

JAVASCRIPT DEBUGGING

JavaScript runs in the browser so it must
be debugged in the browser



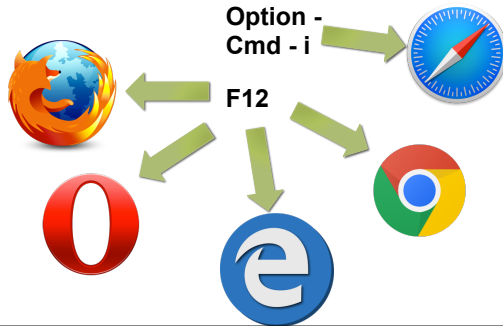


Firebug was the
trailblazer for
debuggers

It's the original Firefox add-on
Needed to be installed
But now merged with built-in Firefox tools

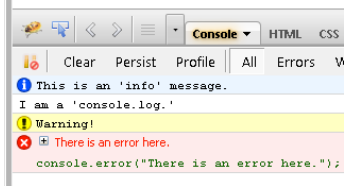
But all browsers have debuggers baked in

- No need for installs and extra packages



We can send messages to the console

```
console.info("This is an 'info' message.");
console.log("I am a 'console.log.'");
console.warn("Warning!");
console.error("There is an error here.")
```



```
console.log(
  "%s %s works as a %s. Whole object: %o",
  person.title, person.lastName,
  person.job, person);
```

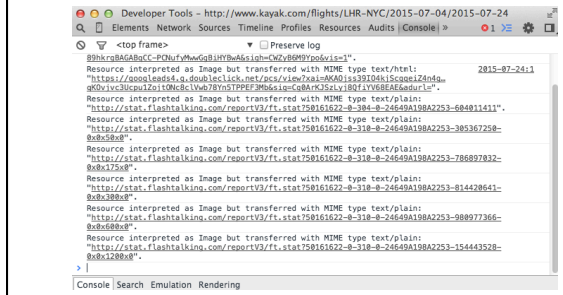
- %s - string
- %f - floating point number
- %d or %i - integer
- %o - Expandable DOM object
- %O - Expandable JavaScript object

console.log
can format

```
Dr. Honeydew works as a Professor. Whole object: {
  assistant: "Beaker",
  birthDate: "Tue Apr 18 1978 18:00:00 GMT-0600 (CST)",
  firstName: "Bunsen",
  job: "Professor",
  lastName: "Honeydew",
  title: "Dr.",
  __proto__: Object
}
```

All Browsers Tools Work Pretty Much Alike

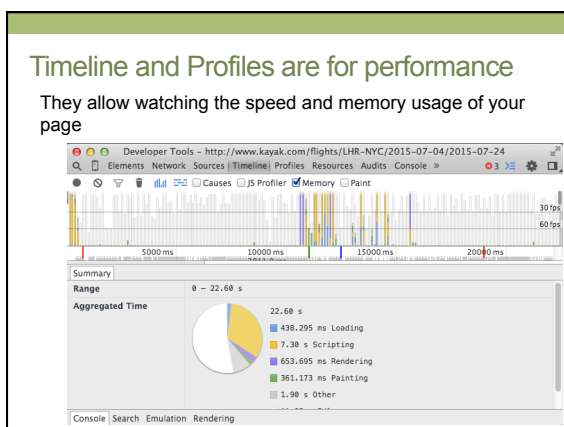
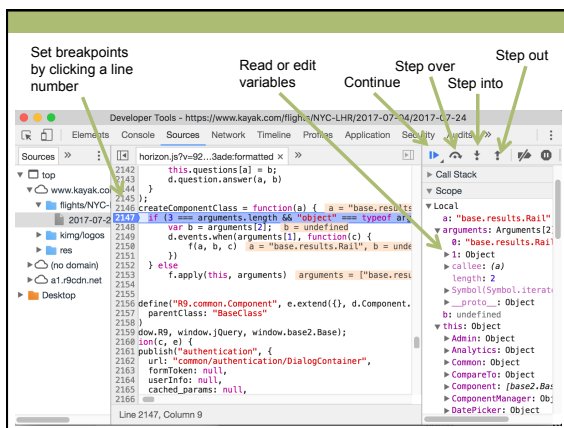
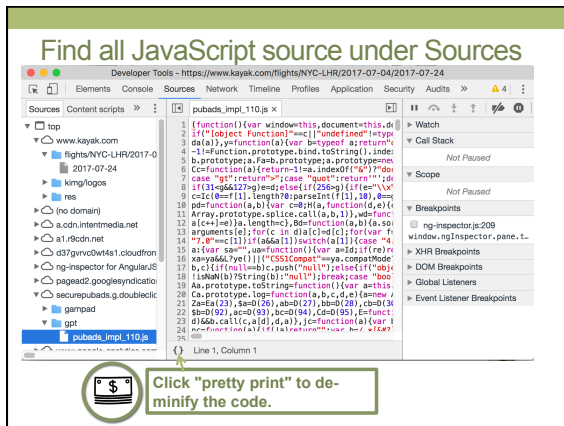
- Let's see how Chrome works differently. This'll give us clues as to how the others work



Resources show memory storage

Like cookies, local & session storage

Debugging JavaScript



Examine traffic on the Network tab

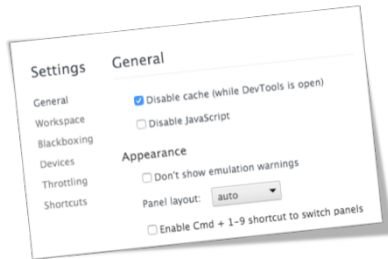
Shows each resource requested, its HTTP method, result, type, and speed

Name	Met.	Status	Type	Initiator	Size	Timeline
idar.js	GET	200	text/javascript	320_0_c309aHbC...	21...	2...
320_0_c309aHbCZYTOmJk5NTc3L...	GET	200	text/javascript	Other	5.5...	8...
imp.js?ot=1430498756836&ah=1&w...	GET	200	application/ja...	Other	5.9...	1...
en.js	GET	200	application/x...	imp.js?ot=14304...	861 B	7...
beacon.js?c1=8&c2=6820648&c3=16c...	GET	200	application/x...	imp.js?ot=14304...	994 B	6...
rtacView.js	GET	200	application/x...	imp.js?ot=14304...	22...	1...
dfa7banner_flash_html_inpage_renderin...	GET	200	text/javascript	320_0_c309aHbC...	0...	0...
modernizr_2.8.3_ec185bb44f6e5e6b74...	GET	304	text/javascript	320_0_c309aHbC...	0 B	5...
idar.js	GET	304	text/javascript	320_0_c309aHbC...	0 B	3...
beacon.js?c1=8&c2=6820648&c3=16c...	GET	200	application/x...	imp.js?ot=14304...	0...	0...
en.js	GET	200	application/x...	imp.js?ot=14304...	0...	0...
beacon.js	GET	200	application/x...	2015-07-24 23...	1.4...	5...

48 / 145 requests | 717 KB / 1.3 MB transferred | Finish: 9.37s | DOMContentLoaded: 2.45s | Load: 7.15s

Sometimes your files aren't re-read from the server. You can force it!

- In developer tools go ...
- Settings (gear)
- General
- Check "Disable cache (while DevTools is open)"



tl;dr

- JavaScript debugging must be done in the browser
- Firebug is available for Firefox
- All browsers have their own debugging tools
- Fortunately they all behave pretty much the same way and all have
 - DOM inspection
 - CSS debugging
 - JavaScript debugging
 - Network analysis