OOP244 Quiz #2 – Section B

1. What is the cause of a memory leak? (1 mark)

A memory leak occurs if an application loses the address of dynamically allocated memory that has not deallocated.

When memory has not been deallocated properly

1. Define a function named “write\_to\_file” that returns void. Have it accept a char pointer, an integer with a default value of 8 and one integer by reference. (1 mark)

void write\_to\_file( char\*, int&, int x = 8)

When you pass by reference, the parameter include the & symbol.

Default parameters must be last.

1. Write code that asks user for a number. Using the number, allocated a char array of that size. Assume the proper library is included as well as using namespace std. (1 mark)

cout >> “Enter a number”;

int num;

cin >> num;

char \* array = new char[num];

1. What is wrong with this code?

int z = 10;

int\* a = new int[z];

for (int i = 0; i < z; ++i){

a[i] = i;

}

for (int i = 0; i < z; ++i){

a[0] += a[i];

}

int b = a[0];

delete a; 🡨should be “delete [] a”

a is an array and has to be deallocated as an array. A lot of you said that you can’t allocate an array with a variable, that only applies to static arrays, not dynamic arrays. Both for loops are perfectly valid.

1. What is the difference in privacy between a struct and a class?

Struct is public by default, class is private by default