Programming – 2020-02-13

* *Bug explanation of previous work (2020-02-05)*
* Four types of variable, register, static, auto
* **Static** variables do not change
* **Auto** variables can change
* **Register** variables have their memory allocated inside the CPU and not main memory
* **Extern** variables are very similar to global variables
* Registers have no risk to use, if it cannot allocate inside CPU it will allocate in memory instead
* Commonly they are only used in index variables, as the difference in speed is not appreciable outside of index (i = 0 is an example of an index)
* EX1.c = Demonstrating EXTERN
* Extern will pull from header files, i.e will check for external variables, it will then check for global variables
* Extern’s ARE NOT defined in the area they are declare i.e a function, they check the above first
* Header files must be compiled in addition to your code, it slows down programs
* In code, “Maths” is referred to as “Math” blame the bloody Americans (*root of all evil)*
* #include <math.h> contains a whole bunch of math related functions, examples of which include:
* Sin(x);
* Cos(x);
* Tan(x);
* Log(x)
* Pow(x,y) – X to the power of Y
* ^ all the above **RETURN DATA TYPE DOUBLE** anything else requires casting, they also **REQUIRE DOUBLES AS INPUTS.**