Android Application Development – Practical

Practical 9: Using Firebase Realtime Database

AIM: Create a suitable Android application to work with Firebase for storing and manipulating data.

The Firebase Realtime Database is a cloud-hosted database. Data is stored as JSON and synchronized in realtime to every connected client. When you build cross-platform apps with our Apple platforms, Android, and JavaScript SDKs, all of your clients share one Realtime Database instance and automatically receive updates with the newest data.

Find the reference of the data where the value is to be stored using the child() function:

```
var reference= DatabaseReference
reference = FirebaseDatabase.getInstance().getReference();
```

Writing/Inserting data into Firebase Realtime Database:

Inserting or writing the data to the Firebase Realtime database is done in Android using the function setValue().

setValue(): This function is used to:

- Replace the data at the referenced position
- If no data present at the referenced position then it writes the data directly at that position

Use the referenced object and setValue() function with the value to be stored as an argument to it in order to write the data:

```
reference.child("user").setValue(name);
```

Since we are using a Realtime Database. So, we must listen to the changes that are made to our database. To listen for changes in the database, we can use the addValueEventListener() method to add a ValueEventListener to a DatabaseReference .

It implements following method:

onDataChange() will be called when there is a change in the data of the database and if due to some reasons the application is unable to read data from the database, then the **onCancelled()** method will be called.