MONTH 1 CONCEPTS TO LEARN (ALX)

1. **POINTERS IN C**
   - Declaring and dereferencing pointers
   - Pointer arithmetic

2. **DATA STRUCTURE I**
   - Arrays
     - Declaring and initializing arrays
     - Accessing array elements
     - Types of arrays (multidimensional arrays etc.)
     - Strings as arrays.

3. **POINTERS IN C**
   - Pointers to pointers

4. **RECURSION IN C**
   - Recursive functions
   - Recursion vs iteration
   - Solving problems(factorial, Fibonacci series, binary search) recursively

5. **COMMAND LINE BEHAVIOUR (CLB) FUNCTIONS**
   - Argument count and its application
   - Argument vector/value and its application

6. **STATIC LIBRARIES IN C**
   - Definition of a library and its use
   - The '*ar*' and '*ranlib*' functions for creating libraries
   - Dynamic and static libraries(The differences)

7. **MEMORY MANAGEMENT IN C**
   - Memory allocation functions and application(malloc(), calloc(), realloc() & free()).

8. **PREPROCESSORS IN C (CPP)**
   - Understanding the compilation process
   - Macros (definition and types- object like macros, function like macros etc. defining macros)
   - Preprocessor directives
   - Predefined Macros and use.
   - Include guards

9. **DATA STRUCTURE II**
   - Structs(Declaring and accessing structs)
   - Pointers to *structs*
   - Documentation of *structs*
   - The *typedef* keyword

10. **POINTERS IN C**
    - Pointers to functions (syntax for declaration and application)

11. **VARIADIC FUNCTIONS**
    - Declaration and definition
    - The *stdarg* library.
    - *const* keyword

12. **PRINTF GROUP PROJECT**