

Forum:[Hack Forums](#)

Thread: [Favorite asynchronous pattern](#)

uint32 - August 24, 2017, 8:56 pm

They are three main asynchronous programming patterns: TAP (task-based asynchronous pattern)

EAP (event-based asynchronous pattern)

CAP (callback-based asynchronous pattern)

TAP: commonly used by the form of promises or observables in javascript. Returns an object that can be queued for results. The new ES6 async/await pattern. Example:

```
Code function getUser(){
  return new Promise((resolve, reject) => { ...some asynchronous stuff... resolve(result) })
}
```

```
let user = await getUser();
```

EAP: event is set and fired on completion. Example:

Code let emitter = new EventEmitter();

```
function getUser(){
  ...some asynchronous stuff...
  emitter.emit("something", params)
}
emitter.on("something", (params) => { ...whatever... });
```

```
getUser();
```

CAP: callback function is passed as an argument. Example:

Code function getUser(callback){

```
  ...some asynchronous stuff...
```

```
  callback(params)
}
```

```
getUser((params) => { ...whatever... });
```

So, which is your personal favorite? I've heard a lot of debate over this topic, and nobody seems decided on which is best.

Personally, I prefer a TAP approach because I find it easier to understand, maintain and clean.

NOTHING MATTERS - August 25, 2017, 12:35 pm

For JS, using promises is dope, but I've noticed when using Firebase that I can't use listeners (EAP) and promises together (the promise can only be resolved once), but I can use listeners with callbacks repeatedly.

Idk if that answered your question tho lol I guess I like TAP. It depends on the use case. I use promises for getting data once, then use callbacks and listeners for getting data on changes like I said.

Fresku - August 27, 2017, 12:45 am

Promises are nice indeed, but I like action based systems like redux aswell

Uncomplicated - August 27, 2017, 10:29 am

+1 for TAP with async/await; makes life so much easier!

Faith Connors - *August 27, 2017, 12:11 pm*

I find myself doing everything web-related with EAP, but generally when not doing anything specifically for the web I default back to TAP.

Dunno, TAP seems to be my goto for like every language too haha.

th3s3cr3t0n3 - *August 31, 2017, 3:32 am*

I like all three, though commonly been TAP. All three methods have their applications and uses. But syntax wise and preference would still be TAP.