# **The Shop**

## Purpose

Create a general purpose workshop program for designing and testing robots and controllers.

## Components in General

### Options

Allows the user to switch between the prototyping and testing portions of the program, as well as load in stored controllers and body plans.

### Prototyping

Allows the user to create a robot design using Unities 3d editor and have it be saved by the program into a robot file. A robot file stores the body plan and components of a robot.

### Testing

Allows the user to run tests on the robot and controller. These tests could be locomotion tests, or anything else which the user determines.

### Showcase

Same as testing but without evolution.

## Components in Specific

### Options

### Prototyping

We’ll need the following:

* A way to store unity objects and components in a text format.
* A way to scan the objects in a scene and turn them into a text format.
* A way to read through a text file and create objects out of it.

### Testing

We’ll need the following:

* A way to attach neurons to specific motors and sensors.
* A way to run those sensors and motors fluidly during the system.
* A testing scenario object complete with fitness function, position of robot, and other objects.