Exercise 1:

1. Explain the changes you made.

Here, I made V0,V1, V2, V3 all equal to 3. By setting V0 to 3, the loop for(a=0; a<V0; a++) {printf("RU ");} prints RU three times. Since V1 is operated by the switch/case command, setting it to 3 runs case 3 which only prints out "Werblin Recreation Center" due to the break command that comes after it. When V3=3, it satisfies the if/else statement V3==3 and outputs "Go". Lastly, to print "RUTGERS!" V2 can be any number greater than 0.

2. Explain the minimum number of distinct values needed for the preprocessor macros.

Only one distinct value is needed for the preprocessor macros which is 3 because it satisfies all of the conditions.

3. What does the -o flag do with gcc?

It is used to identify the name of the executable file that gcc creates.

Exercise 2:

1. Explain how do you set the breakpoint at main, and how you run up to that breakpoint.

Break hello.c: line 3 (main function starts at line 3)
run arglist
step

2. A list containing the additional gdb commands:

1. How do you pass command line arguments to a program when using gdb?

run arglist

2. How do you set a breakpoint which only occurs when a set of conditions is true (e.g. when certain variables are a certain value)?

break ... if expr

3. How do you execute the next line of C code in the program after stopping at a breakpoint?

n

4. If the next line of code is a function call, you'll execute the whole function call at once if you use your answer to #3. (If not, consider a different command for #3!) How do you tell GDB that you want to debug the code inside the function instead? (If you changed your answer to #3, then that answer is most likely now applicable here.)

step

5. How do you resume the program after stopping at a breakpoint?

continue

6. How can you see the value of a variable (or even an expression like 1+2) in gdb?

print

7. How do you configure gdb so it prints the value of a variable after every step?

display

8.How do you print a list of all variables and their values in the current function?

info variables

9.How do you exit out of gdb?

quit

. Exercise 3:
1. Explain the bug and your fix to the function.

In order to use the value, the addresses of the node elements have to first be specified. Thus, to fix bug I had to change the conditional in the if statement inside the ll_equal() function to (&a->val != &b->val).

Exercise 4:
1. Describe how you run CGDB to completion on the executable created by compiling interactive_hello.c without getting stuck.

In order to run CGDB to completion on the executable file, you would have to create a seperate text file, let's say filename.txt, with the input in it, which in this case would be your name. Then, in order to debug the program without explicitly entering an input, use the command run<filename which would run the program and store the input from the text file into stdin.