



Hodgepodge: Building an Extensible JavaScript Library

No, we aren't talking about the rabbit¹ here. Programmers who have been coding for any length of time have invariably built up their own little private library of handy bits of code that they reuse from project to project. JavaScript is certainly no different in this regard. In this chapter, you'll put together such a library for yourself—a library you'll find numerous uses for in the projects to follow.

This chapter will take the form of a question-and-answer session between an imaginary junior developer and his senior mentor who is, shall we say, a bit on the eccentric side. Not only will you put together a batch of handy functions, but you'll also see how to organize it in a pseudo-package structure to avoid namespace collisions and make it easier to find what you want, and also to make it look a bit more like a “real” language, *à la* Java. Oh yeah, the tongue-in-cheek structure of this chapter is a bit fun, too! Now it's time to do a *Wayne's World*² flashback fade and have at it!

Bill the n00b Starts the Day

“Geez, 11:30 a.m., and they expect me to start coding right away? I hate this place.”

Gilbert had been working at Initech³ for all of five years (he was exceptionally loyal for a developer!), and he still couldn't quite get the hang of getting up “early.” Gilbert rolled out of bed at around 10:45 a.m., showered (usually), and then hopped in the car for the 15-minute drive to work. Fortunately, he was a phenomenal developer, and everyone knew it, so he was cut perhaps more than his fair share of slack.

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1. Hodge-Podge was the name of the rabbit in the comic strip *Bloom County* by Berke Breathed.
 2. *Wayne's World* was a 1992 movie starring Mike Myers, Dana Carvey, and Tia Carrere, in which two slacker friends (Myers and Carvey) try to promote their public-access cable television show called “Wayne's World.” As you might expect, madness way above and beyond that simple plot quickly ensues. At least one scene involves a flashback by one of the characters, which is preceded by a transition effect where the screen begins to wobble as the scene dissolves to the flashback scene (and Myers and Carvey accompany the waving with hilarious hand motions and sound effects). Still not ringing a bell? Take a cruise over to YouTube (<http://www.youtube.com>) and search for it; you're bound to find a clip in no time!
 3. Initech is the name of the imaginary company where the main characters in the movie *Office Space* worked.

But today he was facing a challenge he had never encountered before—a horror so grave that he could barely comprehend how he would do it, let alone at this ungodly hour of the morning.

Today was Bill’s third day of work. Bill was a n00b⁴ of the highest order.

Hence, Gilbert was extremely unenthusiastic. Even by his standards.

“Uh, Gilbert, sir?” Bill asked timidly.

“What offering do you have for me today?” Gilbert replied.

“Two cans of Jolt cola, some gummy worms, and a jug of Dunkin’ Donuts coffee.”

Gilbert was pleased with his young apprentice. “You may approach and converse.”

“Well, umm . . . Jack, the senior architect . . .”

“Do not speak the beast’s name in my presence!” exclaimed Gilbert.

Bill had been afraid of this. He knew Gilbert didn’t think too highly of people who sat around all day just writing “thesis papers,” as he put it, and never actually twiddled bits anymore. Bill had indeed been prepared, though.

“I realize the beast is not on your level my master, but he is my superior, and I must therefore acquiesce to his will.”

Gilbert considered his young apprentice for a moment. “That is true. He is superior to you. Few aren’t. You may proceed.”

“Well,” Bill continued, “He asked me to add some functions to the online accounting system, and I have some questions I was hoping you could answer for me, as only you can.” That last part, Bill knew, would score him some points with Gilbert. Indeed, he looked pleased.

“You may ask your questions, n00b, so that you may receive my wisdom.”

And with that, Bill began.

Whoa, back to reality for just a minute. Yes, this is the voice of your author! I just wanted to make sure I haven’t lost you here. What we’ll do now is build up a library of JavaScript functions and also learn how to put it in something of a pseudo-package structure reminiscent of Java or C# packages. Many (but probably not all) of these functions will be used in later projects, and should give you a nice start on your own little library. You should absolutely add your own code to build up this library, and you’ll find it to be a very handy tool in your future work!

Overall Code Organization

In this section, we will look at how to organize JavaScript in a clean, logical way that will also make it a little safer in terms of avoiding naming conflicts.

Question: How can I organize JavaScript code to avoid naming conflicts and generally group related functions together cleanly?

I want to make sure I organize my code well and that I don’t risk naming anything I add in such a way that it conflicts with code that’s already in the system.

Answer: In JavaScript, you can, to a certain degree, emulate the packaging system you use in Java, C#, or most other modern languages. All you need to do is create a new class, and then make all your utility functions members of that class.

For example, let’s say you want to create a package that will contain a bunch of functions for displaying various predefined alert messages. You can do this by writing the following code:

4. n00b is short for newbie in Leetspeak (1337). A newbie is someone who is new at something. Leetspeak is a way of speaking, or more precisely, writing words, usually associated with the computer “underground” (software pirates, hackers, crackers, hardcore gamers, and so on).