DAILY ASSESSMENT FORMAT

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Course:	**Digital design using HDL**	**USN:**	**4AL17EC071**
Topic:	**completed**		**6th b**
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FORENOON SESSION DETAILS

Geocodingrequestandresponse(latitude/longitudelookup)Thefollowingexamplerequests thelatitudeandlongitudeof"1600AmphitheatreParkway,MountainView,CA",andspecifies thattheoutputmustbeinJSONformat.youcantestthisbyenteringtheURLintoyourweb browser(besuretoreplaceYOUR_API_KEYwithyouractualAPIkey).Theresponseincludes thelatitudeandlongitudeoftheaddress.

Viewthedeveloper'sguideformoreinformationaboutbuildinggeocodingrequestURLsand availableparametersandunderstandingtheresponse.

Belowisasamplegeocodingresponse,inJSON:


```
{
   "results":[
   {
      "address_components":[
      {
         "long_name":"1600",
         "short_name":"1600",  "types":["street_number"]
       },
       {
          "long_name":"AmphitheatreParkway",
          "short_name":"AmphitheatrePkwy",
          "types":["route"]
        },
       {
         "long_name":"MountainView",
         "short_name":"MountainView",
         "types":["locality","political"]
```

```
 },
{
     "long_name":"SantaClaraCounty",
    "short_name":"SantaClaraCounty",
    "types":["administrative_area_level_2","political"]
 },
{
    "long_name":"California",
    "short_name":"CA",
    "types":["administrative_area_level_1","political"]
 },
{
     "long_name":"UnitedStates",
     "short_name":"US",
      "types":["country","political"]
  },
  {
      "long_name":"94043",
      "short_name":"94043",
        "types":["postal_code"]
     }
  ],
    "formatted_address":"1600AmphitheatrePkwy,MountainView,CA94043,USA",
     "geometry":{
     "location":{
     "lat":37.4267861,
     "lng":-122.0806032
   },
    "location_type":"ROOFTOP",
    "viewport":{
```

```
            "northeast":{
            "lat":37.4281350802915,
            "lng":-122.0792542197085
          },
           "southwest":{
            "lat":37.4254371197085,
            "lng":-122.0819521802915
          }
       }
    },
    "place_id":"ChIJtYuu0V25j4ARwu5e4wwRYgE",
    "plus_code":{
    "compound_code":"CWC8+R3MountainView,California,UnitedStates",
    "global_code":"849VCWC8+R3"
   },
   "types":["street_address"]
  }
  ],
  "status":"OK"
  }
```


Reversegeocodingrequestandresponse(addresslookup)Thefollowingexamplerequests theaddresscorrespondingtoagivenlatitude/longitudeinBrooklyn,NY,USA.Itspecifiesthat theoutputmustbeinJSONformat.Youcantestthisbyenteringthe URLintoyourweb browser(besuretoreplace‘YOUR_API_KEY’withyouractualAPIkey).Theresponseincludes ahumanreadableaddressforthelatitudeandlongitudelocation.

Viewthedeveloper'sguideformoreinformationaboutbuildingreversegeocodingrequest URLsandavailableparametersandunderstandingtheresponse.

Belowisasamplereversegeocodingresponse,inJSON:


```
{
    "plus_code":{
   "compound_code":"P27Q+MCNewYork,NY,USA",
   "global_code":"87G8P27Q+MC"
},
  "results":[
     {
        "address_components":[
           {
              "long_name":"279",
              "short_name":"279",
              "types":["street_number"]
           },
           {
              "long_name":"BedfordAvenue",
              "short_name":"BedfordAve",
              "types":["route"]
           },
           {
              "long_name":"Williamsburg",
              "short_name":"Williamsburg",
              "types":["neighborhood","political"]
```

```
      },
      {
         "long_name":"Brooklyn",
        "short_name":"Brooklyn",
        "types":["political","sublocality","sublocality_level_1"]
      },
      {
         "long_name":"KingsCounty",
        "short_name":"KingsCounty",
        "types":["administrative_area_level_2","political"]
      },
     {
        "long_name":"NewYork",
       "short_name":"NY",
        "types":["administrative_area_level_1","political"]
      },
     {
       "long_name":"UnitedStates",
       "short_name":"US",
       "types":["country","political"]
      },
      {
       "long_name":"11211",
       "short_name":"11211",
        "types":["postal_code"]
      }
    ],
  "formatted_address":"279BedfordAve,Brooklyn,NY11211,USA",
   "geometry":{
```

```
          "location":{
          "lat":40.7142484,
          "lng":-73.9614103
          },
          "location_type":"ROOFTOP",
          "viewport":{
          "northeast":{
            "lat":40.71559738029149,
            "lng":-73.9600613197085
          },
          "southwest":{
          "lat":40.71289941970849,
          "lng":-73.96275928029151
          }
    }
},
"place_id":"ChIJT2x8Q2BZwokRpBu2jUzX3dE",
"plus_code":{
 "compound_code":"P27Q+MCBrooklyn,NewYork,UnitedStates",
  "global_code":"87G8P27Q+MC"
 },
 "types":[
              "bakery",
               "cafe",
              "establishment",
              "food",
              "point_of_interest",
             "store"
             ]
```

```
        },


  ...Additionalresultstruncatedinthisexample[]...


  ],
"status":"OK"
```

StartcodingwithourclientlibrariesClientlibrariesmakedevelopingwiththeGoogleMaps webserviceAPIseasierbyprovidingsimple,nativeimplementationsofcommontasks,such asauthentication,requestthrottlingandautomaticretry.TheGeocodingAPIisavailableinthe JavaClient,PythonClient,GoClientandNode.jsClientforGoogleMapsServices.

Authentication,quotas,pricing,andpoliciesAuthenticationTousetheGeocodingAPI,you mustfirstenabletheAPIandobtaintheproperauthenticationcredentials.Formore information,seeGetStartedwithGoogleMapsPlatform.