You may be asked to demonstrate/explain your work to the tutor, if you are absent/unavailable or fail to demonstrate properly, zero marks will be awarded.

Exercises (Submit all four questions)

1. Explain the below in your own words using examples (**Examples must be different from lecture slide examples**). All example programs should be **executed- programs and screenshots are mandatory**
   a. Differences between variables and arrays with examples
   b. Differences between pointers and arrays with examples
   c. Define Recursive function and give an example
   d. Differences between with or without programmer defined function with examples
   e. Differences between "Call by value and Call by reference" with examples

2. Write a swap() function with the following function header:

```
void swap(int *p1, int *p2);
Use this function to swap the values of two integers.
int main(){
   int x = 50;
   int y = 60;

    // You must figure out how to call the function correctly!
   swap(...)

   // Should print out x: 50, y: 60
   printf("x: %d, y: %d\n", x, y);
}
```

3. Write a function that reorders the values in three integer variables such that the values are in ascending order. Assume that the corresponding function prototype statement is

```
void reorder(int *a, int *b ,int *c);
where a, b, and c are pointers to the three variables.
```

4. Write a function called AddTwo(). It will receive three pointers to floats. It will add the numbers pointed to by the first two floats and store their sum in the location pointed to by the third pointer. In main(), define j, k and m. Scan in j and k, send their addresses to AddTwo() and have main() print the address of m and its value that is in it from AddTwo().