

Project 3

Architectural Robotics



Figure 1. Shows the original turtle from "Mindstorms," Seymour Papert, Basic Books, Inc., 1980. (<http://www.bfoit.org/itp/IntroCmds.html>)

Posted April 23
Due before next class

Overview

This assignment is a synthesis of the Architectural Robotics module. By designing, building and testing a tool for our robot, you will show your command over the fundamentals of architectural robotics, and open new possibilities for designing and *making*.

a) Finish Your Tool

Develop your tool we know that the robot can move and we know that you can program the robot. So what? For this assignment, your goal is to design and build an imaginative robot-tool assembly.

There are infinite possibilities to be explored in terms of defining new kinds of robotic tools to perform creative tasks. Individually or with a partner, design and prototype a tool to attach to our ABB robot's end-effector, that takes advantage of its programmability.

c) Test your Tool

Test your tool both through simulations and "dry runs" with the robot. Start simple.

d) Make something

This is self-explanatory. Once you have tested your tool through simulations, edit the code make sure you book time with the robot to create something. Prepare your code

d) Document and discuss your Tool, Workflow and Result

Document your project carefully in the blog. Include photographs, video, and descriptions. In your blog post, discuss whether the tool worked as expected. What failed? What surprises did you find? How would you improve the tool and the workflow?