

# Tech Savvy Computing Camp

Instructors

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Principle  
Organizer  
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# You can control the world

- Banking
- Movie Graphics
- Military
- Better Decisions
- No Restrictions

# Hacking and Security

Security Analyst - [http://](http://www.securityfocus.com/)

[www](http://www.securityfocus.com/)

[www.securityfocus.com/](http://www.securityfocus.com/)

# Open Communication

CraigsList

CraigsList

Twitter

PGP

# Cure Diseases

Human Gnome is in a digital format

# Packet Sniffing

Intel(R) PRO/1000 PM Network Connection (Microsoft's Packet Scheduler) - Wireshark

File Edit View Go Capture Analyze Statistics Telephony Tools Help

Filter: http Expression... Clear Apply

No.	Time	Source	Destination	Protocol	Info
751	5.744230	192.168.0.71	72.14.204.101	HTTP	GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1
769	5.821430	72.14.204.101	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/javascript)
797	6.024261	192.168.0.71	72.14.204.101	HTTP	GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1
811	6.104006	72.14.204.101	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/javascript)
908	7.018995	192.168.0.71	72.14.204.101	HTTP	GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1
920	7.104258	72.14.204.101	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/javascript)
1150	8.724775	192.168.0.71	72.14.204.101	HTTP	GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1
1161	8.796060	72.14.204.101	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/javascript)
1271	9.296921	192.168.0.71	72.14.204.101	HTTP	GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1
1282	9.368537	72.14.204.101	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/javascript)
1436	10.402501	192.168.0.71	72.14.204.101	HTTP	GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1
1457	10.526454	72.14.204.101	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/javascript)
1729	12.973587	69.63.176.165	192.168.0.71	HTTP	HTTP/1.1 200 OK (text/plain)
1746	13.098800	192.168.0.71	69.63.176.165	HTTP	GET /x/1202346709/false/p_547824987=1 HTTP/1.1

Frame 1436 (1387 bytes on wire, 1387 bytes captured)

Ethernet II, Src: Intel\_7f:b8:b9 (00:19:d1:7f:b8:b9), Dst: Cisco\_6e:0e:c8 (00:18:73:6e:0e:c8)

Internet Protocol, Src: 192.168.0.71 (192.168.0.71), Dst: 72.14.204.101 (72.14.204.101)

Transmission Control Protocol, Src Port: patrol-mq-nm (2665), Dst Port: http (80), Seq: 5315, Ack: 1356, Len: 133:

Hypertext Transfer Protocol

GET /complete/search?output=firefox&client=firefox&hl=en-US&q=computing+camp+july HTTP/1.1\r\n

Host: suggestqueries.google.com\r\n

User-Agent: Mozilla/5.0 (windows; U; windows NT 5.1; en-US; rv:1.9.2.6) Gecko/20100625 Firefox/3.6.6\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,\*/\*;q=0.8\r\n

Accept-Language: en-us,en;q=0.5\r\n

Accept-Encoding: gzip,deflate\r\n

Accept-Charset: ISO-8859-1,utf-8;q=0.7,\*;q=0.7\r\n

0000 00 18 73 6e 0e c8 00 19 d1 7f b8 b9 08 00 45 00 ..sn....E.  
0010 05 5d a5 76 40 00 80 06 7a c1 c0 a8 00 47 48 0e .].v@...z....GH.  
0020 cc 65 0a 69 00 50 5f eb fa 08 3f 4d ec ca 50 18 .e.i.P\_..?M..P.  
0030 fa b4 da b2 00 00 47 45 54 20 2f 63 6f 6d 70 6c .....GET /compl  
0040 65 74 65 2f 73 65 61 72 63 68 3f 6f 75 74 70 75 ete/sear ch?outpu  
0050 74 3d 66 69 72 65 66 6f 78 26 63 6c 69 65 6e 74 t=firefo x&client  
0060 3d 66 69 72 65 66 6f 78 26 68 6c 3d 65 6e 2d 55 =firefox &hl=en-U  
0070 53 26 71 3d 63 6f 6d 70 75 74 69 6e 67 2b 63 61 S&q=comp uting+ca  
0080 6d 70 7b 63 75 6c 7d 20 48 54 54 50 2f 31 2a 31 m+Julyv HTTP/1.1

File: "I:\DOCUME~1\ADMINI~1\LOCAL5~1\Tem... Packets: 2164 Displayed: 18 Marked: 0 Dropped: 0 Profile: Default

# 3 Sorting Games

Split the class into 2 groups. Each member of one group will sort the other group.

Each person has a sheet of paper with a number on it. They will hold it so it can not be seen.s

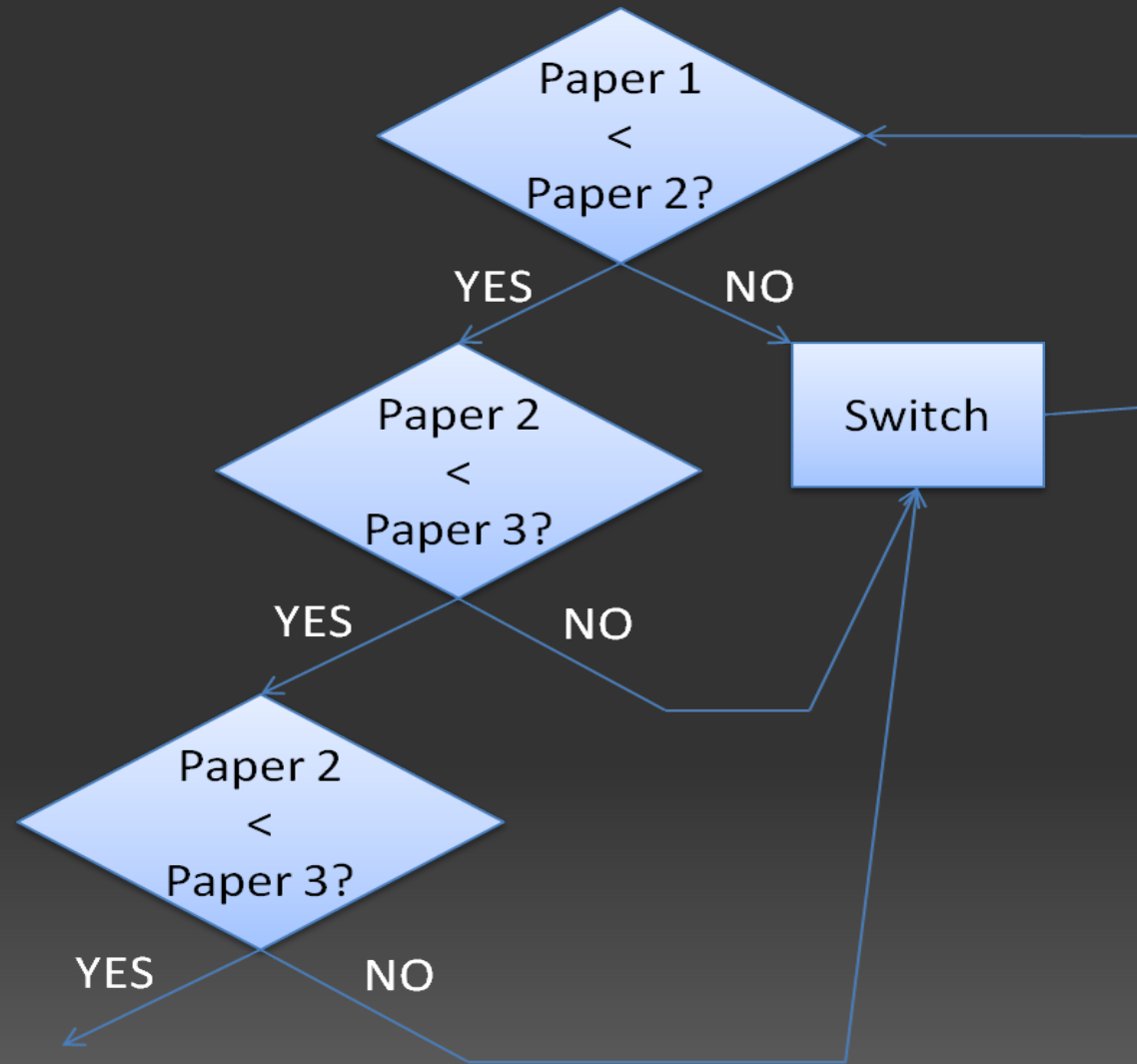
Rule 1 : You can only turn over 2 papers at once

Rule 2 : You can only switch 2 people at a time

# Self Sort

Try to put everyone in order without an algorithm

# Bubble Sort



... Until all paper  
have been checked.

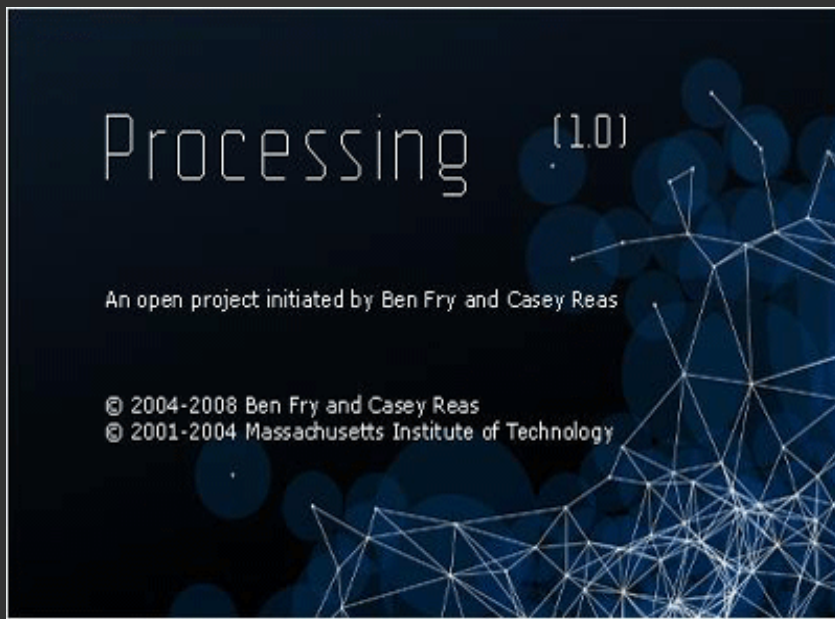
# Quick Sort

```
function quicksort(array)
var list less, greater
select and remove a pivot value pivot from array
for each x in array
if  $x \leq \text{pivot}$  then append x to less
else append x to greater
```



# What did you just do?

You used an algorithm to solve that problem.



# Processing

1. Open up  
example/Basic/Math/arctangen  
t

2. Edit Source Code

1. Change the size of canvas to (600,600)
2. Move an Eye to the center of the canvas
3. Change the size of the eye.
4. Change the background color.
5. Change the Eye color.
6. Change the movement of the Eye
7. Ask the student to create a new eye.



Go through figure skater tutorial

# Programming Contest

We will perform a movement of the figure skater and first one to copy it wins that game

There will be 5 games

Best out of 5 wins