**Live Tracking By Using Google Cloud**

**Abstract:**

The Live Tracking is a document that is used to gather information about tracking devices, this document contains what is Live Tracking, how GPS tracker works,benefits of GPS tracking,How to connect GPS Tracker for vehicle,tracker models. The purpose of this document is how GPS tracker device works and how to installed.

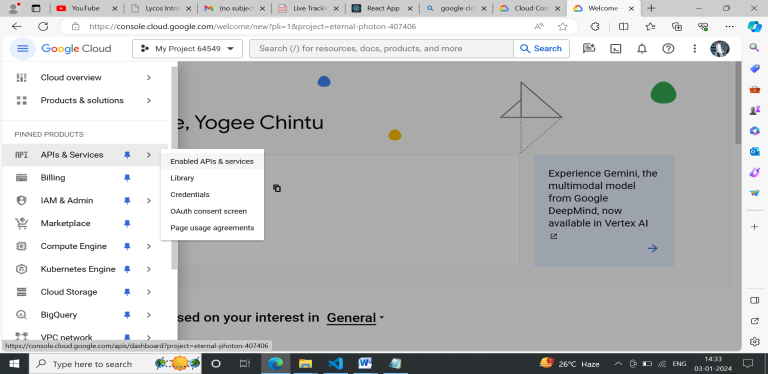
**Generate API Key Through Following Steps:**

**Step1:** Open google cloud console in any browser.

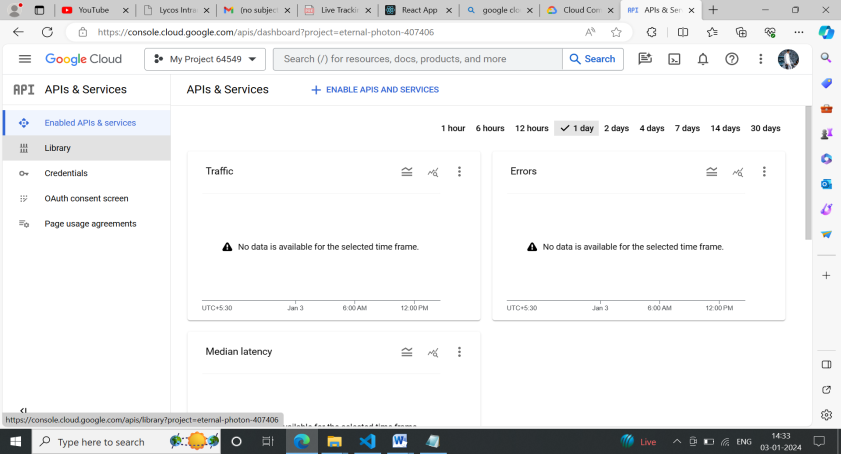
[Cloud Computing, Hosting Services, and APIs (google.com)](https://cloud.google.com/gcp/?utm_source=bing&utm_medium=cpc&utm_campaign=japac-IN-all-en-dr-bkwsrmkt-all-super-trial-e-dr-1009882&utm_content=text-ad-none-none-DEV_c-CRE_-ADGP_Hybrid+%7C+BKWS+-+EXA+%7C+Txt+~+GCP+~+General_google+cloud+console-KWID_43700071941079768-kwd-74904499330894:loc-90&userloc_155637-network_o&utm_term=KW_google%20cloud%20console&gclid=01a304d5b4aa19cd92de6140962b6325&gclsrc=3p.ds&)

**Step2**: Create project**.**

**Step3**: Go to Navigation,click on API/Services

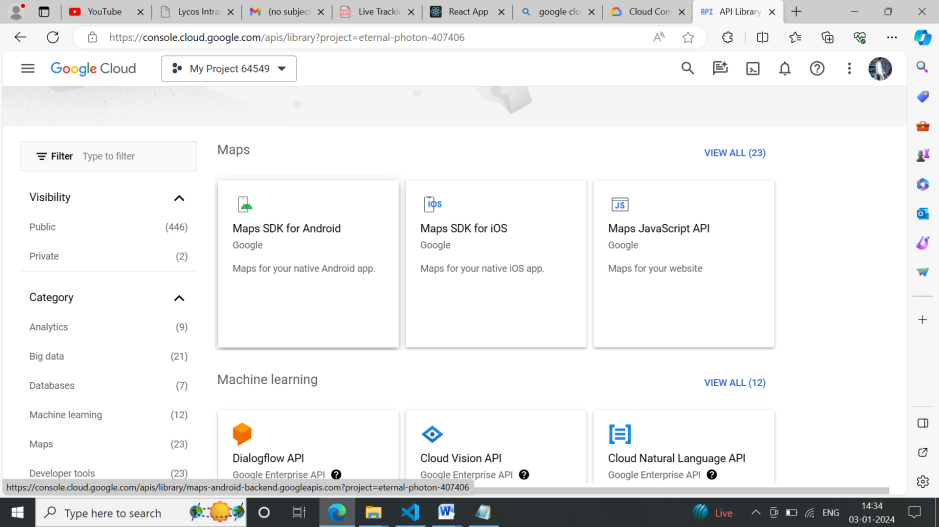
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**Step4:** Click on Library.

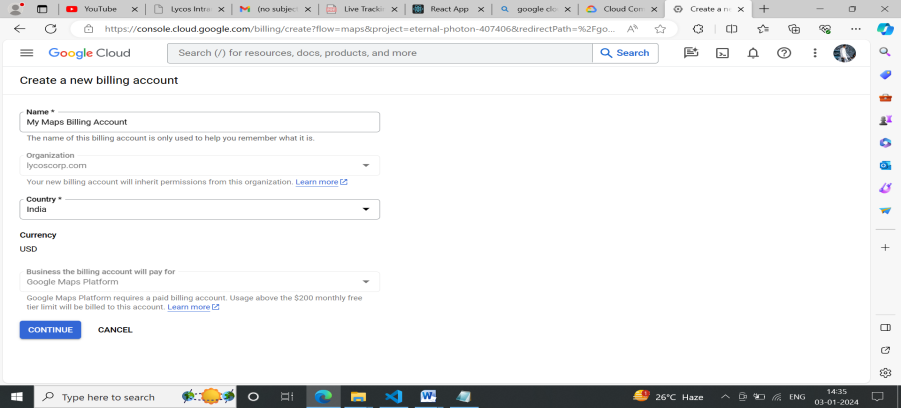
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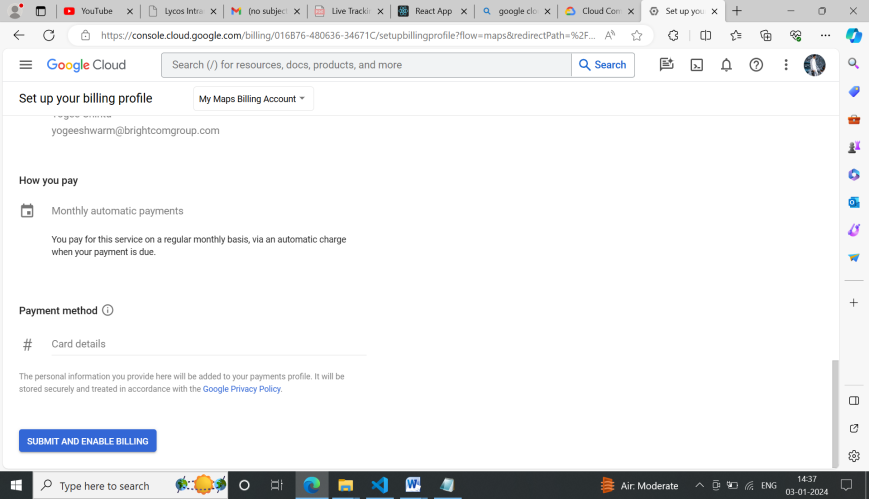
**Step5**: Select API key for accordingly(Android/Ios/Website).

**Step6**: Now I am using for Android**.**

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**Step7:**Fill the following requirements and do payment.

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**Step8:** API key is generated ,the help of that API key we can detect Live Location by using reactjs.

Insert the API key in the code as shown below.

**Step by Step Procedure:**

***TRACKING***

***execution steps:***

***Get Google Maps API Key:***

***https://console.cloud.google.com/***

***Dependencies:***

***npm install @react-google-maps/api***

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***MapContainer.js:***

import React from 'react';

import { GoogleMap, LoadScript, Marker } from '@react-google-maps/api';

const MapContainer = ({ location }) => {

const mapStyles = {

height: '100vh',

width: '100%',

};

const defaultCenter = {

lat: location.lat,

lng: location.lng,

};

return (

<LoadScript googleMapsApiKey="YOUR\_API\_KEY">

<GoogleMap

mapContainerStyle={mapStyles}

zoom={15}

center={defaultCenter}

>

<Marker position={defaultCenter} />

</GoogleMap>

</LoadScript>

);

};

export default MapContainer;

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App.js:

import React from 'react';

import MapContainer from './MapContainer';

function App() {

const location = {

lat: 37.7749, // replace with the actual latitude

lng: -122.4194, // replace with the actual longitude

};

return (

<div className="App">

<MapContainer location={location} />

</div>

);

}

export default App;

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To create Api key we need to purchase Api keys,

for that we need to create a project in google cloud console and need to do payment,

the payment charges will be deducted accordingly (from usage of api key)

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Method 2:

to detect exact location with help of longitude and latitude:

install dependencies:

npm i leaflet react-leaflet

npm install @react-google-maps/api

MobileLocationTracker.js:

import React, { useState, useEffect } from 'react';

import { MapContainer , TileLayer, Marker, Popup } from 'react-leaflet';

import 'leaflet/dist/leaflet.css';

//import io from 'socket.io-client';

const socket = io('http://localhost:5000'); // Replace with your server URL

const MobileLocationTracker = () => {

const [location, setLocation] = useState(null);

const [error, setError] = useState(null);

useEffect(() => {

if ('geolocation' in navigator) {

const watchId = navigator.geolocation.watchPosition(

(position) => {

const { latitude, longitude } = position.coords;

setLocation({ latitude, longitude });

setError(null);

// Emit the location to the server

socket.emit('sendLocation', { latitude, longitude });

},

(error) => {

setError(`Error getting location: ${error.message}`);

}

);

return () => {

navigator.geolocation.clearWatch(watchId);

};

} else {

setError('Geolocation is not supported by your browser');

}

}, []);

return (

<div>

{error && <p>{error}</p>}

{location && (

<MapContainer center={[location.latitude, location.longitude]} zoom={15} style={{ height: '400px', width: '100%' }}>

<TileLayer

url="https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png"

attribution='&copy; <a href="https://www.openstreetmap.org/copyright">OpenStreetMap</a> contributors'

/>

<Marker position={[location.latitude, location.longitude]}>

<Popup>Your Location</Popup>

</Marker>

</MapContainer>

)}

</div>

);

};

export default MobileLocationTracker;

Note:

In this method we can locate exact location with the help of latitude and logitude

(enter manually) using geolocation.