Task 1

* 1. a: Stack, memory automatically allocated at compile time.

b: Heap, explicit memory allocation using the “new” keyword.

c: Stack, fixed sized memory allocation.

n: Stack, memory automatically allocated at compile time.

d: Heap, memory allocated at runtime.

e: Stack, a constant memory address has been allocated, and does not point to any data.

f: Stack, a pointer to a memory address has been allocated.

g: Stack, memory automatically allocated at compile time.

h: Stack, memory automatically allocated at compile time.

c[10]: Stack, it is a pointer to the variable “e”, memory allocated at compile time.

* 1. Assigning NULL to an constant integer will compile, however it will not be very useful since the value cannot change.
  2. “int a;” -> Without initialising a, it will contain a garbage value. If it is then used for calculations, it may yield unexpected results.

“char g = 2;” -> This will assign the character corresponding to the ASCII value of 2 rather than 2 itself. It may be best to change it to “char g = ‘2’;”

“c [ 1 0 ] = ∗&∗e;” -> The array “c” was assigned a size of 10. This is accessing a garbage value, since it is out of bounds.