* Create a Linux app that demonstrates the use of semaphores or mutex
  + Github: <https://github.com/level2fast/Embedded_Projects/tree/main/Visual_Studio_2019_Projects/Linux_Semaphore_and_mutex_app>
* Create a program that demonstrates the use of processes and threads.
  + Github: <https://github.com/level2fast/Embedded_Projects/tree/main/Visual_Studio_2019_Projects/Linux_Semaphore_and_mutex_app>
* Create a multithreaded application for reading and writing to a file.
  + Github: <https://github.com/level2fast/Embedded_Projects/tree/main/Visual_Studio_2019_Projects/Linux_Semaphore_and_mutex_app>
* **Create a program that demonstrates the use of the fork() command in Linux**
* Create a program to reverse the bits of a string
  + Github: <https://github.com/level2fast/Embedded_Projects/tree/main/Project1_reverse_bit_string>
* Create program that uses the keyword volatile
* Create a program that tests ones ability to guess the size of struct when sizeof() is used.
* Create a program that takes an image as an array of pixels and flips it 180 degrees
* Develop and algorithm to detect a cycle in linked list
* Create a program that reverses bits in a byte
* Create a program that use multilevel inheritance and the contains virtual functions
* Create a program that uses and inline function and demonstrate the advantage of using inline functions
* Create a program that tests knowledge of pointer arithmetic
* Create a program that uses static memory and demonstrate what static memory is
* Create a program that Given a singly linked list of integer values. You must remove all the values greater than a given integer N, maintaining the integrity and order of the list. From this function you need to return a pointer to head of the updated list.
* Create a program that performs scheduling of multiple threads
* Create a program to remove elements from a linked list
* Create Write a program to find if a linked list is circular or not.
* Create a program that uses function pointers.
* Create a program that Given two binary numbers A and B. Write a program to find how many binary bits of ‘A’ needs to be flipped in order to get number ‘B’.
* Create a program to find no. of ‘1’s in binary representation of a number?
* Create a program that implements a circular buffer
* Create an interrupt service routine
* Create a program that uses I2C
* Create a program that use SPI
* Create a c++ program that uses C functions. Make sure they are defined as C functions
* Create a program that uses a union and a structure. Demonstrate the difference between the 2 in the program.
* Create a program that uses a bit field
* Write a program that demonstrates the difference between big endian and little endian
* Create a function that swaps the values of two pointers without a temp variable
* Create a class of linked list questions and answers.
* ~~Create a program that implements a priority queue~~
* ~~Create a program that implements Dijkstras algorithm~~
* Create a program that uses shared memory with a memory mapped i/o file
* Create a program that uses message queues and pipes to send messages
* Create a program that does IPC using signals
* Creating a program that solves the dining philosophers problem using semaphores