

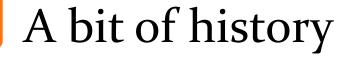


#### Node

- Cross-platform JavaScript run-time environment
- Built on Chrome's V8 JavaScript engine
- Executes JavaScript code outside of a browser.
- Open-source
- Written in C++
- Event-driven architecture capable of asynchronous I/O
- Node.js combined Google's V8 JavaScript engine, an event loop, and a low-level I/O API.









 Node was written by Ryan Dahl in 2009

> "Dahl was inspired to create Node.js after seeing a file upload progress bar on Flickr.

The browser did not know how much of the file had been uploaded and had to query the Web server. Dahl desired an easier way."



#### **Node Modules**

Core Modules

• Path, fs, http etc https://nodejs.org/dist/latest-v10.x/docs/api/

3<sup>rd</sup> party modules

Npm library

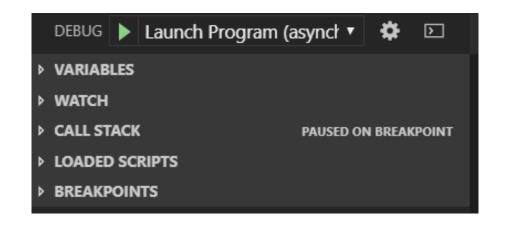
**Custom Modules** 

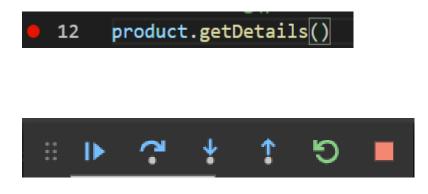
Specific to projects



## Debugging Node Apps







```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

C:\Program Files\nodejs\node.exe --inspect-brk=19755 cd-node-app\app\index.js
Debugger listening on ws://127.0.0.1:19755/715be2db-649f-4037-b861-d65cf72672c6
For help, see: https://nodejs.org/en/docs/inspector

Array(2) [Object, Object]
```



## Build a node server & Deploy on Cloud

{A}

- Set up Heroku
- Configure the project
- Deploy to Heroku
- Test the application

Heroku is a cloud platform as a service supporting several programming languages. Heroku, one of the first cloud platforms, has been in development since June 2007, when it supported only the Ruby programming language, but now supports Java, Node.js, Scala, Clojure, Python, PHP, and Go. Wikipedia





# Thank you!

