

CMSC 143: Introduction to Object-Oriented Programming with Robots

Lab 5: Online Robots

Due February 28, 2011

Online robots like the telegarden¹ combine the internet with robotics to provide telepresence. In this lab you will build a webpage describing the state of your robot.

You will write a python program that generates HyperText Markup Language (HTML) code which you can then upload to a webserver or look at locally in your web browser. You are encouraged to post the resulting HTML file to your student web space on Bard's student webserver ².

First, you should read the first few HTML tutorials provided by the w3schools.com ³. HTML is a markup language, meaning that along with the actual content (the data) the text file also contains annotations of the content (meta-data). In HTML, the annotations, or tags, are predetermined commands that describe the structure of the document and also how it should be displayed (e.g. `body`, `a`, `img`). The HTML tags are enclosed in angle brackets and the tags are often found in open/close pairs.

Guidelines for the webpage:

1. Robot: You must show the robot's name and some of the robot's sensor values (light, infrared, battery).
2. HTML: You must use a header, a link, an image, a list, a table.

Beyond those specific guidelines, you should be as creative as possible. You might:

1. Provide a graph of the robot's sensors or battery voltage for some amount of time.
2. Include or provide links to some of the programs you have created.

Learning Objectives

- Work with File I/O
- Use HTML

Deliverables

Submit an electronic copy of your program and your webpage via moodle using files named:

`cmssc143_lab5_FIRSTNAME_LASTNAME.py`
`cmssc143_lab5_FIRSTNAME_LASTNAME.html`

¹<http://www.usc.edu/dept/garden/>

²<http://inside.bard.edu/computing/webpublish/>

³http://www.w3schools.com/html/html_intro.asp