| Sr | Task | References |
| --- | --- | --- |
| \* | WiFi | Username UMS Tech Labs  Password UMSIsAwesome  Username belking54g  Password 08061058fd  Username iball-Baton  Password 08061058fd |
| \* | Study the UMS website and try to understand various products we deliver.  Execute demo projects available on the website.  Study ATSA, ATIS and Progressive Dialer App | [UMS Tech Labs](https://umstechlabs.com/)  <https://umstechlabs.com/all-demos/> |
| 1 | Read thoroughly about   1. Google App Engine 2. Oauth Implementation 3. Google Developer Console | Here are some links for reference:   * <https://cloud.google.com/appengine/docs/java/oauth/> * [console.developers.google.com/project](https://console.developers.google.com/project) * [OAuth 2.0 Tutorial](http://tutorials.jenkov.com/oauth2/index.html) * <https://www.youtube.com/watch?v=VP4hR3LSXGg> * <https://cloud.google.com/sdk/gcloud/reference/beta/app/create> |
| 2 | Installation of Google App Engine  Perform demo GAE project of Hello App Engine | Here are some links for reference:   * [Getting Started: Setting Up Your Development Environment | App Engine standard environment for Java 8 | Google Cloud](https://cloud.google.com/appengine/docs/standard/java/building-app/environment-setup) * (use Java SDK 8 only, [Eclipse](https://cloud.google.com/eclipse/docs) ) * <https://www.youtube.com/watch?v=26hazpYOhPU> * <https://www.youtube.com/watch?v=Tl7ykgBW1YU> |
| 3 | Access and Read the data from spreadsheet using servlet and display data using logs. Like spreadsheet name, worksheet name, spreadsheet key, spreadsheet data   1. Operations on spreadsheet data (insert, update, delete, sort, query on data) 2. Perform above operation using Firebase | * Read about p12 key Failed while installing Java 1.8. * org.eclipse.core.internal.resources.Project cannot be cast to org.eclipse.core.resources.IFolder * Create, download, add p12 key to GAE project * <https://www.youtube.com/watch?v=yHuMJffPxgM> * <https://developers.google.com/sheets/api/reference/rest> * <https://www.youtube.com/watch?v=gb0bytUGDnQ> * <https://www.dundas.com/support/learning/documentation/connect-to-data/how-to/connecting-to-google-sheets> * <https://examples.javacodegeeks.com/core-java/util/logging/java-util-logging-example/> * Find Firebase training related document “Training session on Firebase” in firebase SDK v2.0.2 * Perform CRUD operation using firebase API |
|  | Hereafter, Assignments are related to popular google cloud services.Read the topic thoroughly and perform assignment as a new servlet to spreadsheet project and keep adding following functionality to same GAE project | |
| 4 | Using Cron Jobs, display “Good Morning” after every 2 min. | Read about cron jobs  <https://cloud.google.com/scheduler/docs/creating> |
| 5 | Using task queues, try to call one servlet from another servlet | Read about task queues  <https://cloud.google.com/appengine/docs/standard/python/taskqueue#whats_next> |
| 6 | Using Memcache, put and get data of student object student name, roll no, college name, Degree | Read about MemCache |
| 7 | Using GCP Fire store, add key:value pair data like id:name as “2233”:”AABBCC” to firestore. Write and retrieve data operations to be done. | Read about data store and GCP fire store |
| 8 | Send simple email using Java Mail Also add cc,bcc,subject,etc | Read about sending Email in Java |
| 9 | Read Java data parsing. Learn how to parse responses after hitting API.  Perform examples illustrated in reference documents. | [How to Read XML File in Java - Javatpoint](https://www.javatpoint.com/how-to-read-xml-file-in-java)  Find related document “Different Types Of Json Data Parsing” in Email. |
| 10 | Study FCMData handling using FCM | Ref.  <https://firebase.google.com/docs/cloud-messaging> |
| 11 | Postman App Install Hit exotel APIs and other API using Postman. Study response and parse for further logic. | <https://www.postman.com/downloads/> |
| 12 | Exotel : Read about  What is exotel  Applications of Exotel  Developer login  Public API of Exotel  Voice, SMS and their introduction | [http://exotel.](http://exotel.in/)in  Find related document “Exotel Training Document” in Email |
| 13 | To make Custom Flows in Exotel To make a call :Inbound, Outbound  To send a SMS | Find related document in Email |
| 14 | Zoho Read about  What is ZOHO  Zoho CRM  Create Zoho CRM account  Study properly Zoho CRM account  API documentation of Zoho CRM | <https://crmplus.zoho.in/>  Find related document “Zoho CRM Account Set up” in Email |
| 15 | Chrome extensions  1. Create simple chrome extension for displaying a alert 2. Create a chrome extension for registering a mobile number from a user. Create UI and show responses as successfully registered or not. 3. Using chrome extension, create button on web page, on click of button pop up is created showing information. | Read about chrome extensions thoroughly.  <https://www.youtube.com/watch?v=FB2gJBoSshM>  <https://www.agiratech.com/how-to-build-a-chrome-extension-the-beginners-guide>  [Getting started - Chrome Developers](https://developer.chrome.com/docs/extensions/mv3/getstarted/) |
| 16 | HubSpot | Find related document “API Documentation For HubSpot” in Email |
| 17 | SaleForce | Find related document “Salesforce CRM OAuth API” in Email |