Vim Part 2

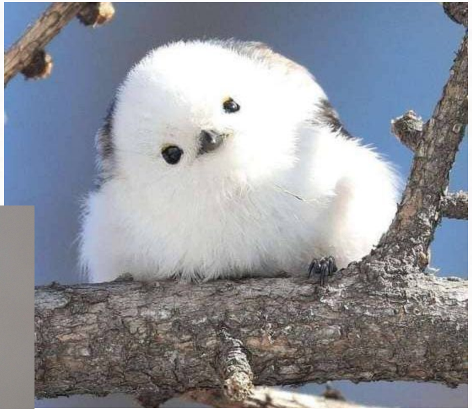
Lecture 4: Daphne Han & Maggie Cai

PET TAX!

Finneas (Male Halfmoon Betta Fish)

Adorable Borbs

Shima Enaga



Black-Capped Chickadee

European Robin

Lecture Outline

01

Vim 1 Recap!

Refreshing information from last lecture

02

Vim 2 Content

More advanced Vim content

03

Demo

Let's apply what we just learned!

04

Reminders

Helpful reminders for the lab & other information

01

Vim 1 Recap

Let’s review what we learned last lecture!

Modes :D

Normal (esc)

Editor commands are used in this mode. The **default mode**.

Visual (v)

Used for **highlighting areas** for text.

Insert (i)

Editing a text buffer. Similar to modern text editors.

Command-line (:)

Single line input, used mostly for **file navigation**. Exits mode after command

Helpful Commands :)))

- **vim <filename>** (open file in vim)
- **y** (yank /copy) & **yy** (yank a line)
- **d** (delete/cut) & **dd** (delete/cut a line)
- **p** (paste below) & **P** (paste above)
- **u** (undo) & **ctrl-r** (redo)
- **:w** (save) & **:q** (quit) & **:wq** & **:q!** (force quit)
- **:help <cmmd>** & last week's slides for help!

Alrighty...
Vim II for real this time

02

Vim 2!

Some more advanced stuffs

Find & Replace

```
:s/<find>/<replace>/<flags>
```

or

```
:s:<find>:<replace>:<flags>
```

- Takes place in **normal mode**
- Use when you want to replace some instances of a word/character with another word/character!

Find & Replace

```
:s/<find>/<replace>/<flags>
```

or

```
:s:<find>:<replace>:<flags>
```

- **s –** specify the range you’re searching from!
  - :s - search only in **current line**
  - :%s - search the **entire file**
  - :a,bs - search from **line a to line b**
  - :a, $s - search from **line a to the end**
  - :’<,’>s - search in **selected region**

Find & Replace

:s/<find>/<replace>/<flags>

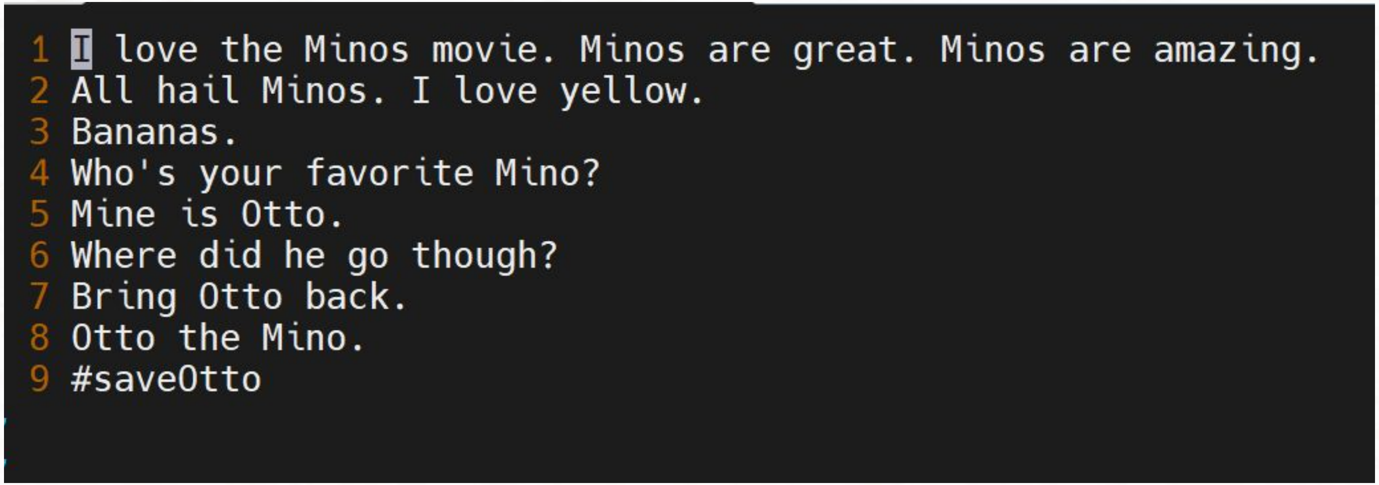
or

:s:<find>:<replace>:<flags>

- **flags** (optional!)
  - g - stands for **global** (finds & replaces every occurrence!)
  - c - **confirm** before applying

Find & Replace – Example

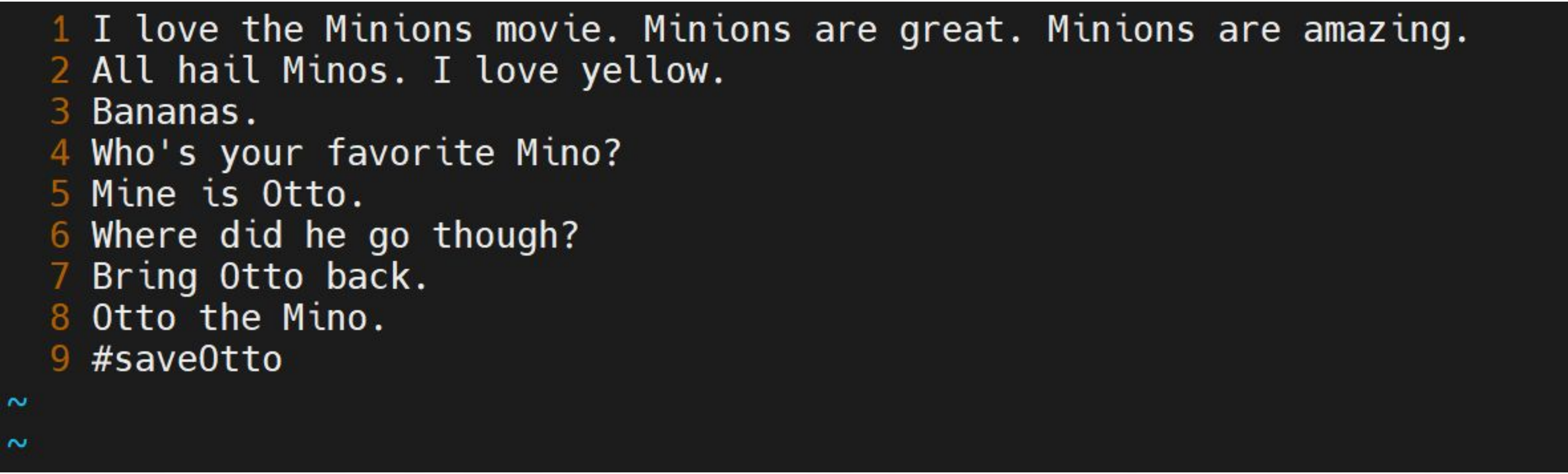
- We want to replace the word **Mino** with the word **Minion** for **only the current line**!



```
I love the Minos movie. Minos are great. Minos are amazing.
All hail Minos. I love yellow.
Bananas.
Who's your favorite Mino?
Mine is Otto.
Where did he go though?
Bring Otto back.
Otto the Mino.
#saveOtto
```

- What would the command be to do this?

Find & Replace – Example

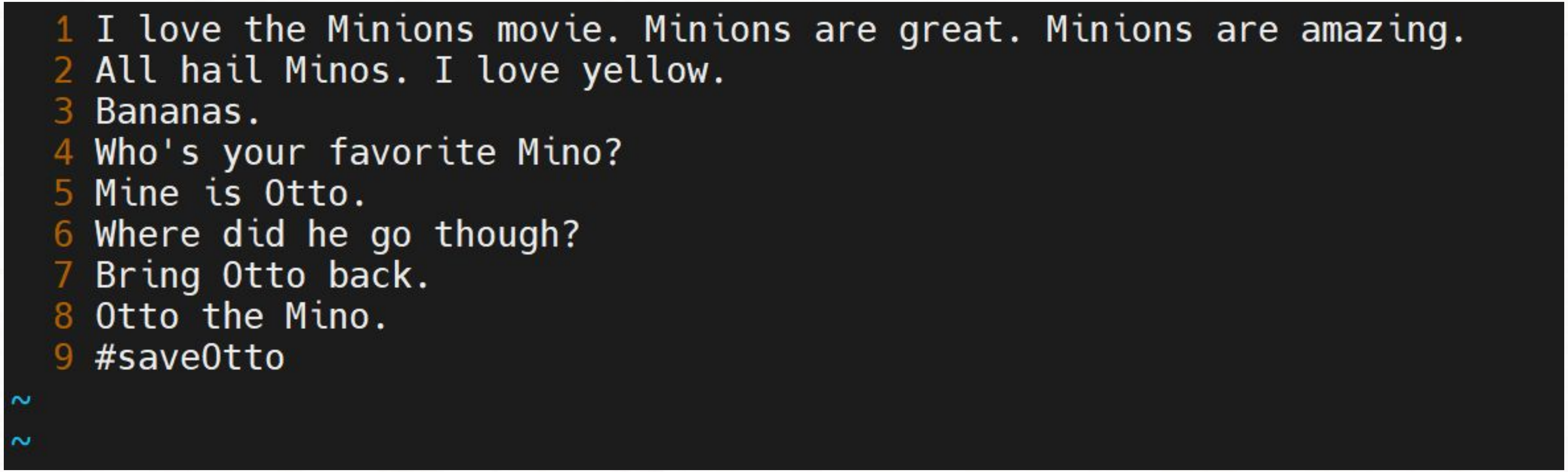


```
I love the Minions movie. Minions are great. Minions are amazing.
All hail Minos. I love yellow.
Bananas.
Who's your favorite Mino?
Mine is Otto.
Where did he go though?
Bring Otto back.
Otto the Mino.
#saveOtto
~
~
```

```
:s/Mino/Minion/g
```

Find & Replace – Example

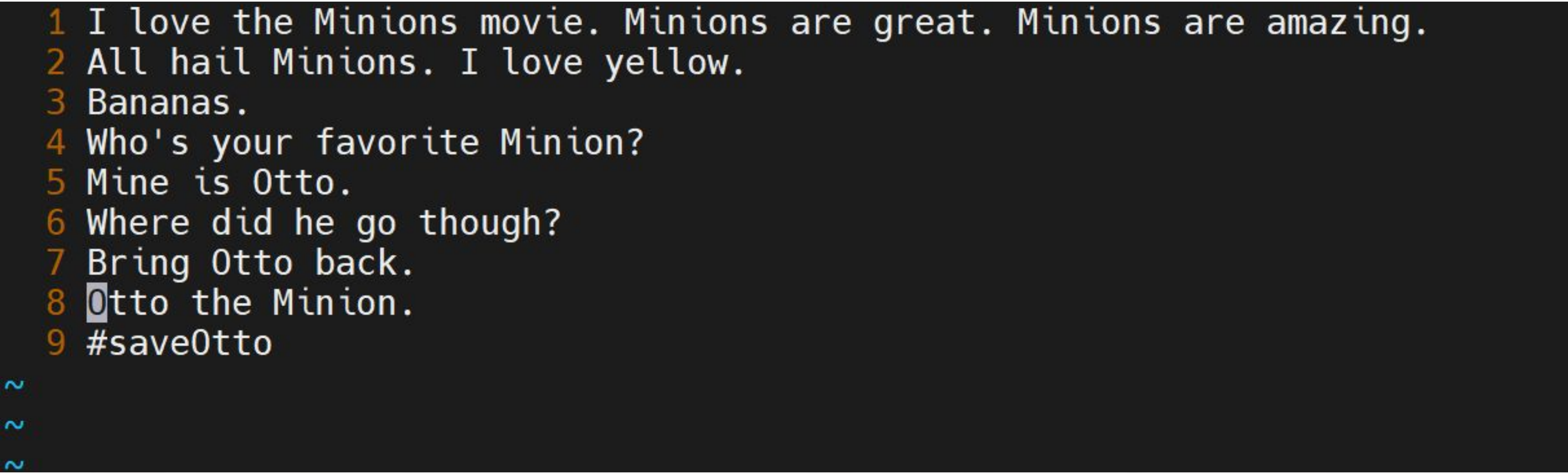
- You realize you made more minion typos. How would you change every occurrence of **Mino** to **Minion** in this file?



```
I love the Minions movie. Minions are great. Minions are amazing.
All hail Minos. I love yellow.
Bananas.
Who's your favorite Mino?
Mine is Otto.
Where did he go though?
Bring Otto back.
Otto the Mino.
#saveOtto
~
~
```

- What would the command be to do this?

Find & Replace – Example



```
I love the Minions movie. Minions are great. Minions are amazing.
All hail Minions. I love yellow.
Bananas.
Who's your favorite Minion?
Mine is Otto.
Where did he go though?
Bring Otto back.
Otto the Minion.
#saveOtto
~
~
~
```

```
:%s/Mino/Minion/g
```

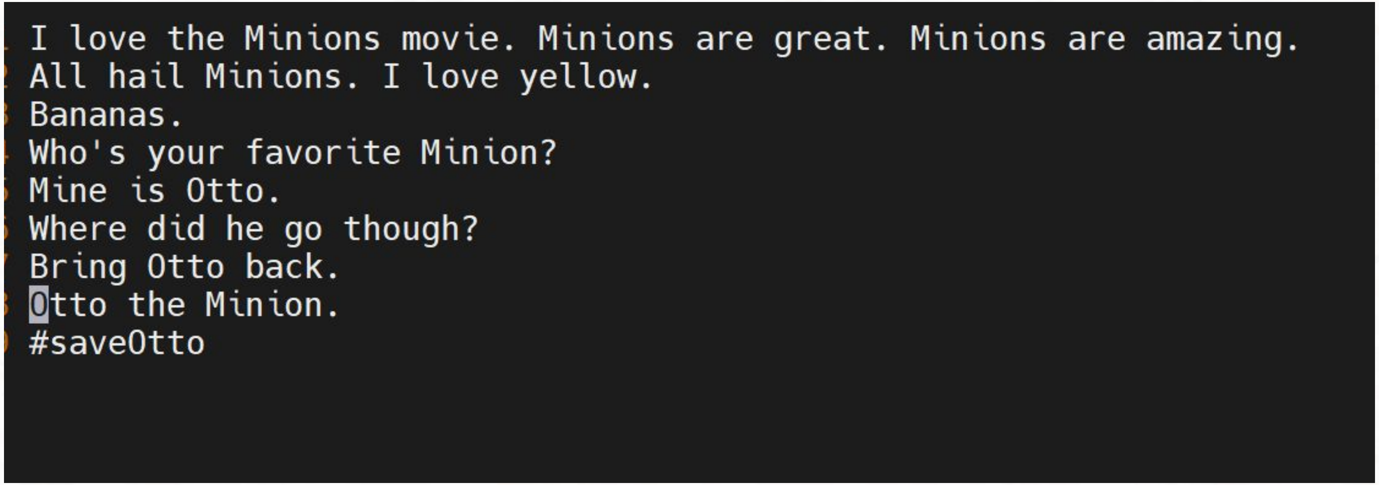
Editing Text Objects

<number><command><text obj>

- Takes place in **normal mode**
- <number>: **how many times** to perform <command>
- <command>: **d**elete (cut), **y**ank (copy), etc.
- <text obj>: **w**ord, **p**aragraph**, s**entence, etc.

Editing Text Objects – Example

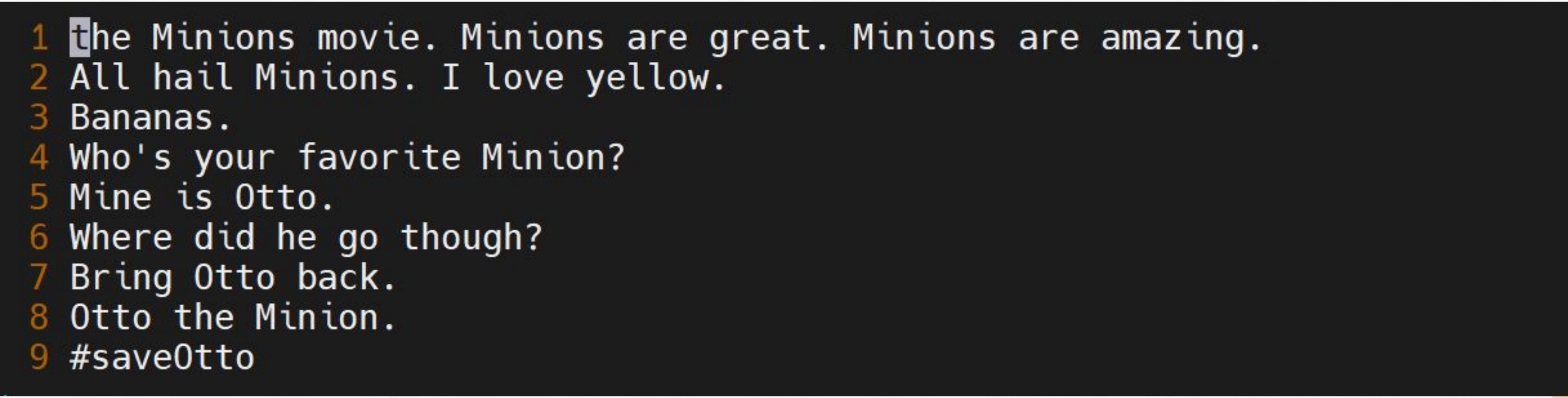
- We want to delete the words **I love** on the first line.



```
I love the Minions movie. Minions are great. Minions are amazing.
All hail Minions. I love yellow.
Bananas.
Who's your favorite Minion?
Mine is Otto.
Where did he go though?
Bring Otto back.
Otto the Minion.
#saveOtto
```

- What would the command be to do this?

Editing Text Objects – Example



```
the Minions movie. Minions are great. Minions are amazing.
All hail Minions. I love yellow.
Bananas.
Who's your favorite Minion?
Mine is Otto.
Where did he go though?
Bring Otto back.
Otto the Minion.
#saveOtto
```

Make sure cursor is on “I” on the first line & then do 2dw

Editing Text Objects - working with delimiters

d<inside or along><delimiter>

- Takes place in **normal mode**
- Examples of delimiters: “ { [(‘ ` <

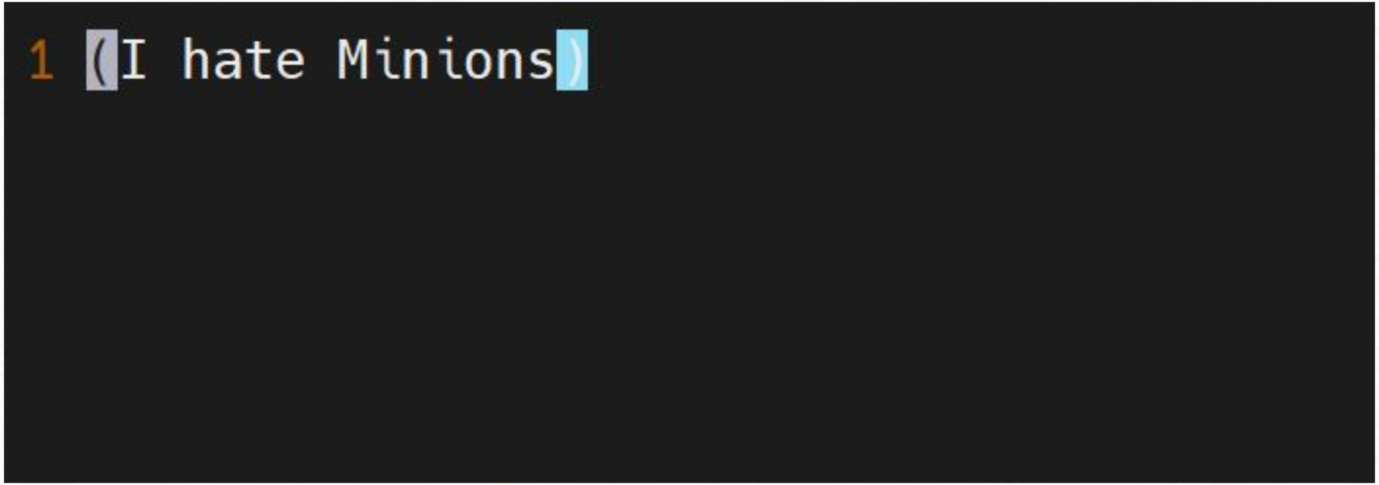
Editing Text Objects - working with delimiters

d<inside or along><delimiter>

- <inside or along>
  - i - **i**nside: this will perform **c**hange or **d**elete **INSIDE** the delimiter!
  - a - **a**long: this will perform **c**hange or **d**elete **ALONG WITH** the delimiter!

Delimiters Example

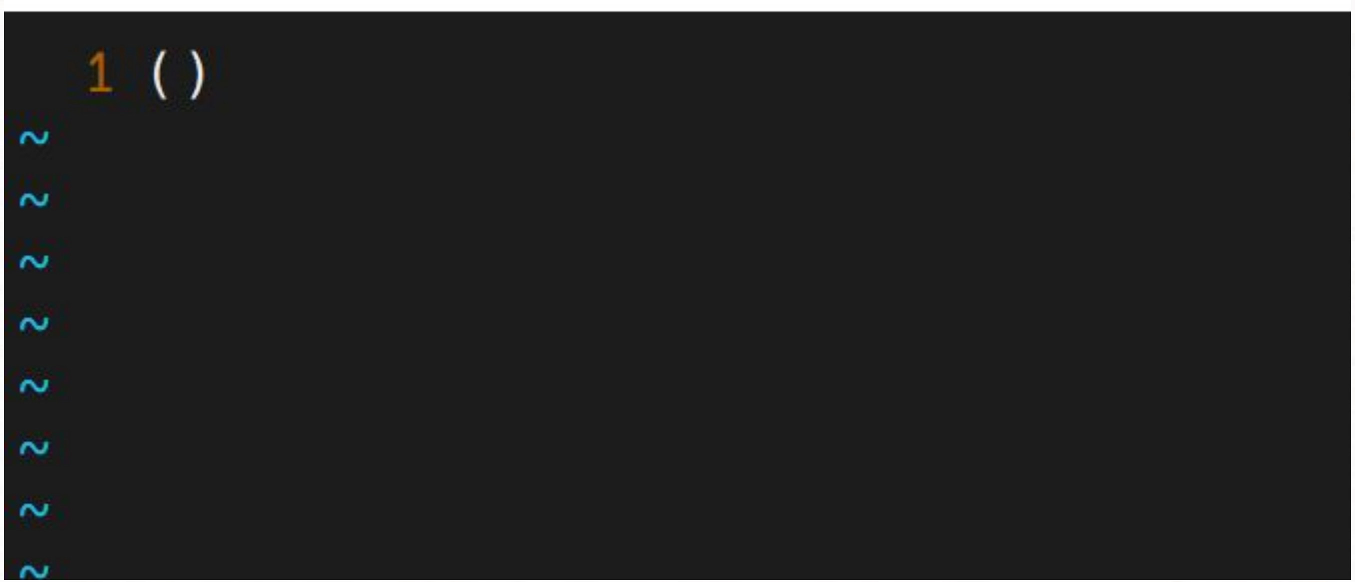
- Such a hateful statement! How do we delete the words inside?



```
(I hate Minions)
```

- What would the command be to do this?

Delimiters Example

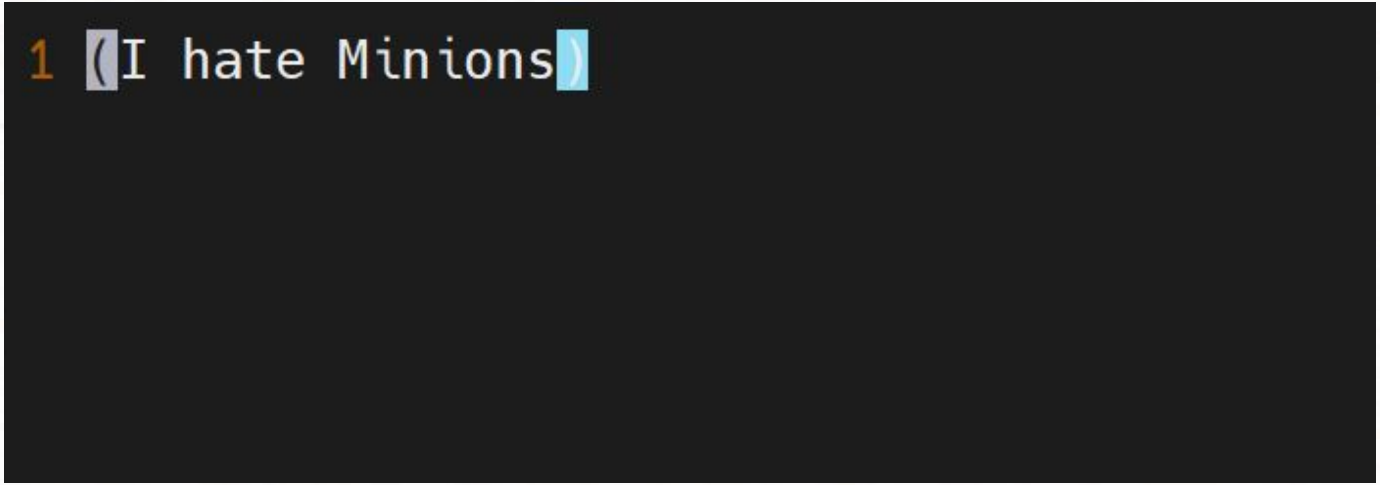


```
( )
~
~
~
~
~
~
~
~
```

di(

Delimiters Example

- What if we just wanted to delete this whole thing including the parentheses?



```
(I hate Minions)
```

- What would the command be to do this?

Delimiters Example

```

~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
```

da(

03

DEMO

02.5

Vim 2 cont...

Macros

A macro is a feature used to record a sequence of commands and executing it multiple times

Creating a macro:
q<letter><commands>**q**

Executing a macro
(<number> times. Once by default)
<number>**@**<letter>

Must run the macro at the same places
Use **j0** to go to the start of the next line at the end of the macro

So what do the symbols mean?

Start recording: **q**<letter>
Stop recording: **q**
Execute once: **@**<letter>

Execute again: **@@**
View register contents: **:reg**<letter>
More info: **:h recording**

Macro Video

Check out this video for detailed example of usage:
https://www.youtube.com/watch?v=jsscmRDYhjw

Registers

The sequences of commands given to macros go to registers!

Registers are spaces in memory that vim uses to store text. Each register has an identifier so it can be accessed later.

Access with double quote before name (Ex: **"r**).

Copy (yank) selected text to the register r with **"ry**

Paste the content of register r with **"rp**

See all registers with **:reg**

See contents of specific registers with **:reg <space separated register names>**
Ex: **:reg a b**

Marks!

Marks let you bookmark your current position so you can jump to it later.

Marks are invisible!

Each file has a set of marks identified by lowercase letters (a-z)

Uppercase letters (A-Z) is used to globally identify a position within a particular file

Mark Commands

Set Mark: **m**<letter>

Jump to Line of Mark: **‘**<letter>

Jump to Position of Mark: **`**<letter>

Delete till Line of Mark: **d’**<letter>

Delete till Position of Mark: **d`**<letter>

Change Text of Lines Till Mark: **c’**<letter>

Jump to Next Line of Mark: **]’**

Jump to Prev Line of Mark: **[‘**

Jump to Next Mark: **]`**

Jump to Previous Mark: **[`**

Delete Mark: **:delmarks** a

Delete Marks in Range: **:delmarks** a-c

Delete Specified Marks: **:delmarks** abc

Delete All Lowercase Marks: **:delmarks!**

List All Marks: **:marks**

List Certain Marks: **:marks** <comma-separated letters>

Check out these video for detailed example of usage:

https://www.youtube.com/watch?v=o4x4jUcHJwk

https://www.youtube.com/watch?v=f4_68zI81Vk

04

Reminders

Reminders!

- GPI Website is live!
  - https://www.cs.cmu.edu/~07131/f22/
- smashlab resubmissions are allowed!
  - Email the TA that graded your submission
- SportsLab due 11:59pm ET Tonight!
- **Extratation** this **Saturday 1-2pm Resume Review** @ Doherty 1211
  - Bring a copy of your resume :)
- Feedback Form : Please go fill it out & tell us about your likes and dislikes from this lecture! Please let us know how we did!

tinyurl.com/f22-gpi-feedback

feedback form

Lab Pro Tips ;)

- In general:
  - **:set number** in normal mode to get line numbers!
- Fix-typos:
  - Don’t swap the names in the header
  - Careful when swapping names!
  - u for undo if you make mistakes!
- Hogwarts:
  - leave TWO spaces between books and MORE
  - after deleting paragraphs there should be ONE line in between them

THANKS !

Do you have any questions?