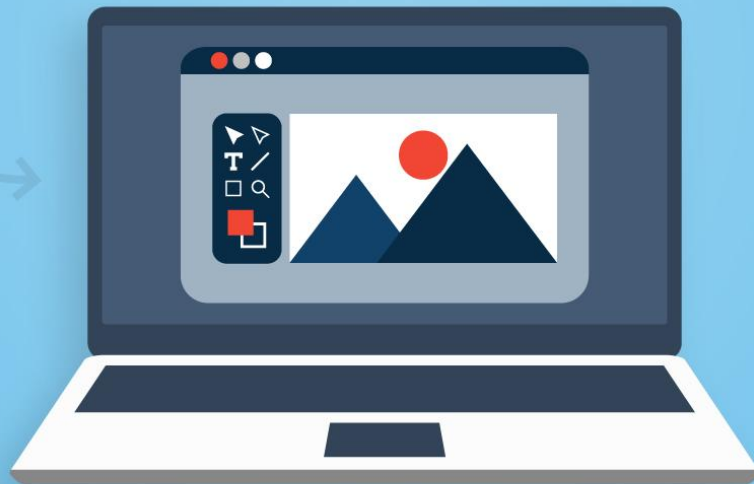# CODE AN HTML5 DOODLE APP WITH P5.JS & FIREBASE

JULY 6

ABOUT THE ASSEMBLY

- **A Smart lab based out of in5 since December 2014.**
- **Over 250 Free workshops done.**
- **Assembly : HACK - Embedded systems, IOT and hardware.**
- **Assembly : CODE - Software projects - APIs, frameworks, apps.**
- **Age range: 16 to 60 – Students | Professionals | Entrepreneurs.**
- **Focus on Smart Technology and Practical applications.**
- **Forum: members.theassembly.ae**

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ABOUT THE ASSEMBLY

FACEBOOK   **The Assembly - @MakeSmartThings**

TWITTER   **@MakeSmartThings**

INSTAGRAM   **@MakeSmartThings**

YOUTUBE   **The Assembly**

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OVERVIEW

OBJECTIVE: Make an HTML5 web application that allows you to draw onto the browser canvas directly using p5.js and save/share it with others using Firebase realtime database

ACKNOWLEDGEMENT: Based on ideas/code from Daniel Shiffman (formerly of the Processing foundation) and his Coding Train blog.

GETTING STARTED

- GITHUB: https://github.com/The-Assembly/DoodleApp
- PASTEBIN: https://pastebin.com/ZzY42Ejv
- WEB WHITEBOARD:
  https://www.webwhiteboard.com/board/rkjwjrdb

PROCESSING

- Open source programming language + environment for creating images, animations, and interactions
- 'a flexible software sketchbook and a language for learning how to code within the context of the visual arts'
- https://processing.org/
- https://processing.org/examples/smokeparticlesystem.html

P5.JS

- Reinterprets Processing for the web via javascript
- Browser page as sketch
- [Differences from Processing](#)
- Main functions ([Getting Started](#))
  - setup() - called once when the program starts
  - draw() - called continuously; whenever canvas refreshed
- [Web editor](#)
- [Reference](#)

P5.JS DOM

- Similar to jQuery
- Allows for manipulation of HTML elements (div, p, a)
- Very useful for creating interactions with Javascript
- Reference
- Beyond the canvas example

FIREBASE

- Google's mobile + web development platform since 2014
- [Realtime Database](#) - cloud data storage
  - Syncs data across iOS, Android & Web connections
  - Data stored in JSON
  - NoSQL database
  - Automatic updates of data in realtime
- [Read And Write Data On The Web](#)