

CGI and cs.rpi.edu

How to create and run CGI programs using the CS web server.

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Web Servers & CGI

- Most web servers are capable of running CGI programs.
- The server must be able to determine whether a URI refers to:
 - document - just send it back
 - CGI program - run it and send back the result.

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CGI recognition

- Some servers insist that CGI programs be in a special place
 - typically the URL path is one of:
`/CGI-BIN /cgi-bin /CGI /cgibin`
- Some servers look at the filename:
 - filename ends with `.cgi`
- Some servers are given a list of URLs that are CGIs

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User files and Web Servers

On Unix based web servers, the URL
`/~username`
is typically *mapped* to the directory
`~username/public.html`
-or-
`~username/public_html`

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www.cs.rpi.edu

- On the CS web server you should put your files in `~/public.html`

The URI

`http://www.cs.rpi.edu/~you`
is your home page.

you is your CS username.

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Directories

- Most web servers do the following when a URL maps to a directory:
 - if there is a file named `index.html` in the directory - it is sent back.
 - if there is no `index.html`, an HTML formatted directory listing is sent back.

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Create a Home Page

```
cat > ~public.html/index.html
<H1>Master Network Programmer for
  Hire</H1>
^D
> chmod go+r ~public.html/index.html
```

The file must be readable by anyone!
(the web server runs as nobody)

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CGI & cs.rpi.edu

The web server `www.rpi.edu` will not run user CGI programs.

Neither will `www.cs.rpi.edu`

`cgi.cs.rpi.edu` will!

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- Your executable file's name should end with `.cgi`
- Your executable will be run as you (with your `userid` permissions).
- Make sure the file/directory are not world or group writeable!

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IMPORTANT

- `cgi.cs.rpi.edu` is a Sun computer!
- You need to build your CGI on a Sun!
- You can use: `a.cs.rpi.edu`,
`b.cs.rpi.edu`, `c.cs.rpi.edu`, ...
(sorry for the hassle, but monica needs a rest anyway)

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Getting Started

- Copy one of the examples and get it running:

```
> cd ~/public.html
> cp -r
  ~hollingd/public.html/netprog
  /code/CGI/pizza .
> chmod -R go-w pizza
```

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Debugging

- It's hard to debug a CGI program!
- Debugging print statements should generate HTML.
- You can run the program from the Unix command line - you just need to set the environment variables right (use GET for this).

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Log Files

- cgi.cs.rpi.edu has a log file that can be helpful when your program won't run:

`/usr/local/logs/cgi.cs.rpi.edu/error_log`

The command `"tail -f"` may come in useful...

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More Help

- Look at "Dave's Local Guide to CGI programming".
- Lots of links to CGI resources.

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Remote Students

- Feel free to use your own web server if you want, but:
 - For Project 4 we'll want a link to your CGI program!
- Some of you don't have telnet access yet - if you don't have a web server this will be a problem!
we have time to resolve these problems now, don't wait until the last minute!

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Free Workstation



- If you don't have a web server or telnet access, and you send Dave \$3,529 (for shipping), we will send you your own free Web Server:
 - 80286 10MHz with 640K Ram
 - Running Minix
 - Includes keyboard cable, but no keyboard.

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