Yousef Awad – EGN3211 Spring 0002

1.

The output of the program would be 8.5000000000 due to the “return 0” statement on line 6 terminating the program returning the code “0” thereby making it so the following lines are not run.

2.

a. 39Magic is not a valid identifier.

b. Variable1 is a valid identifier.

c. Variable_2 is a valid identifier.

d. temp-f is not a valid identifier.

e. a05hn31x is a valid identifier.

f. melody# is not a valid identifier.

g. long is not a valid identifier.

h. A is a valid identifier.

i. counter_to_10 is a valid identifier.

3.

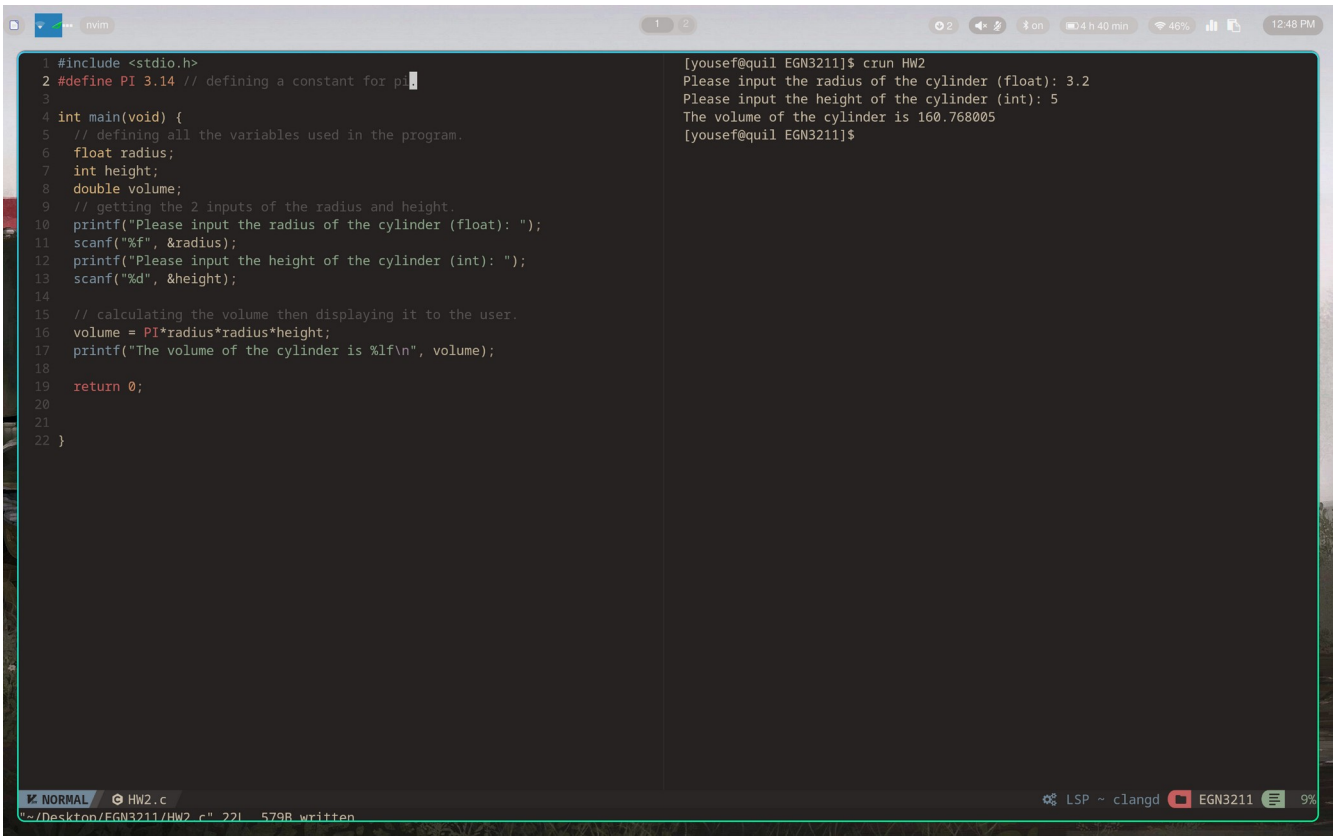
a. 5+6*(1+2)%4 = 5+6*3%4 = 5+18%4 = 5+2 = 7.

b. 2-3*5+7 = 2-15+7 = -13+7 = -6.

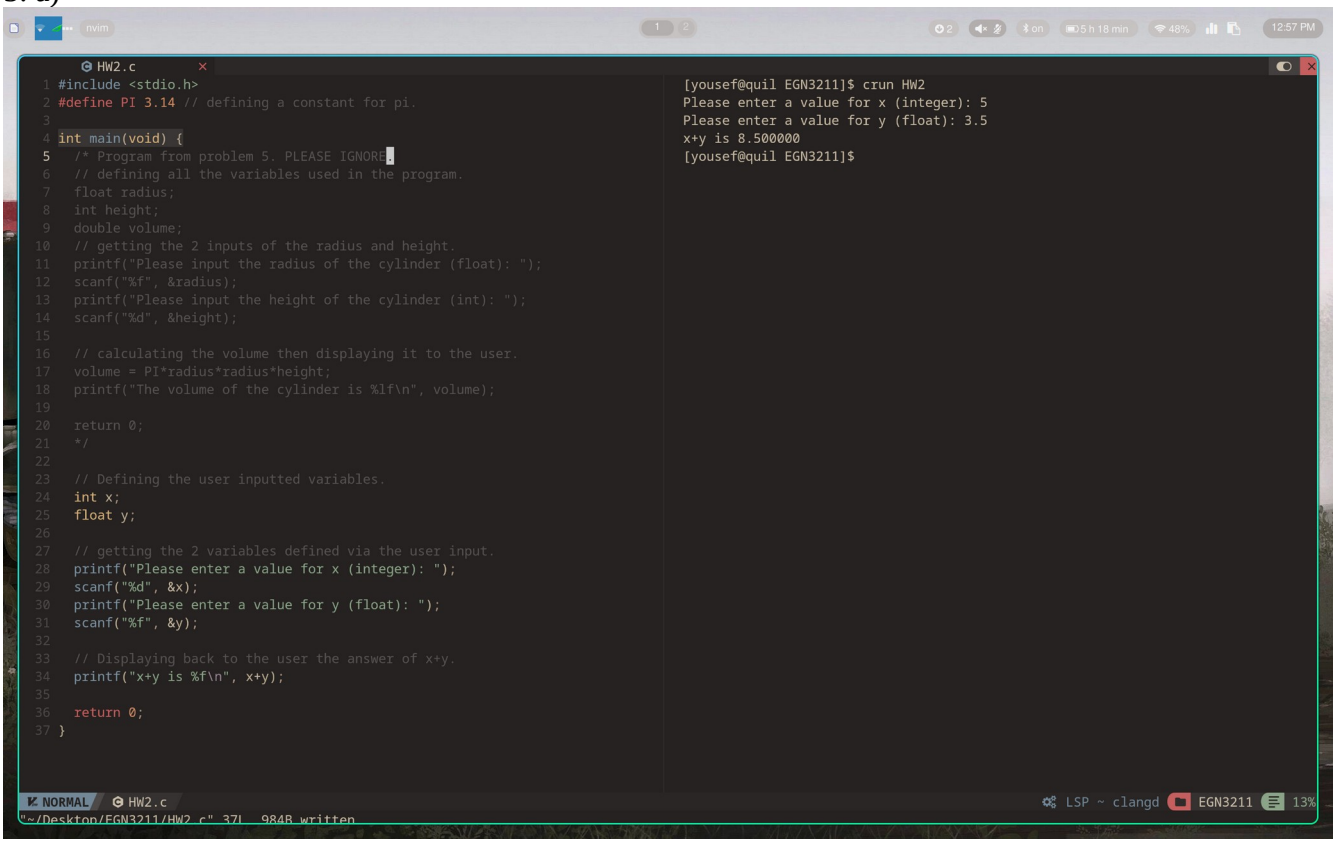
c. (8+2*3)%2 = (8+6)%2 = 14%2 = 0.

d. 8/3+2*4 = 2+2*4 = 2+8 = 10.

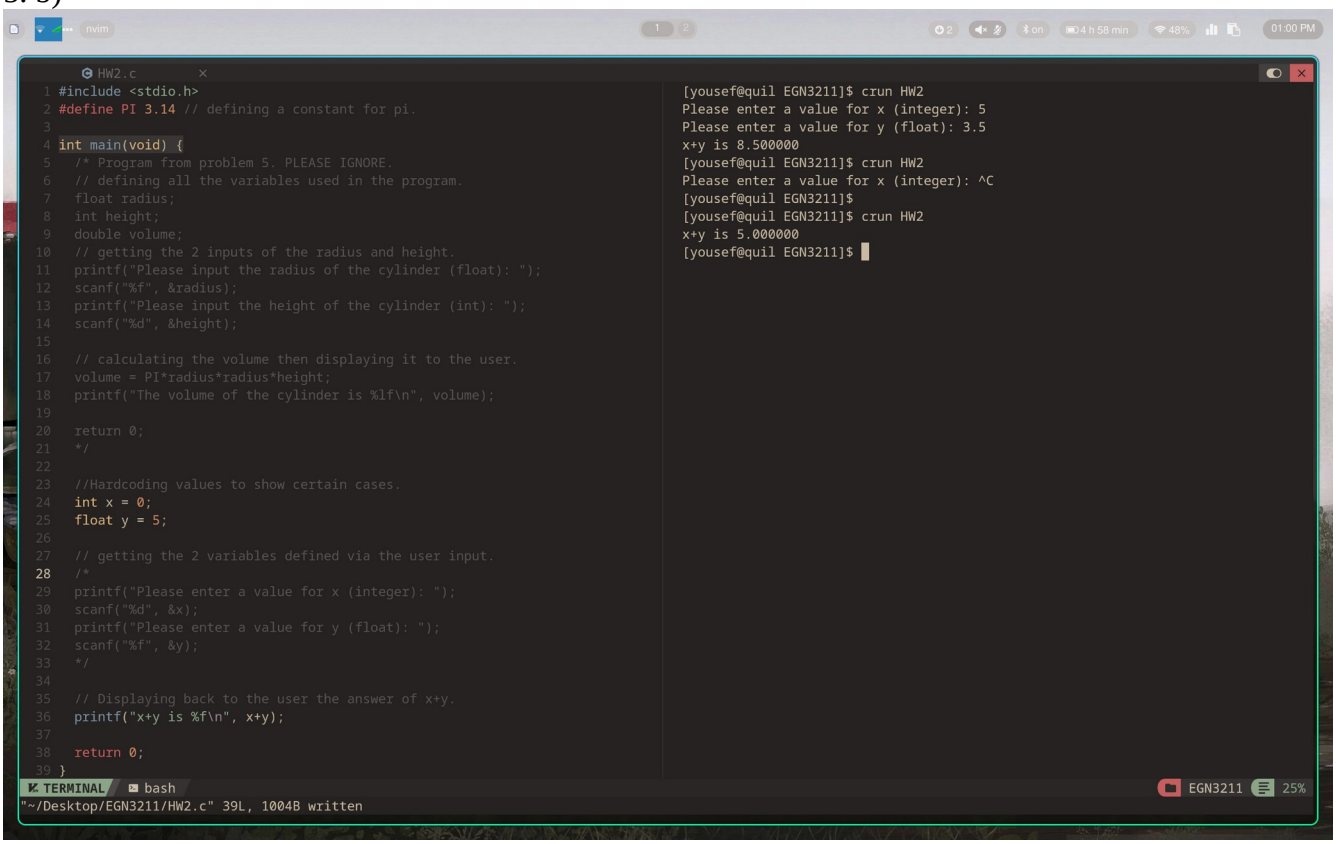
4.


#include <stdio.h>
#define PI 3.14 // defining a constant for pi.
int main(void) {
// defining all the variables used in the program.
float radius;
int height;
double volume;
// getting the 2 inputs of the radius and height.
printf("Please input the radius of the cylinder (float): ");
scanf("%f", &radius);
printf("Please input the height of the cylinder (int): ");
scanf("%d", &height);
// calculating the volume then displaying it to the user.
volume = PI*radius*radius*height;
printf("The volume of the cylinder is %lf\n", volume);
return 0;
}
[yousef@quil EGN3211]$ crun HW2
Please input the radius of the cylinder (float): 3.2
Please input the height of the cylinder (int): 5
The volume of the cylinder is 160.768005
[yousef@quil EGN3211]$
NORMAL
HW2.c
LSP ~ clangd
EGN3211

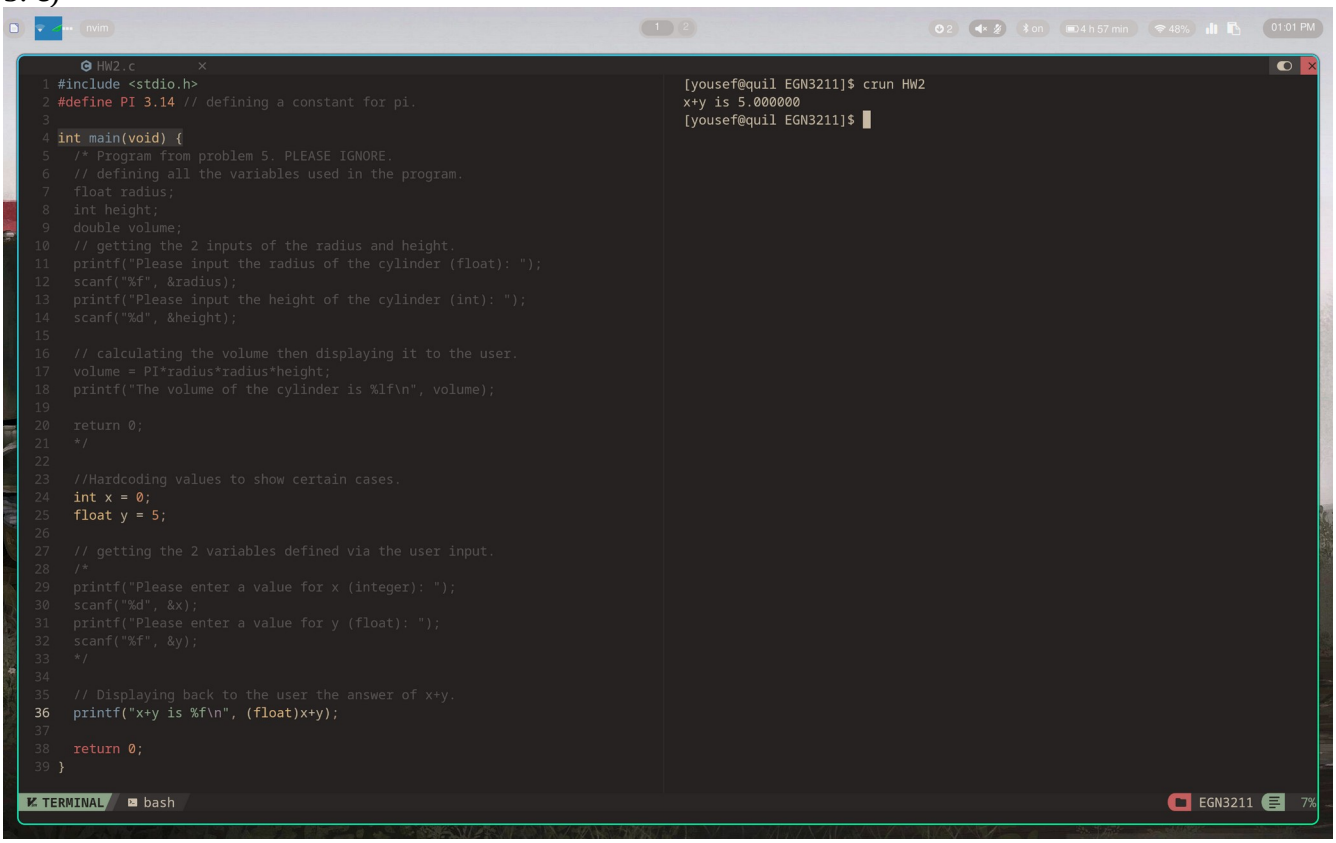
5. a)


HW2.c
#include <stdio.h>
#define PI 3.14 // defining a constant for pi.
int main(void) {
/* Program from problem 5. PLEASE IGNORE.
// defining all the variables used in the program.
float radius;
int height;
double volume;
// getting the 2 inputs of the radius and height.
printf("Please input the radius of the cylinder (float): ");
scanf("%f", &radius);
printf("Please input the height of the cylinder (int): ");
scanf("%d", &height);
// calculating the volume then displaying it to the user.
volume = PI*radius*radius*height;
printf("The volume of the cylinder is %lf\n", volume);
return 0;
*/
// Defining the user inputted variables.
int x;
float y;
// getting the 2 variables defined via the user input.
printf("Please enter a value for x (integer): ");
scanf("%d", &x);
printf("Please enter a value for y (float): ");
scanf("%f", &y);
// Displaying back to the user the answer of x+y.
printf("x+y is %f\n", x+y);
return 0;
}
[yousef@quil EGN3211]$ crun HW2
Please enter a value for x (integer): 5
Please enter a value for y (float): 3.5
x+y is 8.500000
[yousef@quil EGN3211]$
NORMAL
HW2.c
LSP ~ clangd
EGN3211

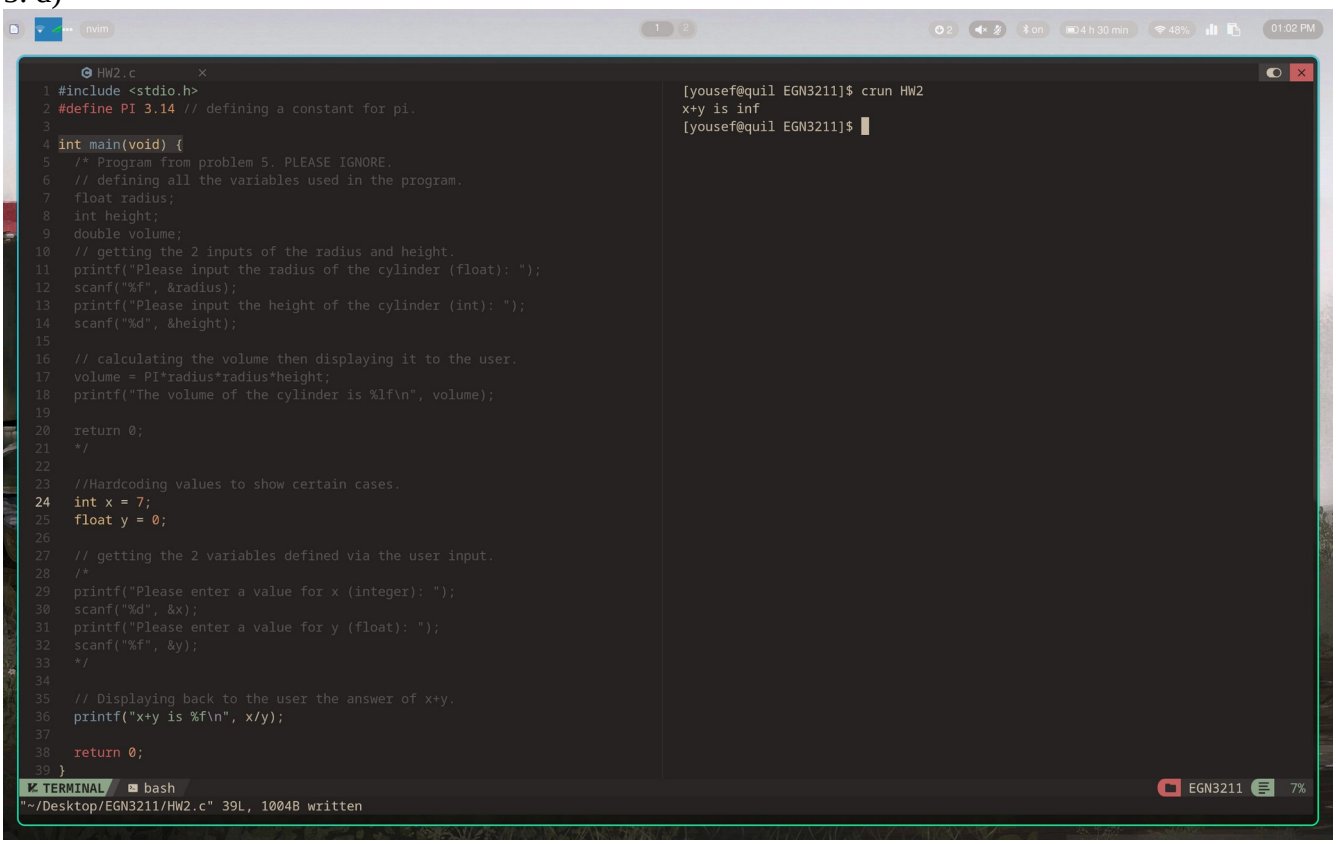
5. b)


HW2.c
#include <stdio.h>
#define PI 3.14 // defining a constant for pi.
int main(void) {
/* Program from problem 5. PLEASE IGNORE.
// defining all the variables used in the program.
float radius;
int height;
double volume;
// getting the 2 inputs of the radius and height.
printf("Please input the radius of the cylinder (float): ");
scanf("%f", &radius);
printf("Please input the height of the cylinder (int): ");
scanf("%d", &height);
// calculating the volume then displaying it to the user.
volume = PI*radius*radius*height;
printf("The volume of the cylinder is %lf\n", volume);
return 0;
*/
//Hardcoding values to show certain cases.
int x = 0;
float y = 5;
// getting the 2 variables defined via the user input.
/*
printf("Please enter a value for x (integer): ");
scanf("%d", &x);
printf("Please enter a value for y (float): ");
scanf("%f", &y);
*/
// Displaying back to the user the answer of x+y.
printf("x+y is %f\n", x+y);
return 0;
}
[yousef@quil EGN3211]$ crun HW2
Please enter a value for x (integer): 5
Please enter a value for y (float): 3.5
x+y is 8.500000
[yousef@quil EGN3211]$ crun HW2
Please enter a value for x (integer): ^C
[yousef@quil EGN3211]$
[yousef@quil EGN3211]$ crun HW2
x+y is 5.000000
[yousef@quil EGN3211]$
TERMINAL
bash
EGN3211
25%
"~/Desktop/EGN3211/HW2.c" 39L, 1004B written

5. c)


HW2.c
#include <stdio.h>
#define PI 3.14 // defining a constant for pi.
int main(void) {
/* Program from problem 5. PLEASE IGNORE.
// defining all the variables used in the program.
float radius;
int height;
double volume;
// getting the 2 inputs of the radius and height.
printf("Please input the radius of the cylinder (float): ");
scanf("%f", &radius);
printf("Please input the height of the cylinder (int): ");
scanf("%d", &height);
// calculating the volume then displaying it to the user.
volume = PI*radius*radius*height;
printf("The volume of the cylinder is %lf\n", volume);
return 0;
*/
//Hardcoding values to show certain cases.
int x = 0;
float y = 5;
// getting the 2 variables defined via the user input.
/*
printf("Please enter a value for x (integer): ");
scanf("%d", &x);
printf("Please enter a value for y (float): ");
scanf("%f", &y);
*/
// Displaying back to the user the answer of x+y.
printf("x+y is %f\n", (float)x+y);
return 0;
}
[yousef@quil EGN3211]$ crun HW2
x+y is 5.000000
[yousef@quil EGN3211]$
TERMINAL
bash
EGN3211
7%

5. d)



The reasoning on why it declared infinity is due to the fact that it effectively took the limit of the function (treating x/y as a function and found its limit to infinity).