Introduction to Programming in R: Takeaways

Syntax

ARITHMETIC OPERATORS

- Parentheses: `(5 / 5) + 5`

- Exponent: `65 ** 5` or `65 ^ 5`

- Multiplication: `5 * 5`

- Division: `5 / 5`

- Addition: `5 + 5`

- Subtraction: `5 - 5`

VARIABLE OPERATIONS

- Assigning a value to a variable:

```
value_1 <- 50

value_2 <- 5
```

- Assigning the result of a calculation to a variable:

```
total <- 5 + 5

average <- (5 + 5 + 5) / 3
```

- Performing calculations using variable names:

```
value_1 + value_2
```

VECTOR OPERATIONS

- Create a vector of values:

```
vector_1 <- c(50, 5)
```

- Create a vector using variable names

```
vector_1 <- c(value_1, value_2)
```

FUNCTIONS

- Average of values in a vector:

```
mean(vector_1)
```

- Smallest value in a vector:

```
min(vector_1)
```

- Largest value in a vector:

```
max(vector_1)
```

- Total number of elements in a vector:

```
length(vector_1)
```

- Sum of elements in a vector:

```
sum(vector_1)
```

Concepts

- When evaluating expressions, R uses the order of operations rules from mathematics.
- **P**arentheses
- **E**xponent
- **M**ultiplication or **D**ivision
- **A**ddition or **S**ubtraction
- When naming variables in R, some rules need to be followed:

Resources

- [Notes on naming variables in R](#)
- [Documentation on vectors in R](#)