

# Developer Tools & Debugging

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# Why should I be a better debugger?

- 1) You'll save yourself **a lot** of time
- 2) It makes you stand out as an engineer
- 3) New engineers get put on debugging duty
- 4) You'll be working with other people's code



# Here's the basic idea

Step 0 - Recreate the bug

Step 1 - Identify the point of failure

Step 2 - Look at the chain of events that led to the failure

Step 3 - Fix the top of the chain

Step 4 - Verify that the bug is resolved (if not, start over)

P.S. - Google is your friend!



Search

TRANSACTIONS

Elements Console Sources >> 1

top Filter Default levels

Uncaught SyntaxError: Invalid or unexpected token index.js:2

>

Here's what exploded

Here's where it exploded

Console

# What if I can't see what I did wrong with my code?

Start `console.log()` 'ing your variables to see if their values are what you expect them to be



# What if I *STILL* can't see what I did wrong with my code?

Throw in a debugger; line and follow your code  
line by line.



Here's where we've  
"frozen" code execution

Sources

index.js

```
33  $('.search-input').on('input', function(e) { isDefaultPrevented
34  debugger;
35  var searchString = e.target.value.toLowerCase();
36  var filteredData = _.filter(fullTransactionData, function(tr
37  var foundInName = transaction.name.toLowerCase().inde
38  var foundInFor = transaction.for.toLowerCase().index
39  var foundInDate = transaction.date.toLowerCase().inde
40  var foundInAmount = transaction.amount.toLowerCase().in
41  return foundInName || foundInFor || foundInDate || found
42  });
43
44  $('#transactions').html(renderTransactions(filteredData));
45  });
46
47  });
```

Line 34, Column 3

Debugger paused

Call Stack

- (anonymous) index.js:34
- dispatch jquery-3.2.1.min.js:3
- q.handle jquery-3.2.1.min.js:3

Breakpoints

No Breakpoints

- XHR Breakpoints
- DOM Breakpoints
- Global Listeners
- Event Listener Breakpoints

Variables

Local

- e: r.Event {originalEvent: InputEvent, type: ...}
- filteredData: undefined
- searchString: undefined
- this: input.search-input

Global

Window

Here's all the variables  
on the page