

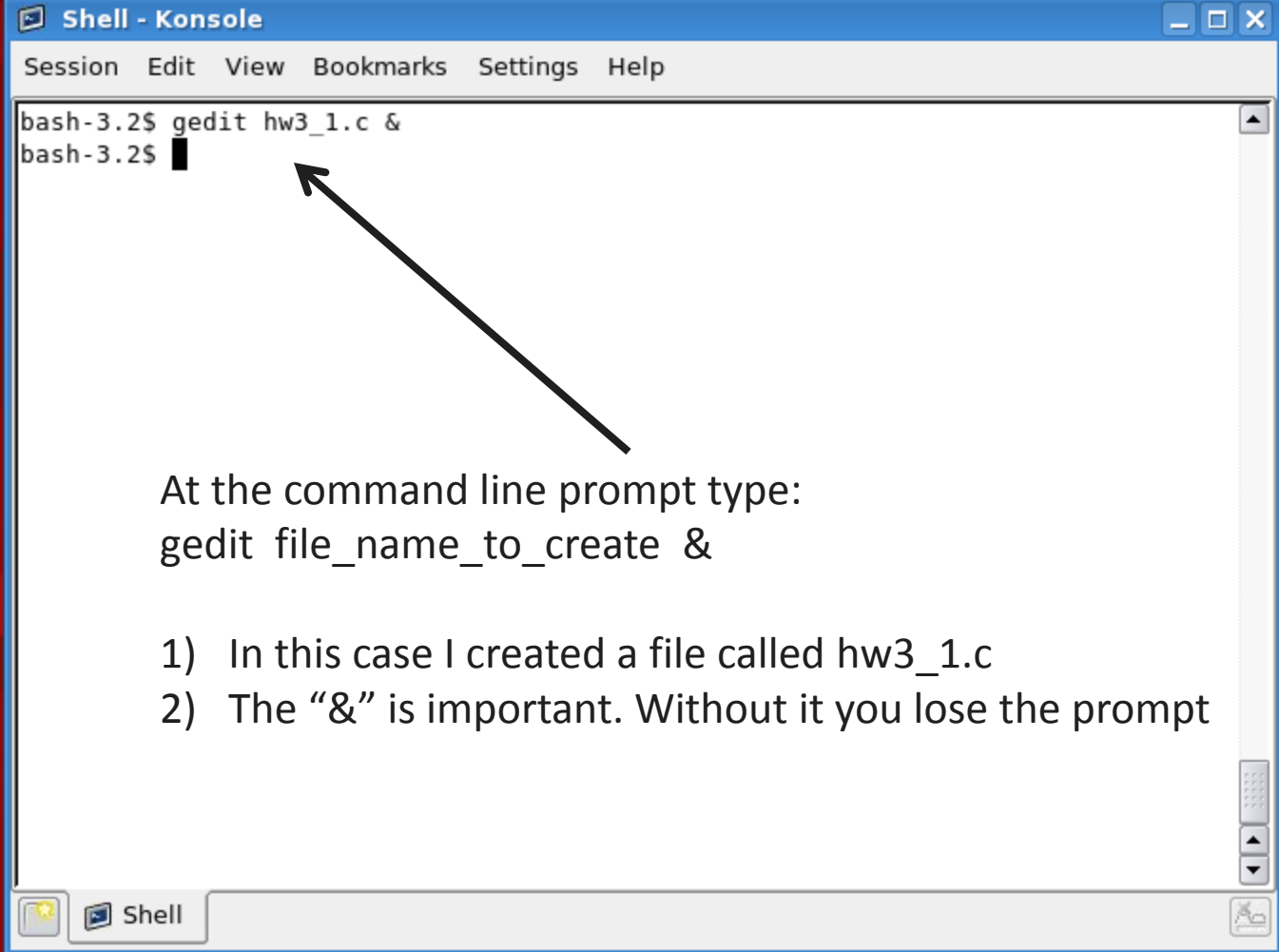
CprE 288 – Quick intro for compiling C in Linux

Instructor:
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Overview

- Compile C code in Linux
- Linux Basics
- Logging in to Linux boxes from off-campus

Open a file



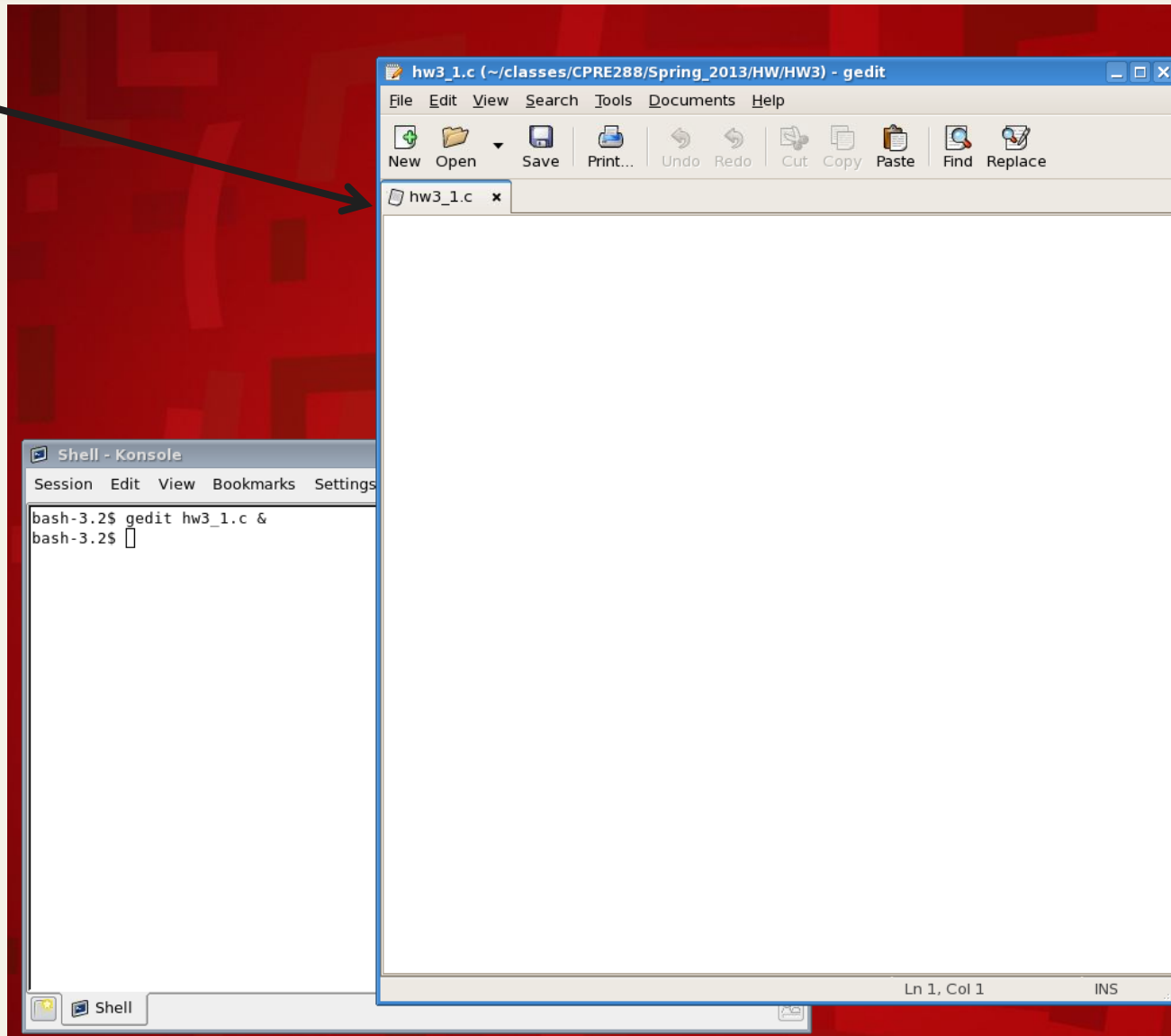
```
bash-3.2$ gedit hw3_1.c &  
bash-3.2$ █
```

At the command line prompt type:
gedit file_name_to_create &

- 1) In this case I created a file called hw3_1.c
- 2) The “&” is important. Without it you lose the prompt

Blank File

A gedit window should open
Notice the name of you file
on the tab



Add your C code

In this case I just copied from Word

Don't forget to SAVE

```
Shell - Konsole
Session Edit View Bookmarks Settings
bash-3.2$ gedit hw3_1.c &
bash-3.2$
```

```
hw3_1.c (~/.classes/CPRE288/Spring_2015/HW/HW3) - gedit
File Edit View Search Tools Documents Help
New Open Save Print... Undo Redo Cut Copy Paste Find Replace

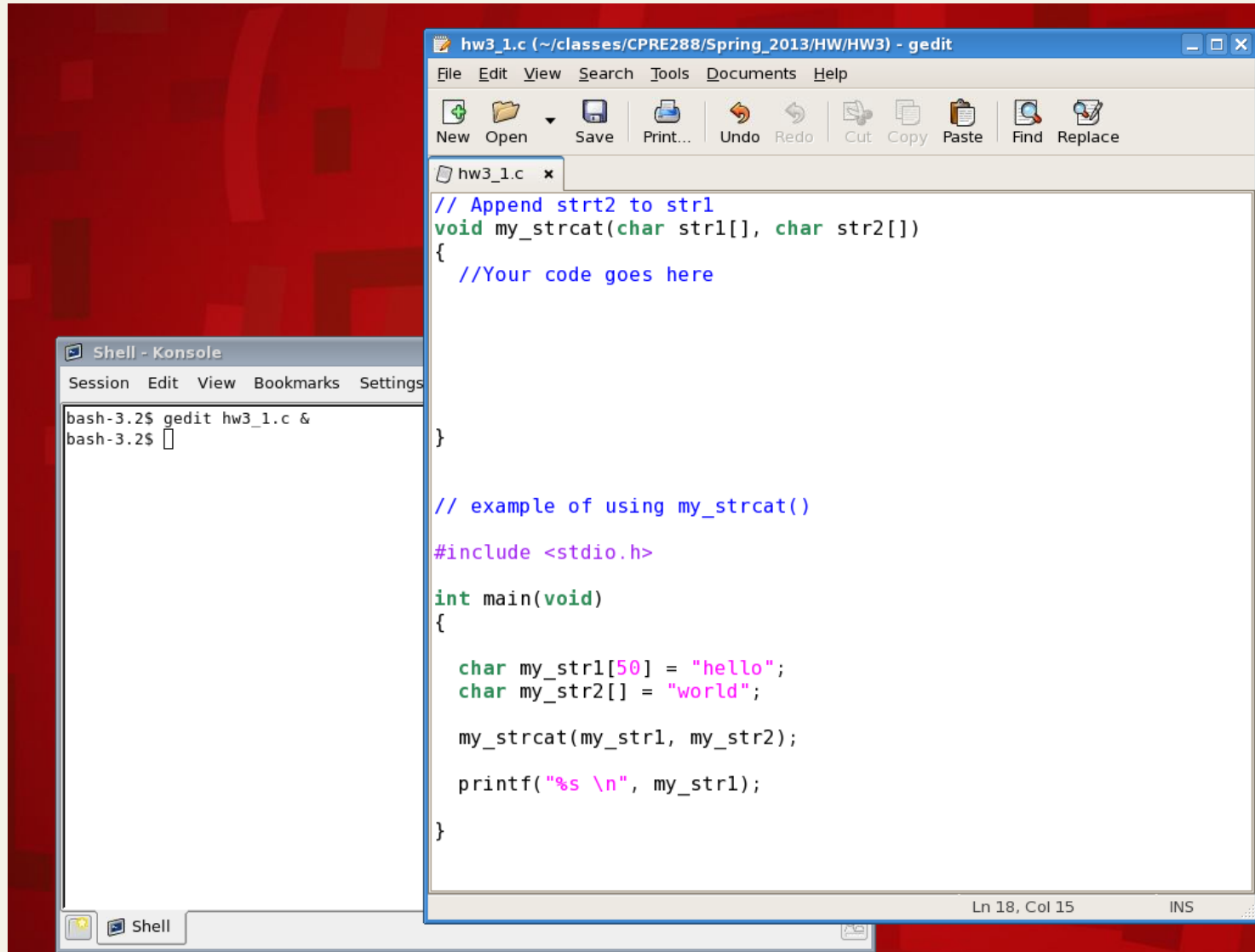
hw3_1.c x
// Append str2 to str1
void my_strcat(char str1[], char str2[])
{
    //Your code goes here
}

// example of using my_strcat()
#include <stdio.h>

void main(void)
{
    char my_str1[50] = "hello ";
    char my_str2[] = "world";
    my_strcat(my_str1, my_str2);
    printf("%s \n", my_str1);
}
```

Note: if you copy from Word the " " may not copy correctly. Just manually retype. See Next slide

Add your C code



```
hw3_1.c (~/.classes/CPRE288/Spring_2013/HW/HW3) - gedit
File Edit View Search Tools Documents Help
New Open Save Print... Undo Redo Cut Copy Paste Find Replace
hw3_1.c x
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    //Your code goes here
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int main(void)
{
    char my_str1[50] = "hello";
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    my_strcat(my_str1, my_str2);

    printf("%s \n", my_str1);
}
Ln 18, Col 15 INS

Shell - Konsole
Session Edit View Bookmarks Settings
bash-3.2$ gedit hw3_1.c &
bash-3.2$
```

Compile your code and execute it

The image shows two windows from a Linux desktop environment. The top window is a code editor titled "hw3_1.c (~/.classes/CPRE288/Spring_2013/HW/HW3) - gedit". It contains the following code:

```
// Append str2 to str1
void my_strcat(char str1[], char str2[])
{
    //Your code goes here
}
```

The bottom window is a terminal titled "Shell - Konsole". It shows the following commands and output:

```
bash-3.2$ gedit hw3_1.c &
bash-3.2$ gcc -o test hw3_1.c
bash-3.2$ ./test
hello
bash-3.2$
```

Annotations with arrows point to the terminal output:

- An arrow points from the text "Output of the program. Note: I have not put any code for my_strcat" to the "hello" output line.
- An arrow points from the text "Run the program that you just compiled called 'test'" to the "./test" command line.
- An arrow points from the text "compile hw3_1.c and call the executable 'test'" to the "gcc -o test hw3_1.c" command line.

Output of the program. Note: I have not put any code for my_strcat

compile hw3_1.c and call the executable "test".

Run the program that you just compiled called "test"

Linux Basics

- Some on-line tutorials and quick reference cards
 - <http://www.ee.surrey.ac.uk/Teaching/Unix/>
 - http://www.linuxdevcenter.com/excerpt/LinuxPG_quickref/linux.pdf
- How do I know where I am
 - pwd (tells you your current location, use this command often)
- What is in my current location
 - ls (list all the files and directors at this location)
- Changing directories
 - cd directory_name
 - cd .. (takes you up one directory level)
 - cd ~ (takes you to your home directory)
- Making a new directory
 - mkdir new_directory_name

Remote Desktop

- Note: If you are not on the campus network, then to access most machines remotely you must set up a VPN: <https://www.it.iastate.edu/services/vpn>
- Using Remote Desktop, you can login to most ISU Linux machines using your userID & password
 - Remote Linux machines: <https://it.ece.iastate.edu/remote/>
- **If you have a problem remotely accessing a Linux machine, then you can physically go to a Linux machine in one of the computer labs in Coover.**