Functions

Reusable blocks of code

Functions

- A Function is a block of organized, reusable code that is used to perform a single, related action.
- It allows us to reuse code instead of rewriting it.
- Once a Function is created, it can be used over and over and over again.
- Functions can be "called" from the inside of other functions.

Functions in C++ and Block-based C++

```cpp
float myVariable;

// User defined function
void myblockfunction_createSquare() {
  Drivetrain.turnFor(left, 90.0, degrees, true);
  repeat(4) {
    Drivetrain.driveFor(forward, 12.0, inches, true);
    Drivetrain.turnFor(right, 90.0, degrees, true);
  }
  Drivetrain.turnFor(right, 90.0, degrees, true);
}

int whenStarted1() {
  myVariable = 2.0;
  Drivetrain.setDriveVelocity(100.0, percent);
  Drivetrain.turnFor(right, 90.0, degrees, true);
  Drivetrain.driveFor(forward, (myVariable * 6.0), inches, true);
  Drivetrain.turnFor(left, 90.0, degrees, true);
  Drivetrain.driveFor(forward, (myVariable * 2.0), inches, true);
  myblockfunction_createSquare();
  Drivetrain.driveFor(forward, (myVariable * mathRandomInt(12.0, 24.0))), inches, true);
  myblockfunction_createSquare();
  Drivetrain.driveFor(forward, (myVariable * mathRandomInt(12.0, 24.0))), inches, true);
  myblockfunction_createSquare();
  Drivetrain.turnFor(right, 90.0, degrees, true);
  Drivetrain.driveFor(forward, (myVariable * 2.0), inches, true);
}
```