY</u></p> <ul style="list-style-type: none"> • Create a firestore project for the app • Create the collections and documents inside the firestore project • Connect to the firestore project from the app 		
<p align="center">  Teacher starts slideshow from slides 8 to 10 Refer to speaker notes and follow the instructions on each slide. </p>		
	Now it's your turn. Please share your screen with me.	
<p align="center">  Teacher ends slideshow </p>		
Step 3: Student-Led Activity (15 min)	Let's create a firestore project and create these collections and sample documents in our project.	<i>The student creates a firestore project and designs the collections and sample documents inside them.</i>
	Let's connect our app to this project.	<i>The student navigates to their project directory.</i> <i>The student installs firebase into their project.</i> <i>The student creates a config file which connects the app to the database.</i>
<p align="center">Teacher Guides Student to Stop Screen Share</p>		
<p align="center">WRAP-UP SESSION - 05 Mins</p>		
<p align="center"><u>FEEDBACK</u></p> <ul style="list-style-type: none"> • Ask the student to start integrating their app functionality with the app database 		

<div>  </div> Teacher starts slideshow from slide 11 to slide 21		
Activity details		Solution/Guidelines
Run the presentation from slide 11 to slide 21 Following are the wrap-up session deliverables: <ul style="list-style-type: none"> ● 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: <div> <div> Creatively Solved Activities  +10 </div> <div> Great Question  +10 </div> <div> Strong Concentration  +10 </div> </div>
	We can now code for all the functionalities in our app. The next 3 classes we will be coding to complete designing the app functionality.	-

<p>Project Overview</p>	<p>*This Project will take only 30 mins to complete. Motivate students to try and finish it after class only.*</p> <p>Database</p> <p>Goal of the Project:</p> <p>Congratulations on getting one step closer to the Purple Hat. In class 93 we designed the database structure for the app.</p> <p>In this project, you will design a database structure for your app.</p> <p>** This is a continuation of the project we did for Classes 91 and 92. Please complete those projects before attempting this project **</p> <p>Story:</p> <p>Help Riya to design a database where she can store the information of people who need help.</p> <p>I am very excited to see your project solution and I know you will do really well.</p> <p>Bye Bye!</p>	
<p style="text-align: center;">Teacher ends slideshow </p>		
<p style="text-align: center;">Teacher Clicks ✕ End Class</p>		

Additional Activities	<i>Get the student to note down all the user actions on the app and the behavior they expect from the app in response to the user actions.</i>	<i>The student makes a list of all the user actions on the app and the app behavior in response to these actions.</i>
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Activity	Activity Name	Links
Teacher Ref. Visual Aid Link	Visual Aid link	https://curriculum.whitehatjr.com/Visual+Project+Asset/PRO_VD/PRO_C93_withcues.html
Teacher Ref. In-Class Quiz	In-Class Quiz	https://s3-whjr-curriculum-uploads.whjr.online/12bf34d8-e00e-4115-bc29-bd1b75023748.pdf