

Week 1

Tommy
MacWilliam
and Jason
Hirschhorn

CS50
Appliance

The
Command
Line

Variables

Conditions
and Loops

From Scratch
to C

Week 1

Tommy MacWilliam and Jason Hirschhorn

September 13, 2011

CS50 Appliance

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From Scratch
to C

- ▶ `http://manual.cs50.net/Appliance`
- ▶ `having trouble?`
 - ▶ `http://manual.cs50.net/VirtualBox`
 - ▶ `http://help.cs50.net`

Helpful Commands

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- ▶ `ls`: list all files in a folder
- ▶ `mkdir folder`: make a folder called “folder”
- ▶ `cd folder`: change to a folder called “folder”
 - ▶ `cd ..`: change to the parent folder
- ▶ `rm file`: remove a file called “file”
 - ▶ `rm -r folder`: remove a folder called “folder”
- ▶ `cp file1 file2`: make a copy of a file called “file1” called “file2”

Data Types

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- ▶ `int`: integer
- ▶ `long long int`: big integer
- ▶ `float`: floating-point decimal
- ▶ `double`: big float

Using Variables

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- ▶ create a variable: `int x;`
- ▶ assign a value to a variable: `int x = 5;`
- ▶ read a value from a variable: `int y = x;`

if

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```
if (something)
{
    // do something
}
else
{
    // do something else
}
```

for

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```
for (initialization; condition; update)
{
    // do something, update, check condition
}
```

while

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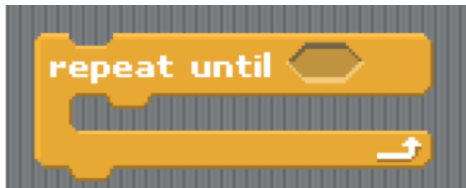
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The
Command
Line

Variables

Conditions
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From Scratch
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```
while (something)
{
    // do something
}
```


Infinite Loop

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Command
Line

Variables

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```
while (1)
{
    // do something
}
```

for vs. while

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```
int i = 0;
while (i < 5)
{
    printf("cs50\n");
    i++;
}

for (int j = 0; j < 5; j++)
{
    printf("cs50\n");
    j++;
}
```

do while

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Variables

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```
int i = 0;
do
{
    printf("cs50\n");
    i++;
}
while (i < 5);
```

Conditions

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From Scratch
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- ▶ compare values and variables with `<`, `>`, `<=`, `>=`, `==`, `!=`
- ▶ combine comparisons with `&&`, `||`
- ▶ negate comparisons with `!`

Scratch

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▶ follow along!

▶ `https://cloud.cs50.net/~tmacwill/section1.sb`