Wolfram Language Cheatsheet

Wolfram Language is a general-purpose programming language developed by Wolfram Research. It is particularly well-suited for symbolic computation and data analysis. Here is an overview of some of its basic syntax and features.

Basic Operations

Arithmetic

```
2 + 2
3 * 4
5 / 2
```

Variables

```
x = 42
y = 3.14
z = "hello"
```

Lists

```
list = {1, 2, 3, 4, 5}
list[[3]]
```

Functions

```
f[x_] := x^2
f[3]
```

Data Analysis

Importing Data

```
data = Import["filename.csv"]
```

Manipulating Data

```
Mean[data]
Median[data]
StandardDeviation[data]
```

Plotting Data

```
ListPlot[data]
Histogram[data]
```

Symbolic Computation

Algebra

```
Expand[(x + y)^3]
Factor[x^3 - y^3]
Solve[x^2 + y^2 == 1, y]
```

Calculus

```
D[x^2, x]
Integrate[x^2, x]
```

Differential Equations

```
DSolve[y'[x] == y[x], y[x], x]
```

Resources

- Wolfram Language Documentation
- Wolfram Language Tutorial Collection