



CS1010

Programming Methodology

Lecture 3

28 August 2018

Unit 5: **First C Program**

Unit 6: **CS1010 I/O**

Unit 7: **Arithmetic Operations**

Tutorial

Group 9 has 6 students.

invest time to master the tools

(e.g., bash, vim, git, etc)

think long term benefits,

not how to get things done now

工欲善其事，必先利其器

**Confucius said: To get things
done properly, get the tools
ready first.**

Use a source code editor

**No IDEs work for all
programming languages
/ tasks**

**Use one that last through
your whole career**



**Use one that is installed
by default on most places**

**Use one that is
terminal based**

emacs

vim



HOTKEYS

/ OPTIONS

/ VIDEO

/ AUDIO

ABOUT

ADVANCED HOTKEYS

UNIT ACTIONS

Learn Ability	K
Upgrade Stats	J
Move	M
Patrol	P
Cancel Current Action	S
Select All Other Units	F2
Activate Glyph	L
Taunt Item	I
Action Item	U

SHOP ACTIONS

Courier Speed Burst	F5
Purchase Sticky	C
Take Stash Items	X
Open Shop	O

CAMERA ACTIONS

Camera Up	UP
Camera Down	DOWN
Camera Left	LEFT
Camera Right	RIGHT
Camera Zoom In	MWHEELUP
Camera Zoom Out	MWHEELDOWN
Show Recent Event	B
Showcase View	L

SAVED CAMERA POSITIONS

Position 1	KEYPAD 1	Position 2	KEYPAD 2
Position 3	KEYPAD 3	Position 4	KEYPAD 4
Position 5	KEYPAD 5	Position 6	KEYPAD 6
Position 7	KEYPAD 7	Position 8	KEYPAD 8
Position 9	KEYPAD 9	Position 10	KEYPAD 0

INTERFACE

Screenshot	F12
Console	`

CONTROL GROUPS

Group 5		Group 6	
Group 7	7	Group 8	8
Group 9	9	Group 10	0

HOTKEYS OPTIONS

- ☒ Quickcast On Key Down
- ☒ Double Tap Ability to Self Cast
- ☐ Smart Double Tap
- ☐ Shop Always Uses Hotkeys
- ☐ Left-Click Activates Camera Grip
- ☐ Use Legacy Keys
- ☐ Allow Windows / Command key to be bound
- ☐ Bind keys based on keyboard position
- ☒ Enable Separately Bindable Quickcast Hotkeys

RESET HOTKEYS...

^ TO BASIC HOTKEYS ^

SPECTATOR >>

PLAY DATA

**if you can learn the
hotkeys for games,
you can learn the
hotkeys for vim :)**

**Tips: build up your
muscle memory**

Basic movement: h j k l

Mode switching: i ESC

Save and quit: ZZ

**The rest: keep asking
“how to do this faster?”
and learn from the answer.**

vim is ergonomic

j and k

**is used in many places
(Gmail, Facebook, man, etc)**

Let's C

char

short int

int

long int

long long int

char

short

int

long

long long

unsigned char

unsigned short

unsigned int

unsigned long

unsigned long long

float

double

long double


```
#include <stdint.h>
```

```
int8_t  uint8_t
```

```
int16_t uint16_t
```

```
int32_t uint32_t
```

```
int64_t uint64_t
```

```
#include <stdio.h>
```

```
stdin
```

```
stdout
```

```
stderr
```

```
long b = 10;
```

```
long c = 2;
```

```
long a = b + ((2 * c) / 4);
```

```
index = index + 1;
```

```
age = age * 2;
```

```
index += 1;
```

```
age *= 2;
```

```
index++;  
approval--;
```

```
++index;  
--approval;
```

`++` and `--` are
banned in CS1010


```
uint8_t c = 255;
```

```
c += 1;
```

```
double half = 3/2;
```

```
double half = 3/2.0;
```

```
double half = 3/(double)2;
```

Tutorial 2

Problem Sets 3 and 5

Exercise 0 (in class)

Assignment 1

Released 7 Sept

Due 14 Sept