I-UG's 2020 Educational Season

Funky Stuff on the IBM I

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Session overview

Open source is emerging as a real contender in the development of our new modern systems.

This session will show some great ways of integrating them into our everyday projects. You will see some new ways of making some very impressive results using a mixture of open source products.

At our annual conference last June, we ran a workshop on Node.JS and the feedback we received from delegates was really positive.

We have therefore decided to continue with the theme in 2020 and Tracy Eastwood, a regular presenter at i-UG meetings will open your mind with some dazzling examples, all running on the IBM i. .

Who are we?, What do we do?

Logicmate

IBM i Modernisation specialists

IBM i Promoter of modernisation products
    Web development
    Genie, Profound UI, RPGsp
    Output Management
    InterForm/400
    InterFormNg

IBM i Software development company
    RPG, PHP, Python, Java, JavaScript, HTML, CSS
    RPG Web services, Encryption

Questions during the presentation

IBMi Open Source Products - 5733OPS

- Node.js v0
- **Python 3.4**
- Chroot with gcc
- **Python 2.7**
- Node.js v4
- Git (version control site, 57 million repositories)
- Tools
- Eclipse Orion
- Cloud-Init for i
- Node.js v6
- Nginx
- IBM i Open Source Solutions Option 12
- IBM i Open Source Solutions Option 13
- IBM i Open Source Solutions Option 14
- IBM i Open Source Solutions Option 15

OLD

ACS Open Source Package Manager

Installing and upgrading

Why Open Source

Three simple reasons

- Frameworks

- Frameworks

- Frameworks

What is an Open Source Framework

Open-**source** software (OSS) is a type of computer software in which **source** code is released under a license in which the copyright holder grants users the rights to study, change, and distribute the software to anyone and for any purpose.

Open-**source** software may be developed in a collaborative public manner.

Is Open Source Free?

- Yes, it's free like an inherited family air loom.

- Open source vendors usually make their living from supporting you, in the use of the open source product.
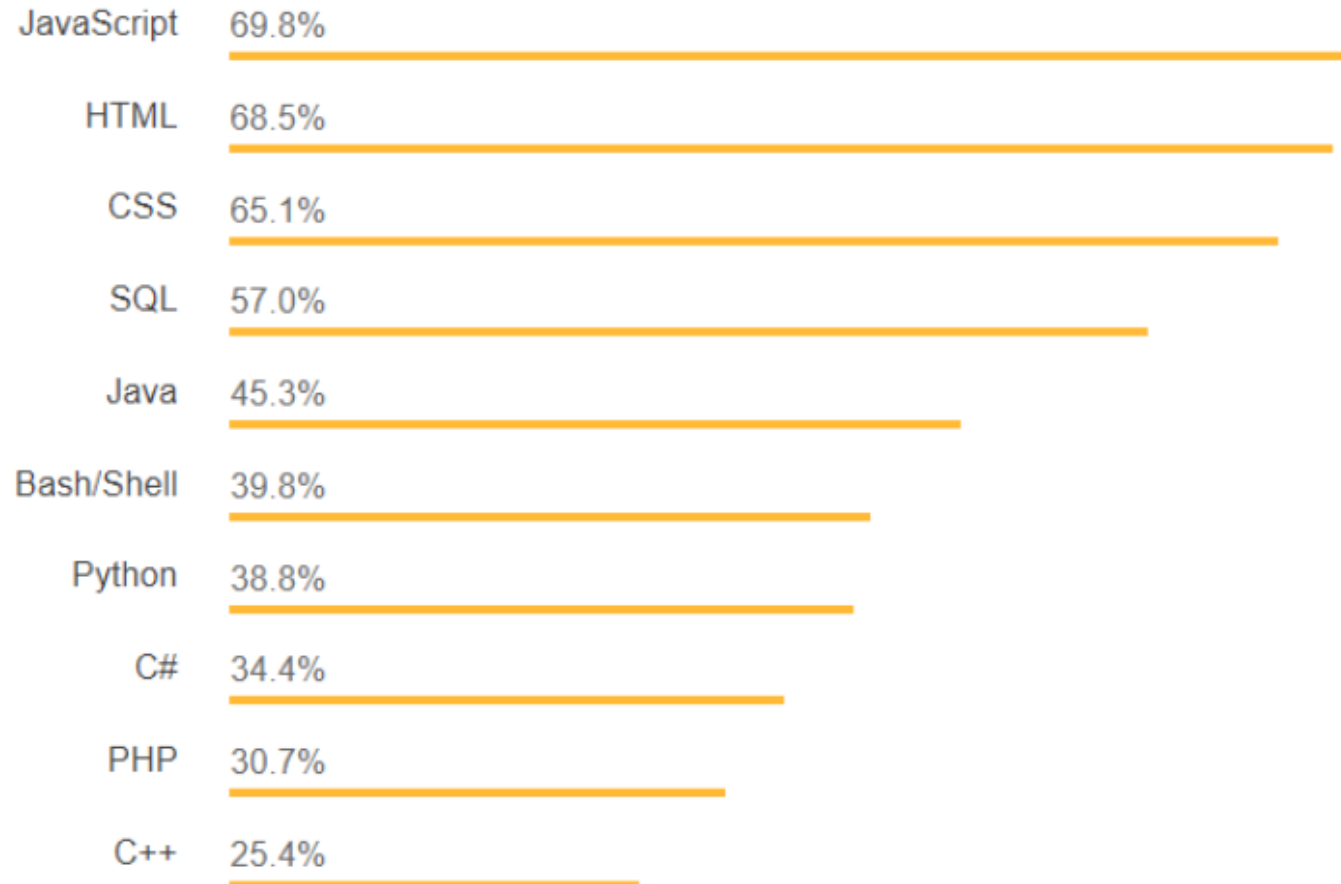
What about Security?

Firstly, I'm not a security specialist, these are the facts as I see them;

- IBM i is reputed to be robust and secure
- Used by lots of banks and financial institutions
- Has multiple layers of security features
- Gets really, really complicated….
- Speak to an expert

Decide upon what you are trying to secure and what level you need to go to, to secure it.

Most popular languages 2020

Language	%
JavaScript	69.8%
HTML	68.5%
CSS	65.1%
SQL	57.0%
Java	45.3%
Bash/Shell	39.8%
Python	38.8%
C#	34.4%
PHP	30.7%
C++	25.4%

https://insights.stackoverflow.com/survey/2018#most-popular-technologies

logicmate

www.logicmate.co.uk

Who Uses Open Source?

Using Node.js (the most popular)

- Netflix
- Paypal
- Capital One (Bank)
- Trello
- LinkedIn
- Yahoo
- Mozilla
- Uber
- Groupon
- Ebay
- Walmart
- Nasa

Examples using Node.js

Examples of Node.js apps using a platform noderun.com/ provided by Profound Logic.

It's a FREE, full stack development environment where you can create business ready applications in node.js and profound.js.

Gives you the ability to copy ("Fork") apps, created others and then make changes and publish etc. Can also be copied to your own server.

Is RPG/LE different to Node.js

The biggest differences

RPG
- Uses a synchronous process
- Uses stated program variables

Node.JS
- Uses a asynchronous process
- Uses loosely typed program variables
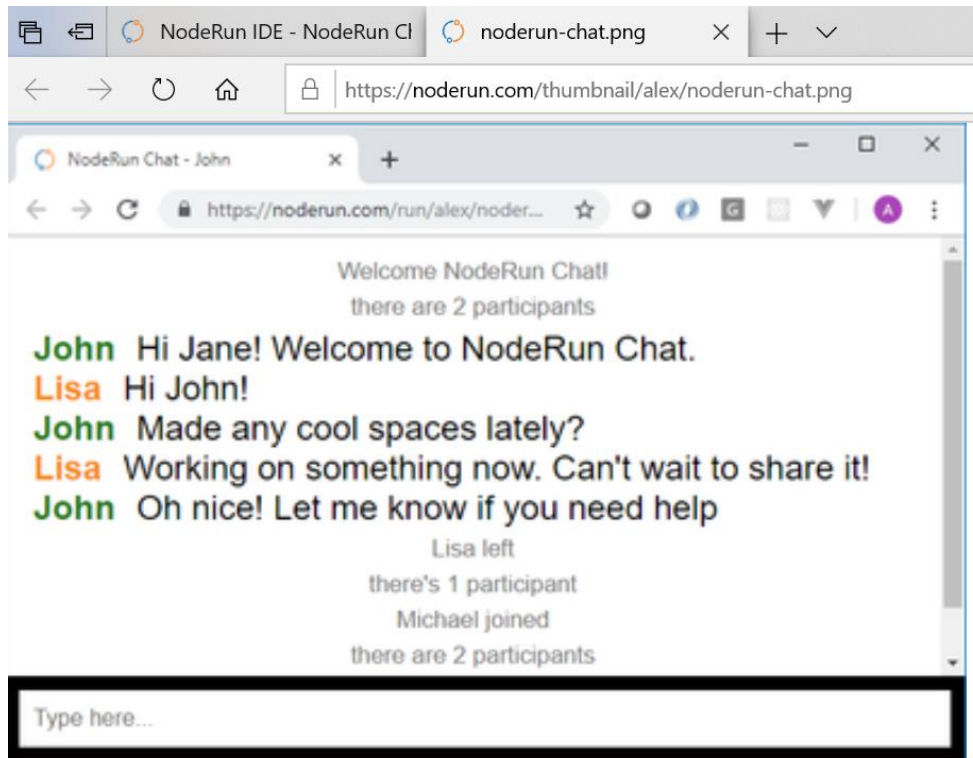
```
amount = 125.99;
amount = "ABC";
```

Examples

Noderun Intro

Charts and graphs
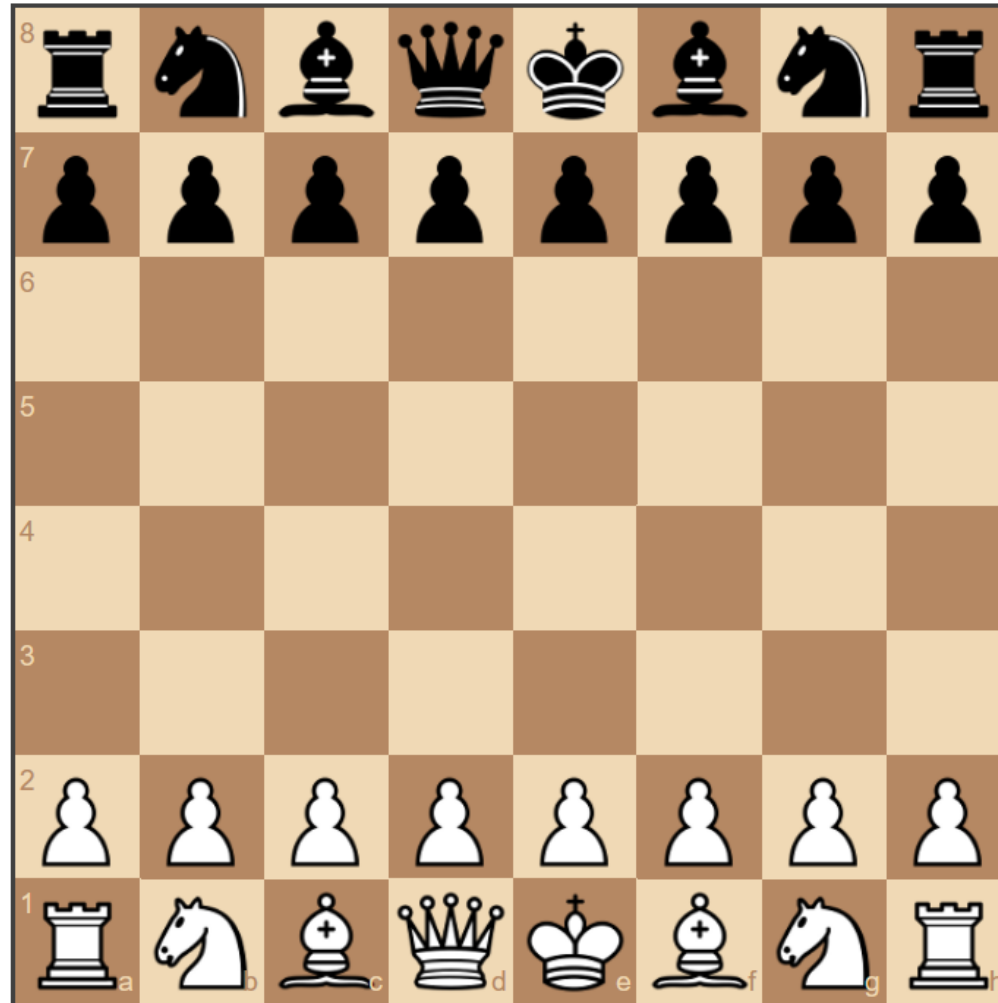
Chat

Examples

Program Source Code for charts

```
function app() {

pjs.defineDisplay("display", "app.json");

while (!quit) {
        options = `theme="${theme}"`;
        display.screen.execute();
        }

} exports.default = app;
```
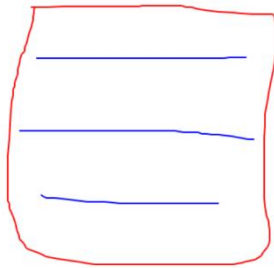
Examples

Chess

Examples

[Dashboards](#)

[Conference booking](#)

Collaborative whiteboard

Draw on the whiteboard and all other users connected to this application will see your drawings live!

Enjoy!
Based on Socket.io example

What's the point?

- The examples you have seen, may not fit your day to day needs, and some are just for fun.

- However based on the examples, can you see how these technologies can be used on the IBM i, and more importantly, in your environment?

- When anyone asks you, "can the AS400 do this….", firstly challenge and educate them, it's an IBM i, and the answer is more likely to be, YES…

Social Media

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The end

Show