

## 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 server 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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## cgi.cs.rpi.edu

- 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:  
`solaris.remote.cs.rpi.edu`

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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/www/logs/cgi.cs.rpi.edu/error_  
log
```

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

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## More Help

- Look at "Guide to CGI programming on cgi.cs.rpi.edu".
- Lots of links to CGI resources.

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