**Assignment No-8**

**Aim:** Design an Assignment to retrieve, verify, and store user credentials using Firebase Authentication, the Google App Engine standard environment, and Google Cloud Data store.

# Objective:

* To design an assignment to retrieve, verify, and store user credentials using Firebase Authentication, the Google App Engine standard environment, and Google Cloud Data store.
* To understand cloud storage technologies and relevant file systems

# Theory:

* Google Firebase is a Google-backed application development software that enables developers to develop iOS, Android and Web apps. Firebase Authentication provides backend services, easy-to-use SDKs, and ready-made UI libraries to authenticate users to your app. It supports authentication using passwords, phone numbers, popular federated identity providers like Google, Facebook and Twitter, and more. Most apps need to know the identity of a user. Knowing a user's identity allows an app to securely save user data in the cloud
* Google Cloud Datastore is a highly scalable, fully managed NoSQL database service offered by Google on the Google Cloud Platform.

**Steps-**

* Install required software's as per the requirement given below.
* Install all the packages which are needed for firebase (firebase-admin , express etc)
* And follow the steps as per the references-

<https://firebase.google.com/docs/reference/admin>

<https://firebase.google.com/docs/auth/admin>

<https://firebase.google.com/docs/admin/setup>

<https://cloud.google.com/appengine/docs/standard/python/configuration-files>

<https://livebook.manning.com/book/google-cloud-platform-in-action/chapter-11/>

https://cloud.google.com/appengine/docs/standard/python/authenticating-users-

firebase-appengine

, Follow the steps as per the references to accomplish the below objectives:

1. Install Git, Python 2.7, and virtualenv.
2. If you're new to Google Cloud, create an account to evaluate how our products perform in real-world scenarios. New customers also get $300 in free credits to run, test, and deploy workloads.
3. In the Google Cloud Console, on the project selector page, select or create a Google Cloud project.
4. Install and initialize the Google Cloud CLI.
5. Cloning the sample app
6. Installing dependencies
7. Running the application locally
8. Authenticating users on the server
9. Getting an ID token from Firebase
10. Verifying tokens on the server
11. Managing user data in Datastore
12. Creating entities to store user data
13. Deploying your app

**Conclusion:** Thus, we have studied procedure to retrieve, verify, and store user credentials using Firebase Authentication, the Google App Engine standard environment, and Google Cloud Data store.