



What we did:

- Used the sort method and compare function to sort an array in ascending order.
- Used the map method to display the team names on the app.
- Created a reset button to reset the database to its default state.

How we did it:

Connecting the database with the Quiz Buzzer App:

```
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       Quiz Master App
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                                       import firebase from 'firebase';

    Open files

                                        const firebaseConfig = {
  M App.js
                                        apiKey: "AlzaSy89k8yIUjgHY49GoiAoR1YkFAS45KPjlTI",
  config.js
                                          authDomain: "wireless-buzzer.firebaseapp.com",
                                         databaseURL: "https://wireless-buzzer.firebaseio.com",
                                        projectId: "wireless-buzzer",
storageBucket: "wireless-buzzer.appspot.com",
△ Project
   assets
                                         messagingSenderId: "919612088593",
   components
                                         appId: "1:919612988593:web:25292998e7829815aeb738",
                                          measurementId: "G-BT33VLR78K"
   & App.js
: la config.js
   package.json
                                       // Initialize Firebase
   README.md
                                   16
                                        if(!firebase.apps.length){
                                          firebase.initializeApp(firebaseConfig);
                                   20 export default firebase.database()
```



```
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                                     Lmport React, { Component } from 'react';
Open files
                                     import { Text, View, StyleSheet, Button } from 'react-native';
                                     import db from './config';
& App.js
di config.js
                                     export default class App extends Component {
Project
                  B # :
                                           <View style={{ flex: 1 }}>
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                                          </Vlew>
 components
                                        );
 App.js
 config.js
 package.json
 README.md
```

We created a state in our App class Component which will hold the names of the teams which have pressed the buzzer button in an array.

```
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0
      import React, { Component } from 'react';
      import ( Text, View, StyleSheet, Button ) from 'react-native';
      import db from './config';
      export default class App extends Component {
       constructor() [
         super();
  8
         this.state - [
          teamsRank: [],
        );
 10
        render() {
         return *View style={{ flex: 1 }} />;
 14
 16
```



The structure of our database. Every team had two keys - 'isButtonPressed' and 'timestamp'.

We will use 'isButtonPressed' to identify if the team has pressed the button.

Teacher shows the database structure to the student.

Let's call this function 'showTeamRanks()' and let us define it inside our app class. Teacher writes an empty function showTeamRanks().

```
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   2 import ( Text, View, StyleSheet, Button ) from 'react-native';
   3 import db from './config';
   5 export default class App extends Component {
       constructor() {
         super();
         this.state - [
           teamsRank: [],
   9
         };
  10
       showTeamsRank = ()+>{
  14
  16
        render() {
         return <View style={{ flex: 1 }} />;
  19
  20
```

Read the value stored inside teams from our database.

- We need to get a database reference first.
- We need to create a listener which triggers a callback() function whenever the function is triggered.



```
24
     import React, { Component } from 'react';
      import [ Text, View, StyleSheet, Button ] from 'react-native';
 3 import db from './config';
      export default class App extends Component {
       constructor() {
 6
         super();
  ġ
         this.state - [
           teamsRank: [],
 9
        );
 10
        showTeamRanks = ()=>{
         var teamRef = db.ref('teams/');
 14
 16
       render() {
 18
        return <View style={{ flex: 1 }} />;
 19
 20
```

```
co. See previous saves.
    import React, { Component } from 'react';
    import [ Text, View, StyleSheet, Button ] from 'react-native';
    import db from './config';
    export default class App extends Component {
     constructor() {
        super();
ġ
         this.state - [
          teamsRank: [],
9
       );
10
      showTeamRanks = ()->{
4
       var teamRef = db.ref('teams/');
       teamRef.on("value", (data)=>{
16
        1);
18
19
20
      render() {
        return <Vlew style={{ flex: 1 }} />;
```



We called the 'showTeamRanks' function inside the 'componentDidMount' so that it is called when the app loads.



We changed the database directly or through the Quiz Buzzer App to see the output change in the console.





To sort the team's array according to their timestamp, there is a function which can help us sort it. 'array.sort()' can sort an array according to the rule we define. It takes a comparison function as an argument. It runs the comparison function repeatedly over the elements of the array until the array is completely sorted.



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                                        import ( Text, View, StyleSheet, Button ) from 'react-native';
import db from './config';
Open files
& App.js
                                        export default class App extends Component {
b config.js
                                          constructor() {
                                            super();
Project
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                                            this.state = {
                                             teamsRank: [],
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components
App.js
                                          showTeanRanks = ()=>{
config.js
                                  14
                                            var teams - []
a package.json
                                            var teamRef = db.ref('teams/');
                                            teamRef.on("value", (data)=>{
                                  16
README.md
                                              var teamList = data.val();
                                              for(var team in teamList)(
                                  19
                                                 iffteenlist[team]["isBut
                                                                                   "] === 'true'){
                                                  teams.push(teamList[team]);
                                  20
                                              teams.sort(function(team1,team2){
                                  24
                                                return team1.timestamp - team2.timestamp
                                  26
                                  28
                                  29
                                          componentDidMount(){
                                            this.showTeanRanks();
                                  30
                                          render() {
```

We wrote the code to update the state.

```
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                                         import { Text, View, StyleSheet, Button } from 'react-native';
import db from './config';
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                                          export default class App extends Component {
  config.js
                                           constructor() {
                                              super():
△ Project
                     B # :
                                              this.state = {
                                               teamsRank: [],
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  components
  App.js
                                            showTeanRanks = ()=>{
  config.js
                                            var teams - []
                                    14
  package.json
                                             var teamRef = db.ref('teams/');
                                             teamRef.on("value", (data)=>{
  README.md
                                               ver teamList = data.vel();
                                    18
                                               for(var team in teamList)(
                                                 if(teamList[team]["isButtonPressed"] === "true"){
                                    19
                                    20
                                                   teams.push(teamList[team]);
                                                teams.sort(function(team1,team2){
                                                 return team1.timestamp - team2.timestamp
                                    26
                                                this.setState({teamsRank: teams});
                                    28
                                    29
                                    30
                                            componentDidMount(){
                                              this.showTeanRanks();
```



We console logged the teams.

```
import { Text, View, StyleSheet, Button } from 'react-native';
      import db from './config':
     export default class App extends Component {
      constructor() {
         super();
         this.state = {
          teamsRank: [],
         };
10
      showTeanRanks = () => {
       var teams - [];
14
        var teamHef = db.ref('teams/');
        teamRef.on('value', data -> {
          var teamList = data.val();
18
          for (var team in teamList) {
           if (teamList[team]['isButtonPressed'] === true) {
   teamList[team]['teamNome'] = team;
   teams.push(teamList[team]);
19
28
            console.log(teams);
       this.setState({ teamsRank: teams });
      });
26
      );
28
      componentDidMount() {
30
       this.showTeanRanks();
```

We used the '.map()' function to iterate through the state array.

```
See previous saves. -
     16
              teamRef.on('value', data => {
               var teamList = data.val();
               for (var team in teamList) {
     18
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                if (teamList[team]['isButtonPressed'] --- true) {
                  teanList[tean]["teanName"] = tean;
     20
                  teams.push(teamList[team]);
:
               console.log(teams);
               this.setState({ teamsRank: teams });
     26
             3);
            );
     28
     29
            componentDidMount() {
             this.showTeamRanks();
     30
     32
            render() {
     34
             return (
               «View style={{flex:1}}>
     36
                «View»
                  (this.state.teamsRank.map((team) -> (
     38
                      <Text>(team.teamName.toUpperCase())</Text>
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                     «/View»
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                  </View>
               </View>
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              ):
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```



We added some inline style or we can use stylesheets.

```
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vious saves.
                    mestacestate() teammank, teams (),
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               componentDidMount() {
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                this.showTeamRanks();
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                render() {
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                return (
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                  <View style={{flex:1}}>
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                    style={{ flex: 1, justifyContent: 'center', alignItens: 'center' }}>
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                       [this.state.teamsRank.map((team) -> (
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                             width: 149,
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                             height: 55,
                             borderWidth: 2,
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                             justifyContent: 'center'.
                             alignItems: 'center',
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                             backgroundColor: team.teamName,
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         48:
                           }}>
        49
                           <Text>(team.teamName.toUpperCase())</Text>
                         «/View»
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                     </Views
                   </View>
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                 );
        56
```

We completed the app by adding the header and a reset button.

```
28
      componentDidMount() {
29
       this.showTeamRanks();
30
31
       render() {
          «View style»{{flex:1}}»
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           «View
            style={{ flex: 1, justifyContent: 'center', alignItens: 'center' }}>
               {this.state.teamsRank.map((team) => (
38
                 «View
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40
                  style={{
                    width: 149,
                    height: 55,
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43
                    borderWidth: 2,
44
                    margin: 5,
                    justifyContent: 'center',
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46
                    alignItems: 'center',
                    backgroundColor: team.teamName,
                   ]]>
48.
49
                  <Text>{team.teamName.toUpperCase()}</Text>
50
                 </View>
               ))]
             <Button
               title-"RESET"
54
               style={{ width: 100, height: 100 }}
               onPress={this.resetOb}
58
           </Vlew>
```



```
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                                 3;
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                                 componentDidMount() {
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                                   this.showTeamRanks();
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           B # :
                                resetDb = () \Rightarrow {
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                                   var restDatabase = db.ref('teams/').set({
                                     red: {
                                       isButtonPressed: false,
                                       timestamp: 8,
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nge.json
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                                       isButtonPressed: False,
                          41
                                       timestamp: 8,
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                                      isButtonPressed: False,
                                       timestamp: 8,
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                                       isButtonPressed: false,
                          48
                          49
                                       timestamp: 8,
                          50
                                    1):
                                    this.setState({ teamDetails: [] });
                                 render() {
                          56
                                      <View style={{flex:1}}>
                                      «View
or expo.io...
```

What's next?:

In the next class, you will learn how to fix a few minor bugs which might have crept in and also learn how to make 'apk' or 'ios' files for installing the app on your phone. f