Please explain what is happening with each line of coding syntax in the programming shell template up above.

1-importing library used for C

2-the block of code will be taking numbers/computer looks for main to start program

3-type your code

4-returns 0 if code executed properly

What is meant by declaring a variable? What is a data type and why do we assign one to a variable? What are some great variable naming conventions? What can we not include in a variable name?

Declaring variable-stores a name/value into memory for program to use later

Variables cannot contain numbers or start with an underscore

What is the difference between the scanf() and printf() functions? What is the syntax that is needed for both types of statements? Please provide a coding sample of each.

Scanf-takes in input from user

Scanf(%d, & num1)

Printf- uses information from scanf and displays it on computer

Printf(“I would like %d pieces of candy”)

What is the difference between a decisional statement and a looping structure? Which one includes increment or decrement operators and what is their function?

Decisional statement- makes decisions based on user input

Looping structure- goes through statements until condition is met. Also contains increment operators that give the function direction

Please provide a real world example of both a decisional statement and a looping structure and include a coding snippet with your written examples.

int number1;

printf("Enter number: ");

scanf\_s("%d", &number1); //& needed to be added so that what ever number is eneterd gets stored into that address

printf("Number1 is %d", number1);

return 0;

1. int radius;
2. int diameter;
3. printf("Enter Radius: ");
4. scanf\_s("%d", &radius);
5. printf("Enter Diameter: ");
6. scanf\_s("%d", &diameter);
7. diameter = radius \* 2; //This line had to be moved from above the diameter function since it would need to know what is entered before it is multiplied
8. printf("The radius is %d \n", radius);
9. printf("The diameter is %d \n", diameter); //& is not needed

int pi = 3.14;

int radius;

int area;

printf("Enter Radius: \n");

scanf\_s("%d", &radius); //added scan statement to enter data

area = pi \* radius \* radius;

printf("The radius is: %d \n", radius); //took out the & for both

printf("The area is: %d \n", area);

int grade = 50;

if (grade >= 60) //if statements dont neet a semi colon after argument

{

printf("Passed \n");

}

else {

printf("Failed \n");

}

int count = 2;

while (count > 0)

{

printf("Continue \n");

count = count - 1; //you need to count down so there isnt an infinit loop

}

printf("Stop \n");