Angular and Electron - More than just a desktop app

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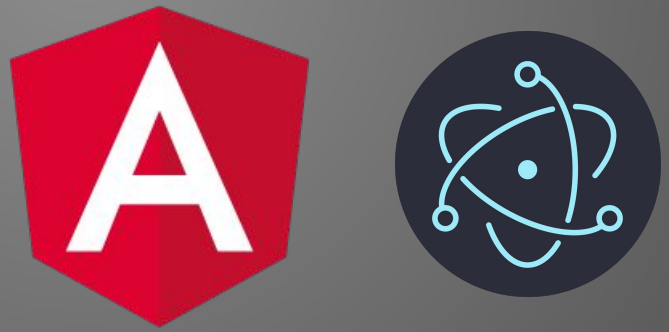

Plex.Earth

Code.Hub

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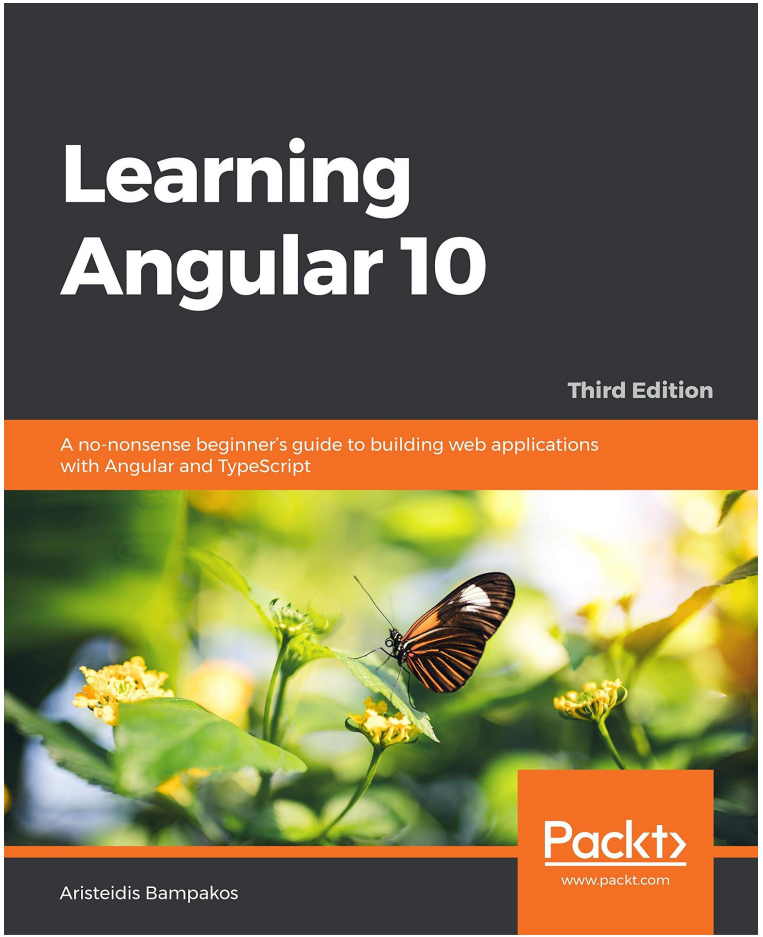
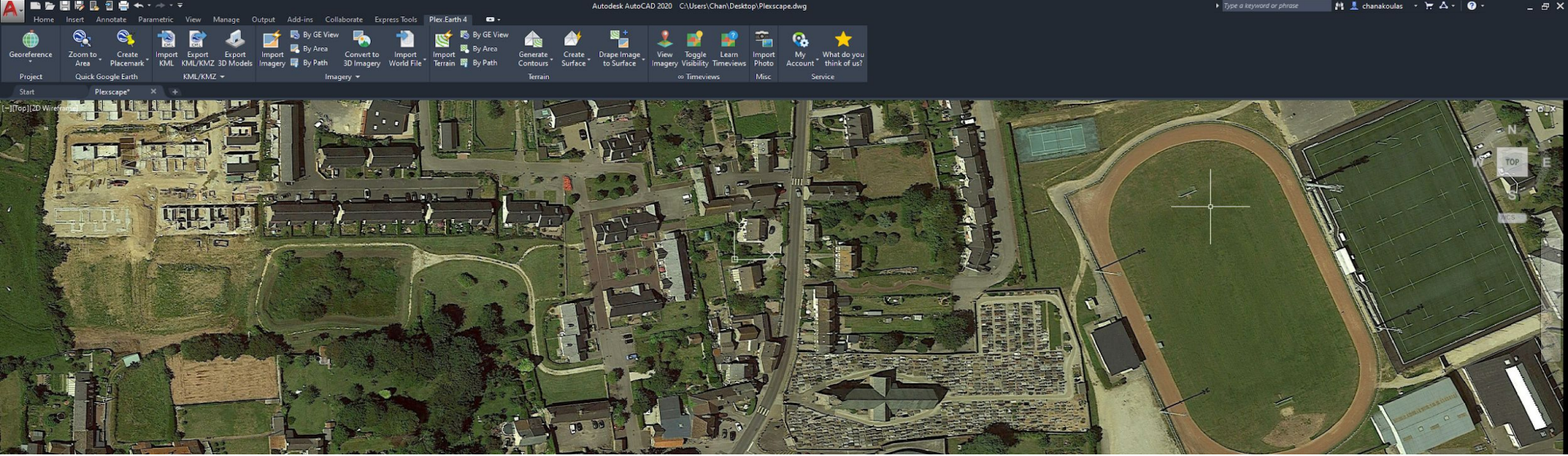
GitHub



https://www.amazon.com/Learning-Angular-no-nonsense-applications-TypeScript/dp/1839210664

https://www.packtpub.com/eu/web-development/learning-angular-10-third-edition



Plex.Earth

Plex.Earth is a hybrid desktop/cloud-based software, developed by Plexscape, that accelerates the design process of architectural, engineering and construction (AEC) projects.

The application, which is used by some of the most notable firms worldwide, such as Hellenic Petroleum, F1, AECOM and Garver, enables designers to have the complete 3D geographical view of their real-world project sites within minutes, through Google Earth and other satellite data providers.

Import imagery

Plex.Earth

Map Explorer

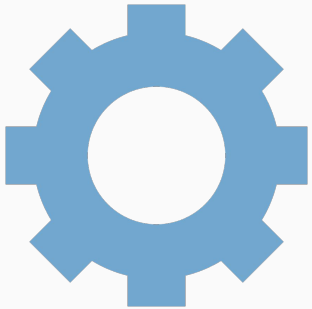
Electron

```
> npm install -D electron
```

- Cross platform framework to create desktop apps using web technologies
- Built on top of Chromium, Node.JS and Chrome v8 engine
- Popular apps (VSCode, Slack, Skype, Whatsapp)

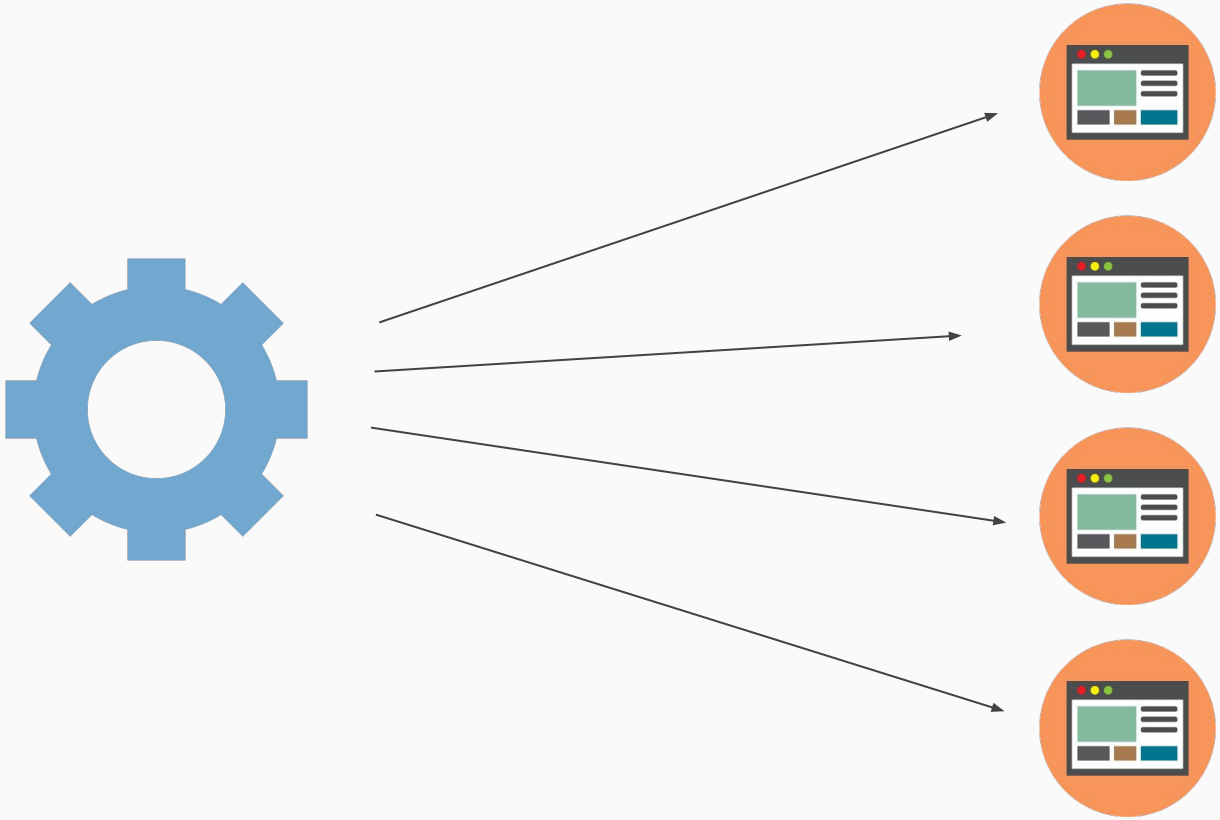
Electron architecture

Main



Renderer

Electron architecture



main.ts

```ts
import { app, BrowserWindow } from 'electron';

function createWindow () {
  const mainWindow = new BrowserWindow({
    width: 800,
    height: 600
  });

  mainWindow.loadFile('index.html');
}

app.whenReady().then(() => {
  createWindow();
});
```

Map Explorer

1. Desktop vs web
2. Serverless
3. Inter-process communication

remote

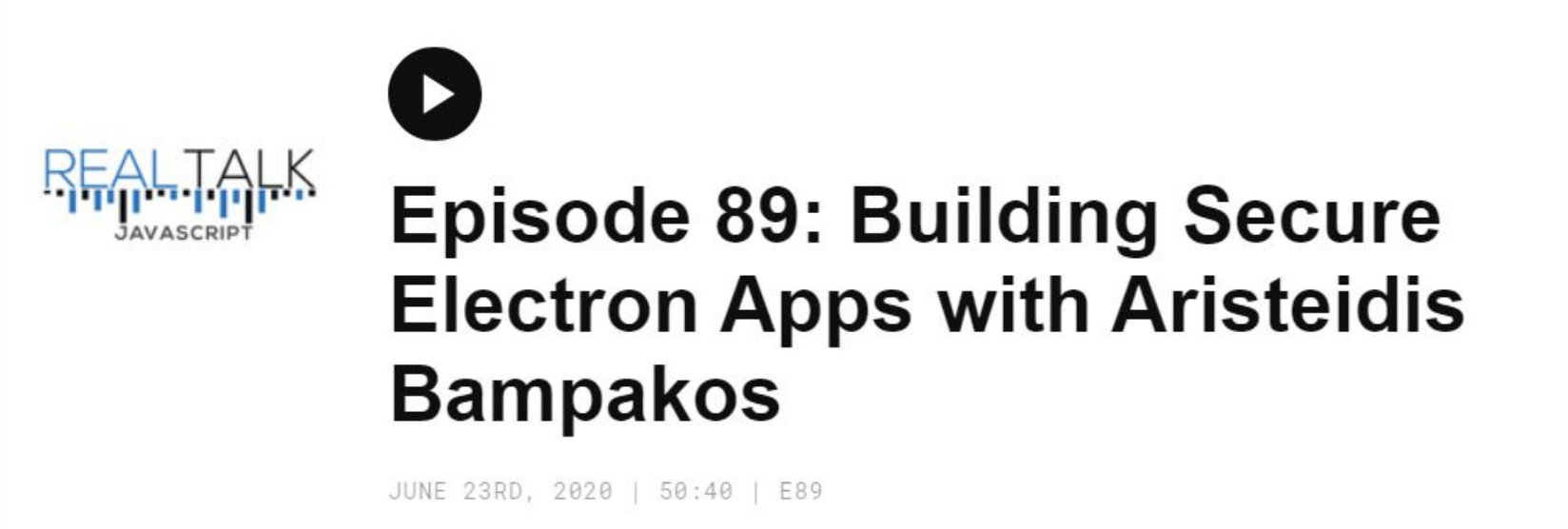
```
import * as fs from 'fs';

global['fs'] = fs;
```

```
require('electron').remote.getGlobal('fs');
```

remote

```
const mainWindow = new BrowserWindow({
  width: 800,
  height: 600,
  webPreferences: {
    enableRemoteModule: false
  }
});
```

Real Talk Javascript



https://realtalkjavascript.simplecast.com/episodes/episode-89-building-secure-electron-apps-with-aristeidis-bampakos

IPC communication

```
import { ipcMain  } from 'electron';

ipcMain.handle('getData', () => {
  return 'Hello World';
});
```

```
async () => {
  const renderer = require('electron').ipcRenderer;
  return await renderer.invoke('getData');
}
```

Thank you!

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- Demo https://github.com/bampakoa/angular-electron-sample
- Plex.Earth http://plex.earth/
- Electron https://www.electronjs.org/
- Electron getting start https://www.electronjs.org/docs/tutorial/first-app
- Electron's 'remote' module considered harmful
- ngx-electron http://github.com/ThorstenHans/ngx-electron/