PIXELDRAW: A DECLARATIVE LANGUAGE FOR PIXEL ART

PD

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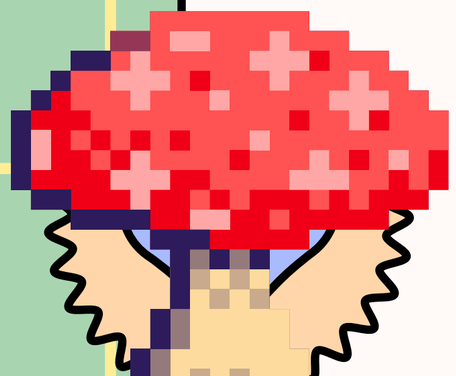
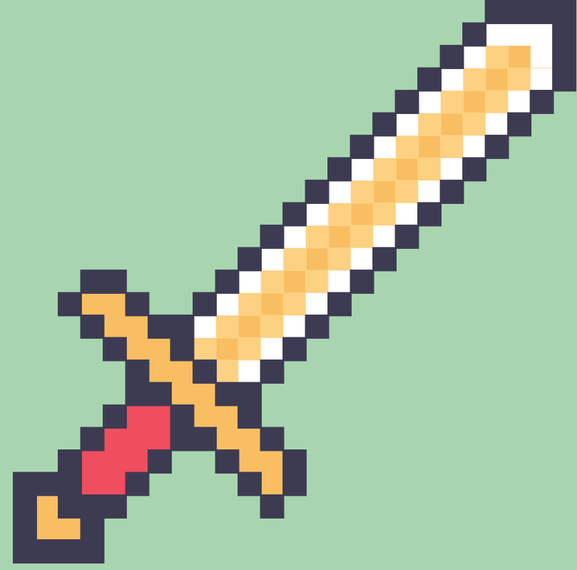
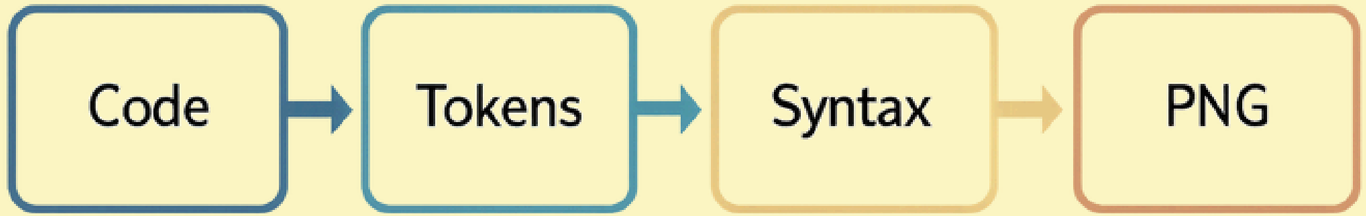
START

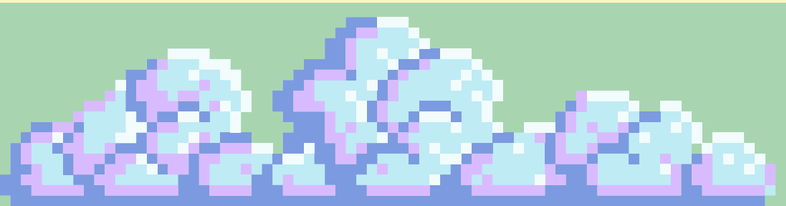


INTRODUCTION



- Existing tools (Logo, p5.js) require programming skills
- PixelDraw simplifies pixel art creation using text instructions





PROYECT OBJECTIVE

GENERAL OVJECTIVE

Create language and compiler for pixel art.

OBJECTIVE 1

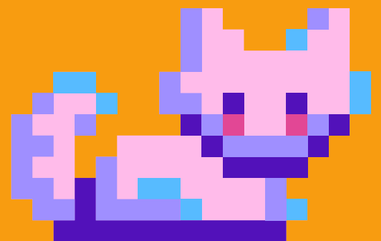
Declarative language for pixel images

OBJECTIVE 2

Compiler that interprets commands

OBJECTIVE 3

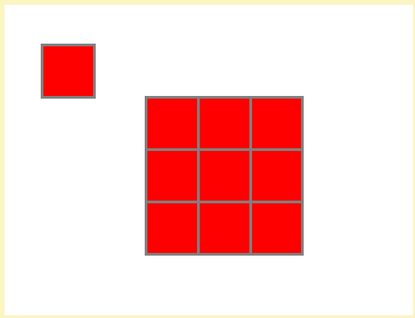
Tool for teaching programming concepts

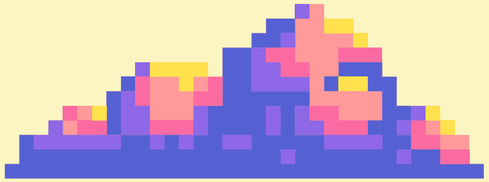


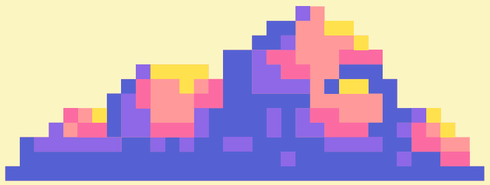
KEY COMMANDS AND SYNTAX

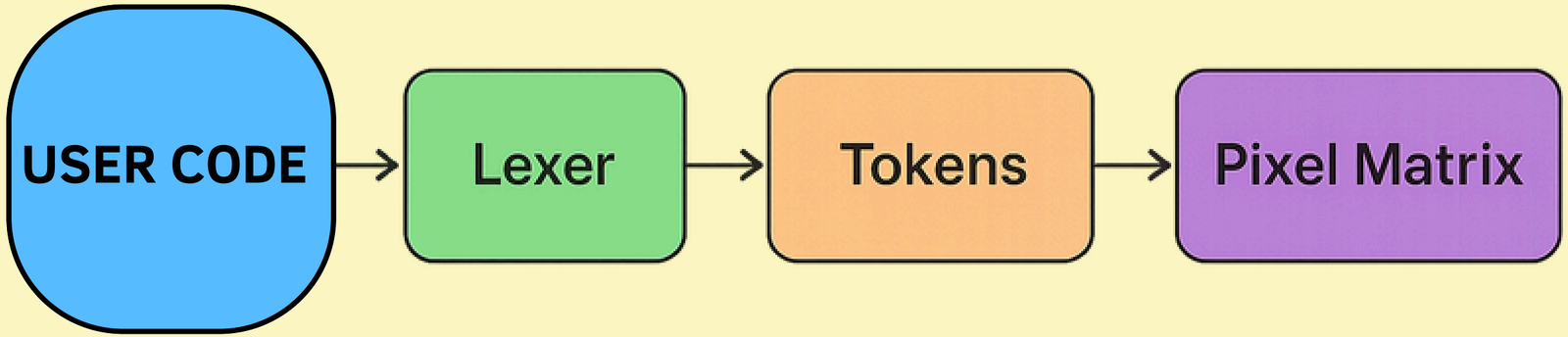
KEY COMMANDS

```
size 10x10
color red
point 2 3
rectangle 4 4 3 3
repeat 3 {
   point 5 5
}
```









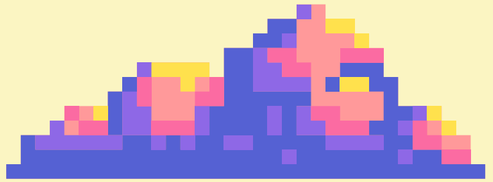
SYNTAX

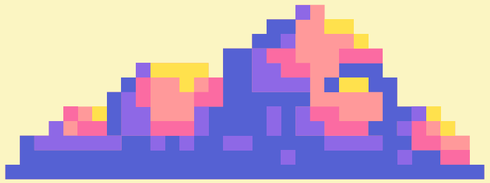
Simple and Structured Syntax 🖋️

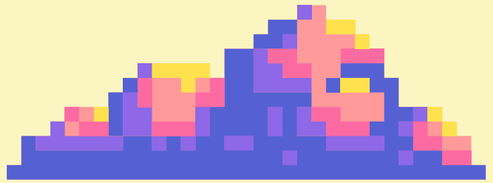
Declarative: Describe what, not how 👨‍💻

Regular Expressions for Validation ✅

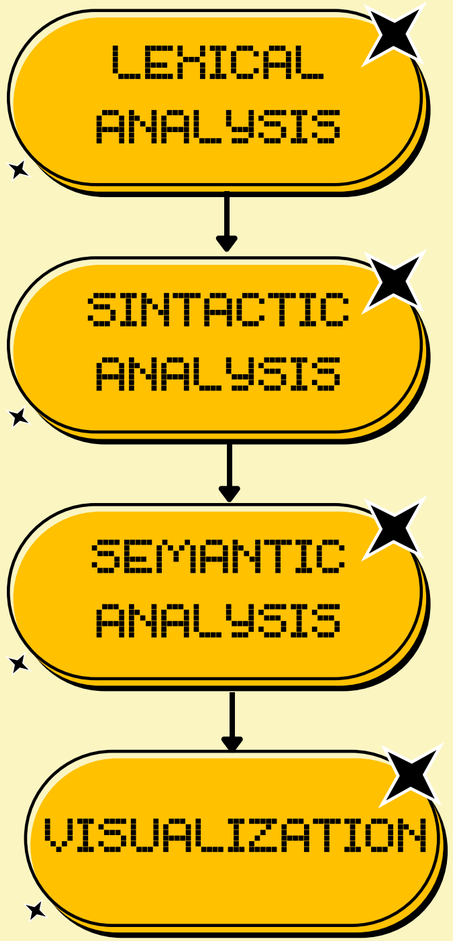
Outputs a Pixel Grid Image 🖼️

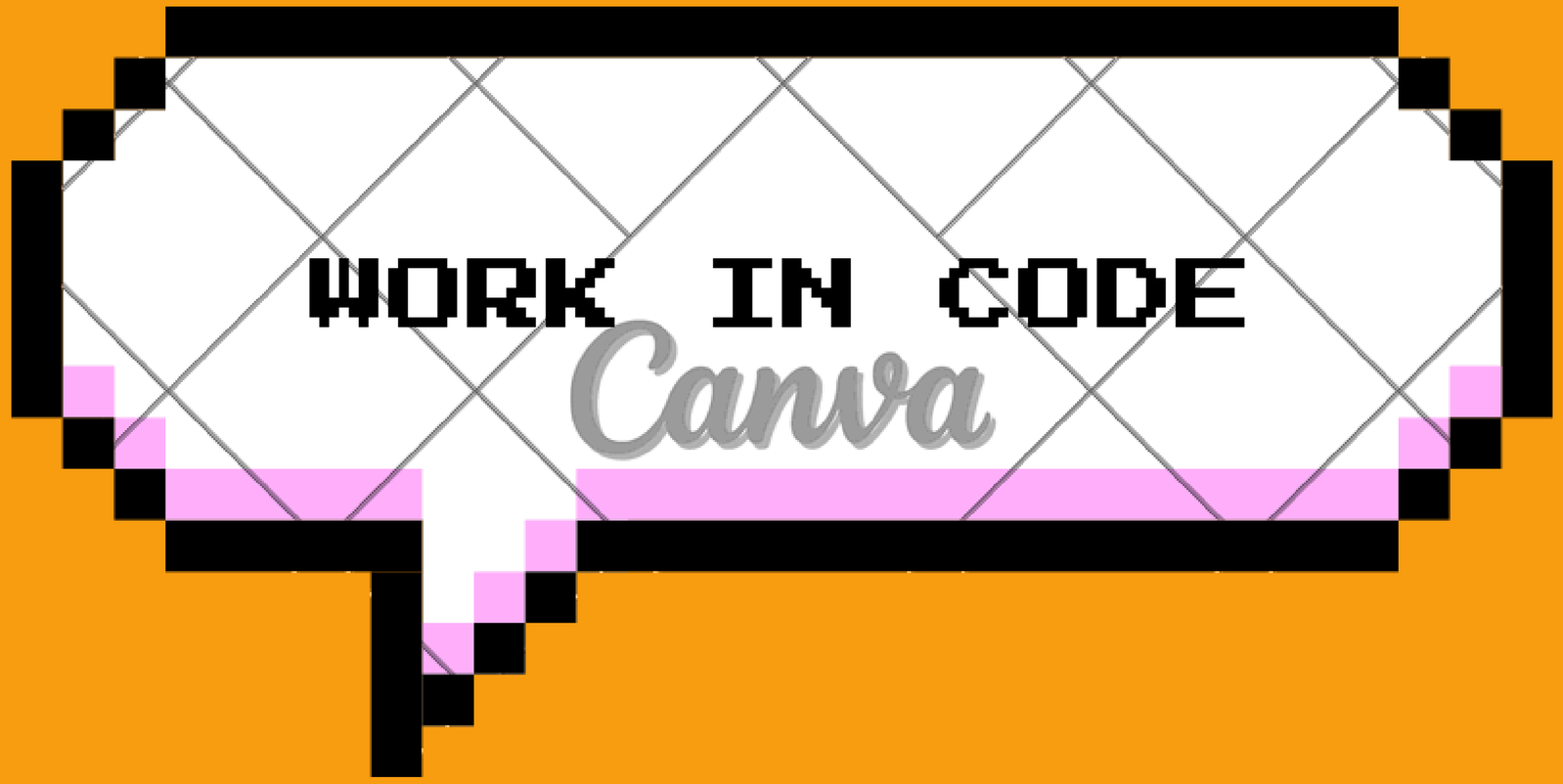






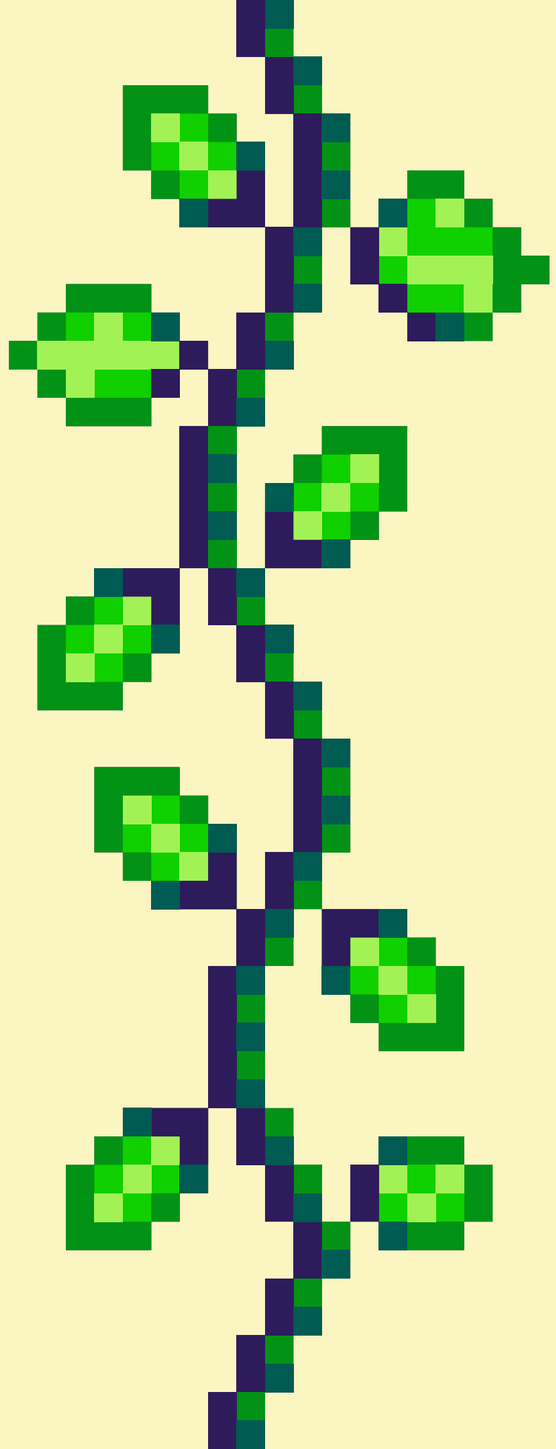
COMPILER ARCHITECTURE




WORK IN CODE
Canva

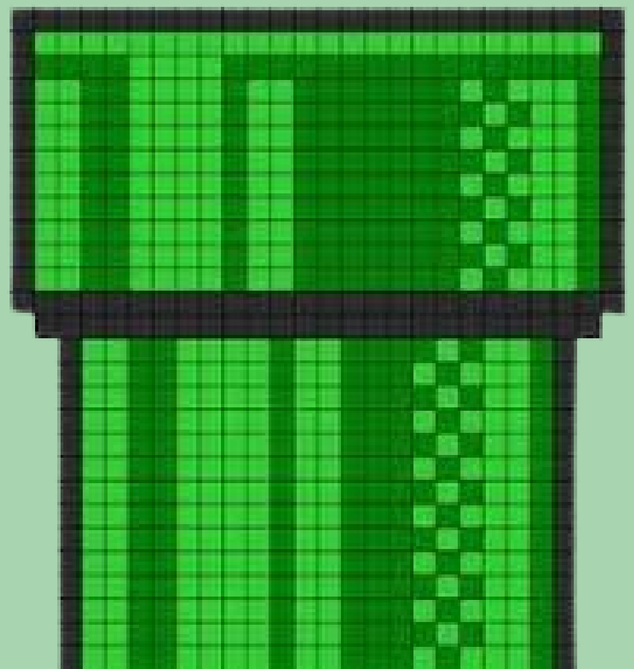
CURRENT PROGRESS & EXPECTED RESULTS

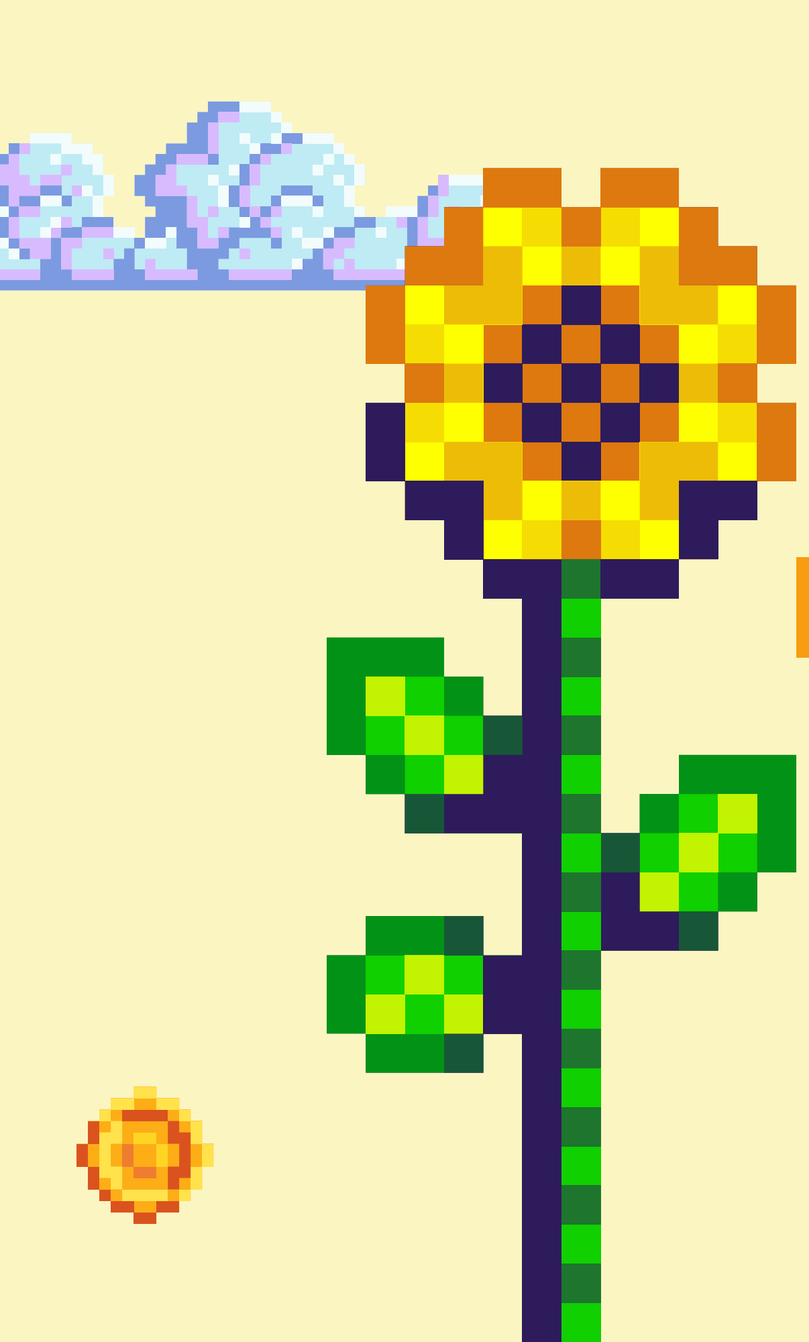
- [x] Grammar & regular expressions done.
- [x] COMPILER IMPLEMENTATION
- [ ]



CONCLUSION

- PIXELDRAW SIMPLIFIES PIXEL ART CREATION AND TEACHES COMPILER DESIGN.
- NEXT: INCLUDES EXPANDING THE INSTRUCTION SET, SUPPORTING ANIMATIONS, AND EXPORTING IMAGES IN MULTIPLE FORMATS.





QUESTIONS?

THANK YOU FOR YOUR ATTENTION!