PetFox Programming Language

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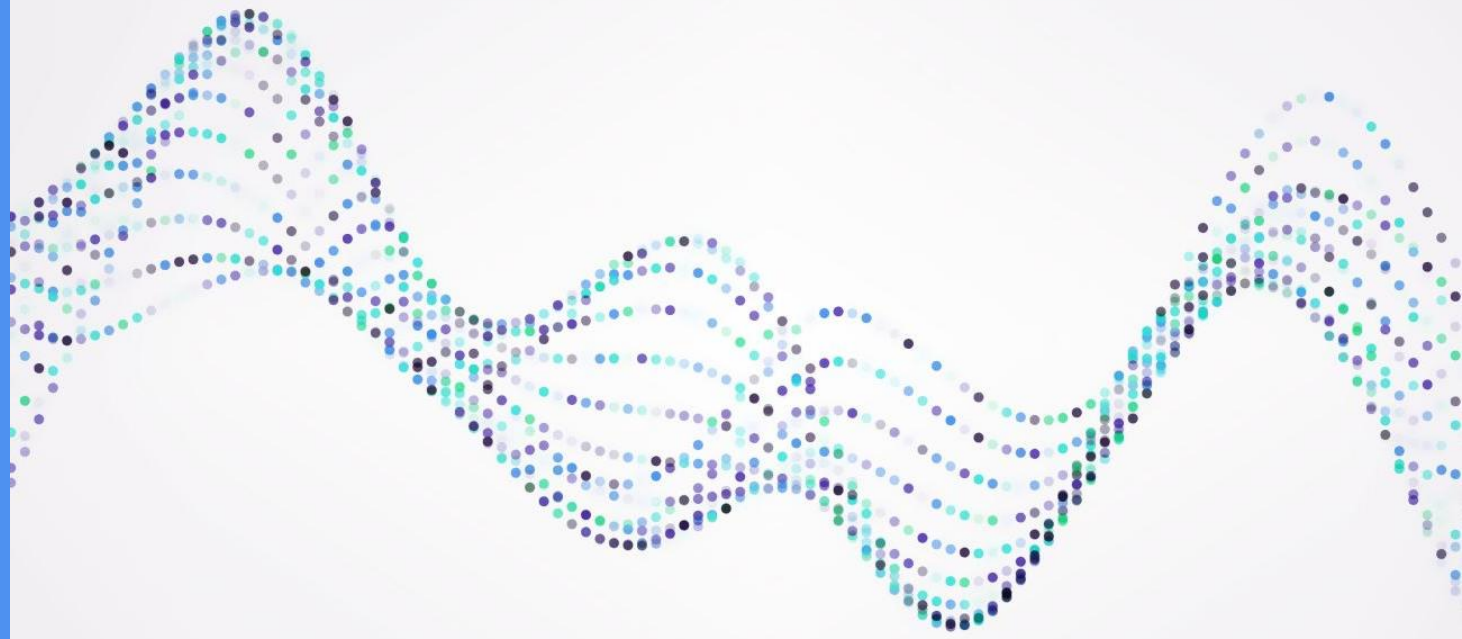
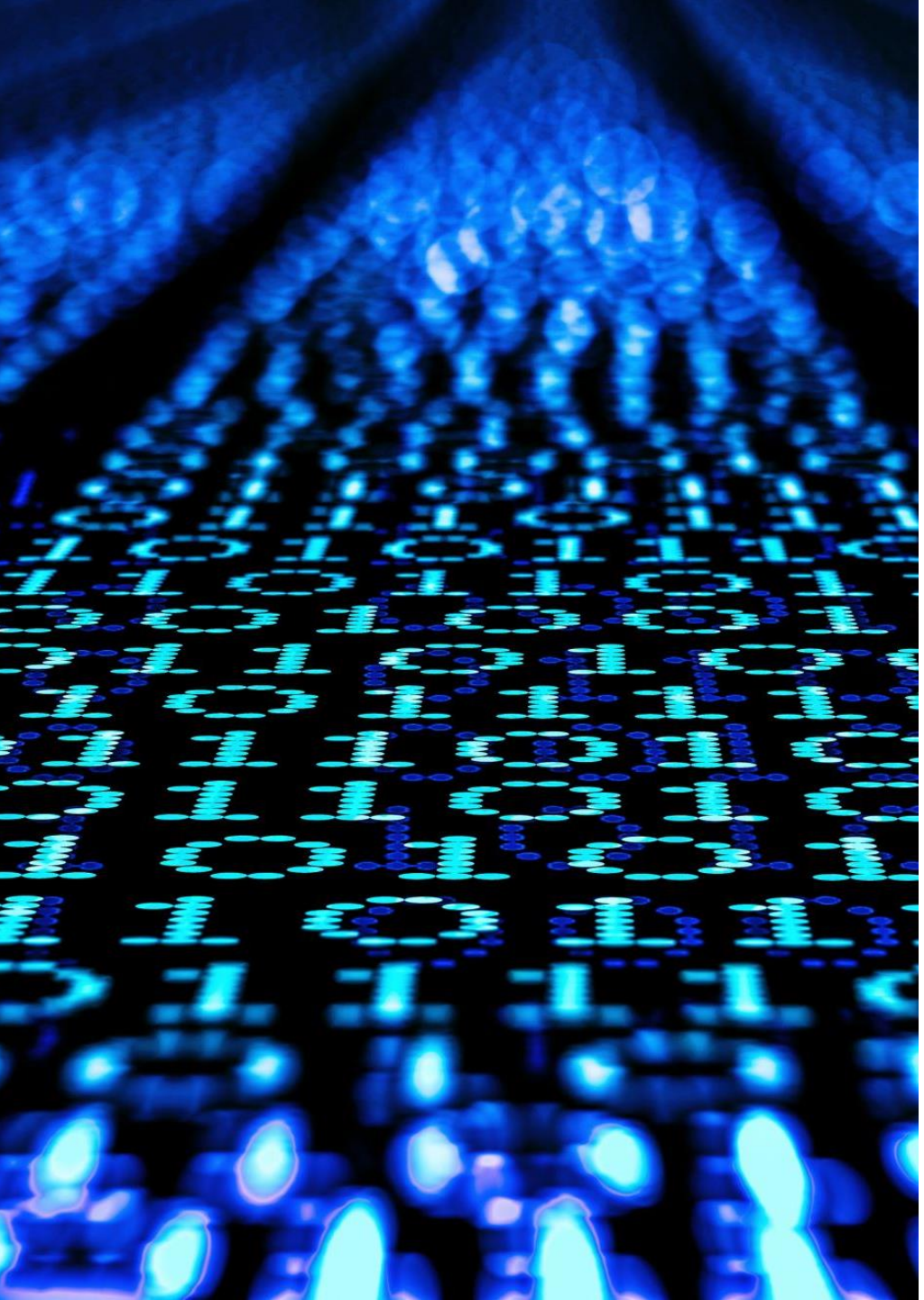




Background

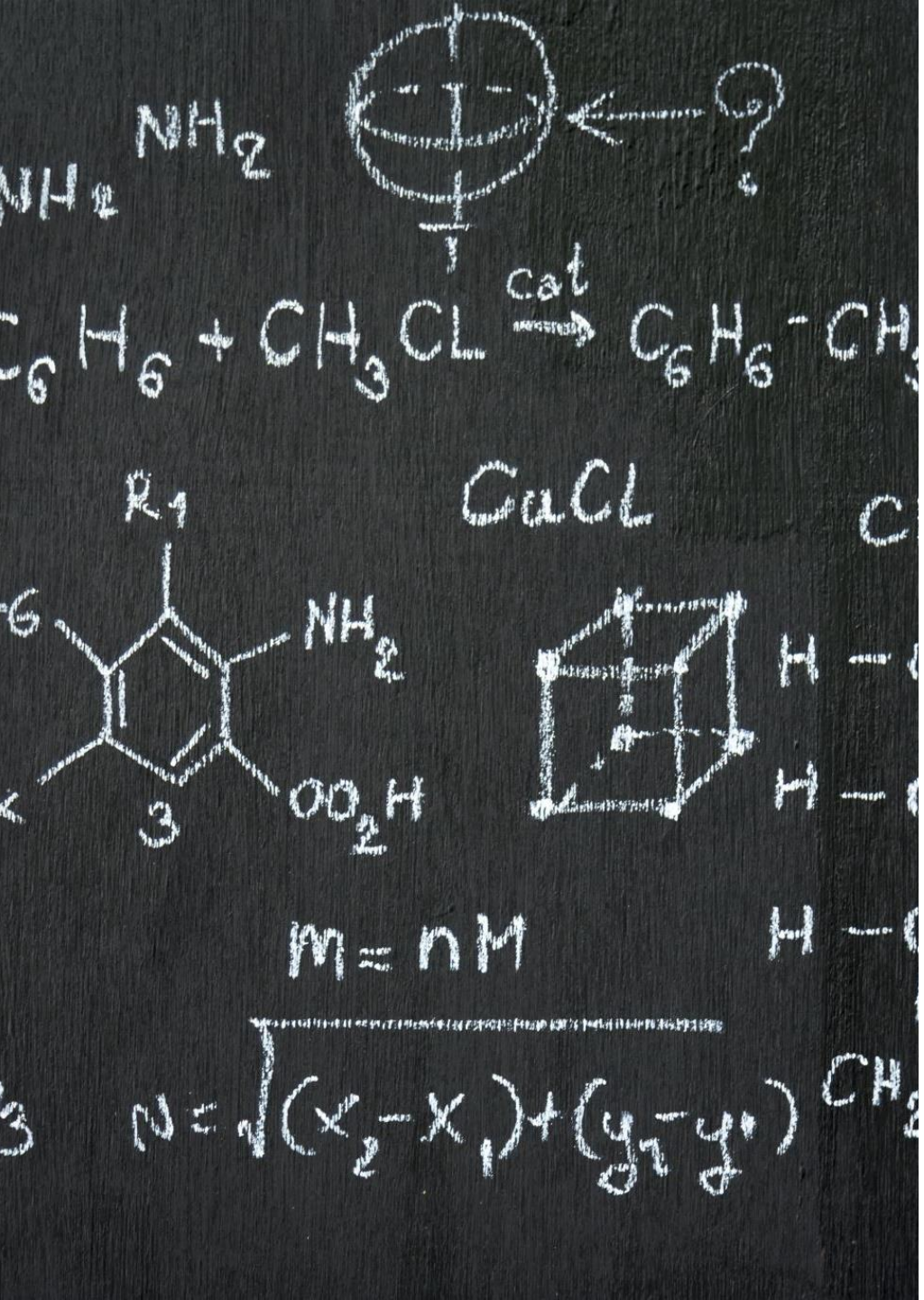
- Base 8 programming language
- Uses “Martian” terminology to help communicate with extraterrestrial life
- Name of the language combines the names of the creators

Tokens

- Tokens include:
  - Number, Identifier, Keyword, Assign, Math_OP, Comparison_OP, Logical_OP, Separator, String, Lparen, RParen

Keywords

- Keywords include:
  - If, Else
  - While, For
  - Pet, Fox
    - Pet is used for variables
    - Fox is used for constants
  - Glorp
    - This is used to create a function
  - Print, Return



Special Symbols

- t_ASSIGN = r'='
- t_MATH_OP = r'[+\-*/%]'
- t_COMPARISON_OP = r'(==|!=|<|>|<=|>=)'
- t_LOGICAL_OP = r'(and|or|not)'
- t_SEPARATOR = r':'
- t_LPAREN = r'\('
- t_RPAREN = r'\)'

Other Rules

STRINGS ARE CREATED BY USING SINGLE QUOTATIONS

COMMENTS ARE CREATED BY USING //

NEW LINES ARE CREATED BY USING \N

Example Code

example.pf

example > example.pf

You, 1 minute ago | 1 author (You)

```
1   glorp my_function(y):
2       pet x = 5
3       fox unchanging = 144
4       pet s = 'hello'
5       print(s)
6       if x == 5:
7           x = x + 1
8       else:
9           y - 2
10          x = 0
11      return x
12
13  my_function(17)
```

```
LexToken(KEYWORD,'glorp',2,1)
LexToken(IDENTIFIER,'my_function',2,7)
LexToken(LPAREN,'(',2,18)
LexToken(IDENTIFIER,'y',2,19)
LexToken(RPAREN,')',2,20)
LexToken(SEPARATOR,':',2,21)
LexToken(KEYWORD,'pet',3,27)
LexToken(IDENTIFIER,'x',3,31)
LexToken(ASSIGN,'=',3,33)
LexToken(NUMBER,'5',3,35)
LexToken(KEYWORD,'fox',4,41)
LexToken(IDENTIFIER,'unchanging',4,45)
LexToken(ASSIGN,'=',4,56)
LexToken(NUMBER,'144',4,58)
LexToken(KEYWORD,'pet',5,66)
LexToken(IDENTIFIER,'s',5,70)
LexToken(ASSIGN,'=',5,72)
LexToken(STRING,'hello',5,74)
LexToken(KEYWORD,'print',6,86)
```