

Using the JSAPI in PS Projects: Lessons Learned Part 2

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Tech Trek 2020

Agenda

- Unit testing
- VS Code JSAPI extension
- jsapi-resources repo
- Customizing Portal for ArcGIS Enterprise
- JSAPI tips, tricks, gotchas

Unit Testing



Money



\$

LEGAL TENDER
FOR ALL PUBLIC AND PRIVATE

Benjamin Franklin
Treasurer of the United States.

SERIES
1998

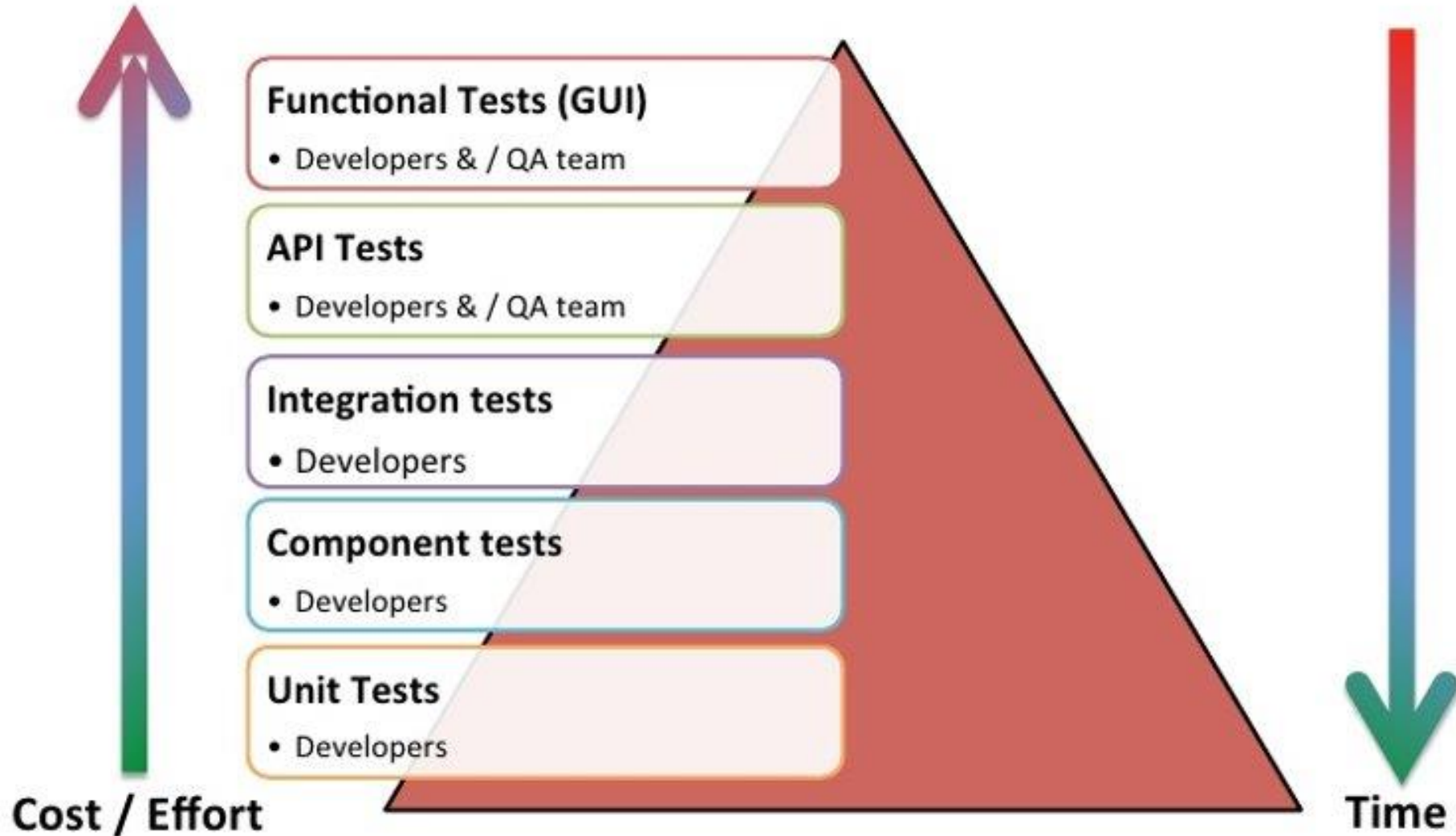
FRANKLIN



A hand in a white glove holds a glowing wand, creating a blue energy trail and sparks. The background is dark blue with floating particles.

Enterprise Challenges

Ideal Test Pyramid



Nightmare Test Pyramid



Bugs

**A single functional test that
hasn't passed in three years**

Often times...

How do we Test?

- ☐ Write Code
- ☐ Write Test
- ☐ Write code, break test
- ☐ Rewrite Test

Goal

Test Driven Development

- ☐ Write Test
- ☐ Test Fails
- ☐ Write code till passes
- ☐ Refactor

Easy to Test

=

Easy to Maintain

Rule #1:

Don't Test

Other People's Code

13

SPY
Shop

SPY

SPY



SINON.JS



Jasmine



intern



...but I want to use

(((Insert latest trendy JavaScript Framework)))

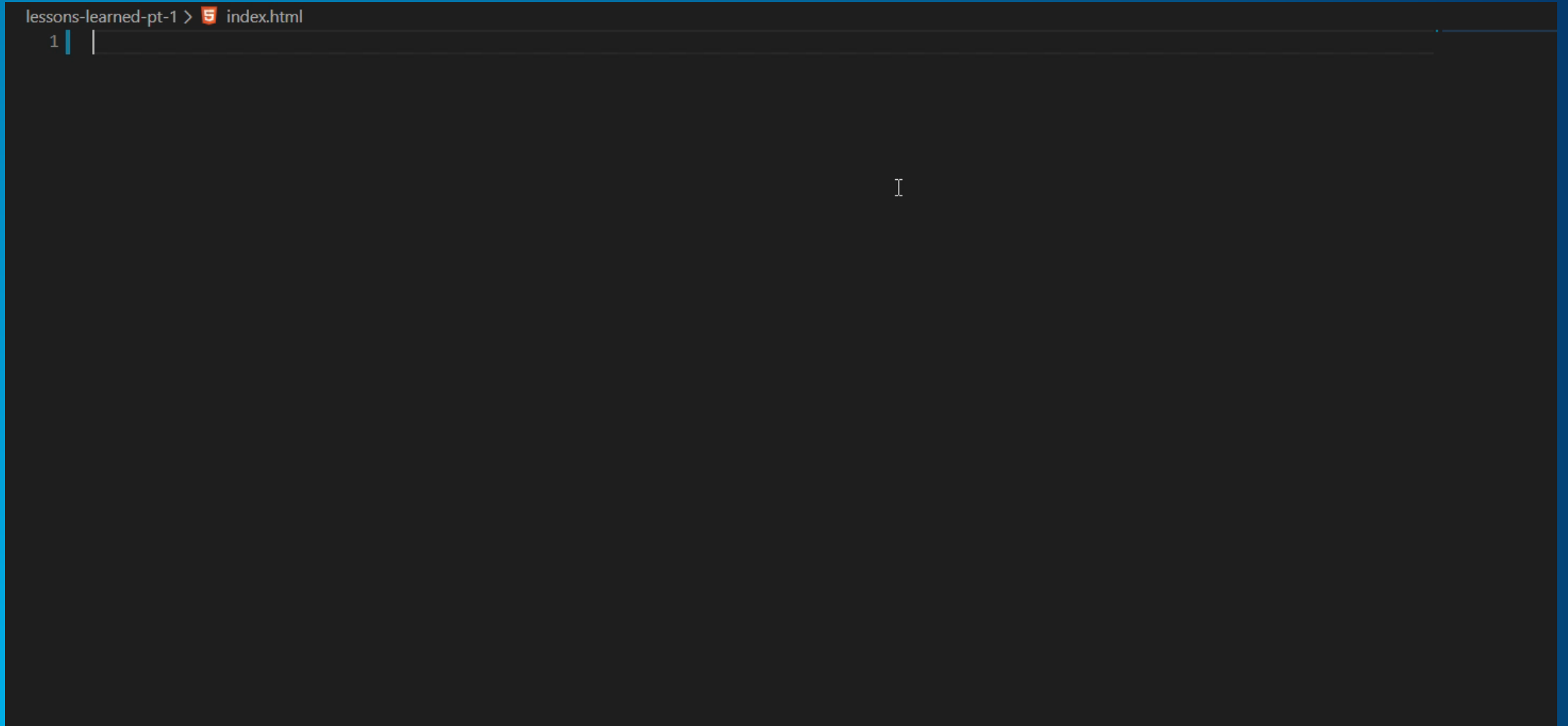
Use any framework you want

<https://github.com/Esri/esri-loader>

<https://developers.arcgis.com/javascript/latest/guide/esri-loader/>

<https://developers.arcgis.com/javascript/latest/guide/arcgis-cli/>

VS Code JSAPI extension



jsapi-resources repo

- <https://github.com/Esri/jsapi-resources>

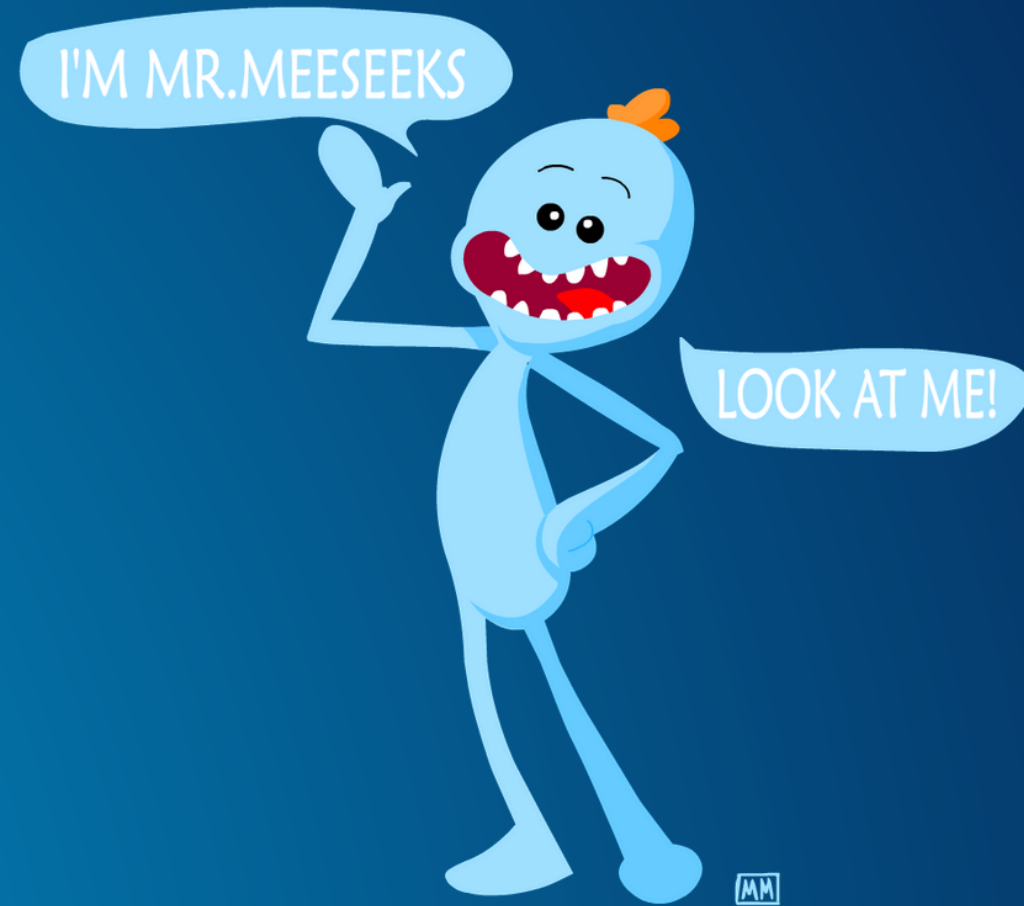


Customizing Portal for ArcGIS Enterprise – tips and best practices

- Upgrades suck. Stay out of the way of core.
 - Hook into events whenever possible
- Automate deployments
- Lets walk through a sample customization – home page announcements

Round 1 - Announcements

- Communication!



Problem

- Need to communicate to users:
 - Planned outages
 - Migration and upgrade windows
 - Current impacted (unavailable) services
 - Outreach for feedback
 - Upcoming events



Solution

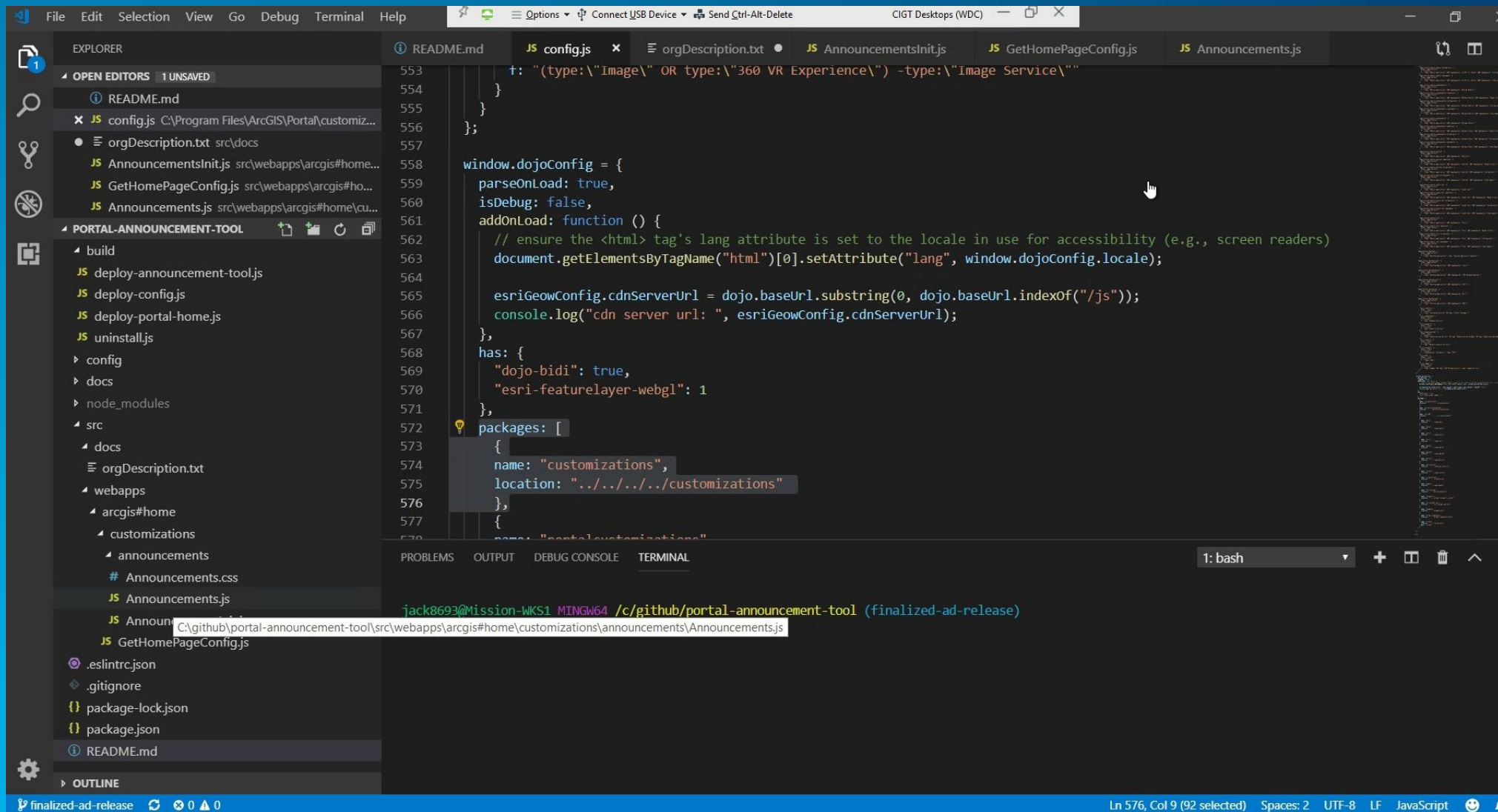
- Custom JavaScript!
 - 1) Add location for your customizations in config.js
 - 2) Hook into the Organization > settings > description
 - Store a hidden <div>
 - 3) Query the class from the home page, create some dom nodes, et...

```
572 packages: [  
573   {  
574     name: "customizations",  
575     location: "../../../../../customizations"  
576   },
```

```
1 <div class="config" style="display:none">  
2 {  
3   "announcementDialog": {  
4     "title": "Announcements",  
5     "closeButtonText": "Close",  
6     "neverShowText": "Don't show this again until there is a new announcement.",  
7     "datePattern": "M/dd/yyyy h:ma",  
8     "announcements": [  
9       {  
10        "date": "04/10/2019 10:00AM",  
11        "title": "Known Issue",  
12        "description": "Default example format for announcement"  
13      }  
14    ]  
15  }  
16 }  
17 </div>
```

```
1 dojo.addOnLoad(function() {  
2   arcgisonline.init.initialize();  
3   require([  
4     "customizations/GetHomePageConfig",  
5     "customizations/announcements/Announcements"  
6   ], function(GetHomePageConfig, Announcements){  
7     GetHomePageConfig.loadConfig(function(config) {  
8       Announcements.init(config);  
9     });  
10  });  
11 });
```

Voila - Announcements!



JSAPI tips, tricks, and gotchas

- Accessors and property watching replaces event listening
- Map/scene view: 2D \leftrightarrow 3D – swap webmaps!
- Layer queries – `createQuery()` vs. `Query()`

References

- What's New in ArcGIS API for JavaScript (April 2020) [blog post](#)
- JavaScript API [sample code](#)
- Arcgis-cli developer tooling [guide](#)
- Esri-loader [guide](#)
- <https://github.com/webdevjackie/esrica-tech-trek>
- [ArcGIS API for JavaScript: Using TypeScript](#)
- [ArcGIS API for JavaScript: Programming Patterns and Fundamentals](#)
- [Unit Testing with the JavaScript API](#)



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