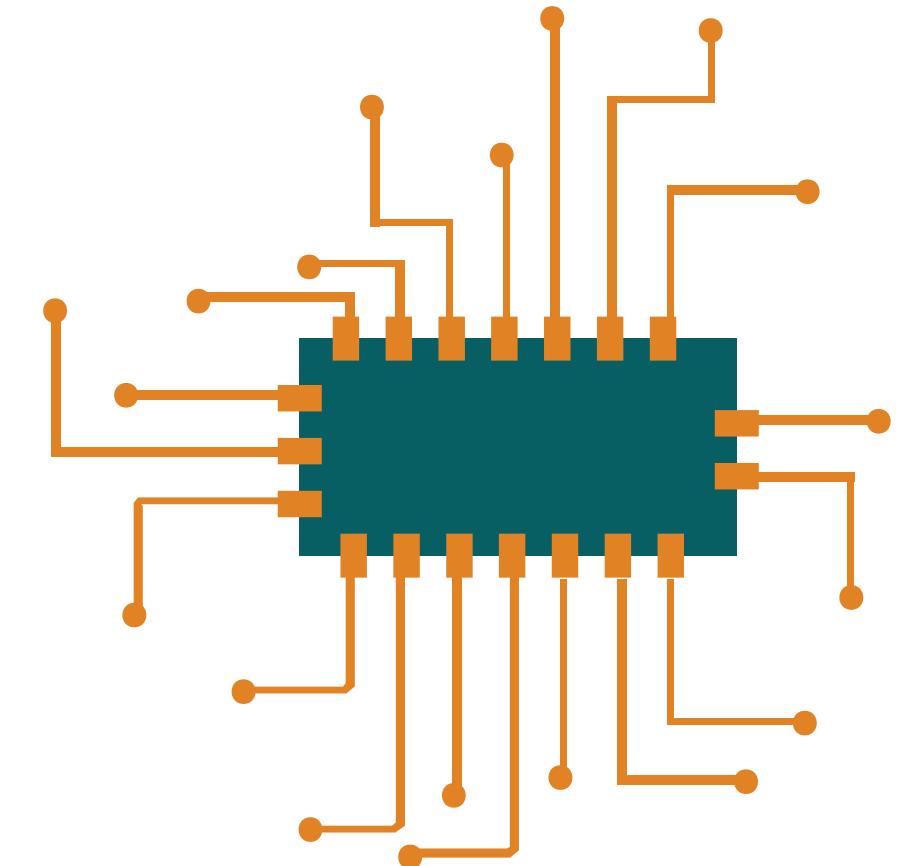




EMBEDDED SYSTEMS

TRACK-TASK 1

C language Arrays & Pointers





IMPORTANT NOTES:

- **The objective** of this assignment is to clearly understand and exercise concepts of arrays and pointers and to use them in function implementations to deliver needed output
- **The secondary objective** is to get to know about strings and how to manipulate them in your code.
- **NOTE !!!** this is one of the most important concepts to learn and apply in your drivers in upcoming stages so we will see string manipulation in the next assignments again

the whole files are inside one folder!!



ASSIGNMENT 1

Arrays and pointers:

- **Write a program in C** to count a total number of duplicate elements in an array.
- **Write a program in C** to print all unique elements in an array.
- **Write C code** that defines a function taking an array as an input argument and counting the frequency of each element of an array.
- **Write a program in C** to add numbers using call by reference.



ASSIGNMENT 2

- Write a C code that define 3 int variables x,y and z and 5 pointers to integers p,q and r. set distinct values to the three variables and set the addresses of the variables into the three pointers then apply the next:
- print with labels the values of x,y,z,p,q,r,*p,*q,*r
- print the message: Swapping pointers.
- Execute the swap code : $r = p; p = q; q = r;$
- print with labels the values of x,y,z,p,q,r,*p,*q,*r



ASSIGNMENT 3

- **Strings :**
- Write a program in C to input a string and print it.
- Write a program in C to separate the individual characters from a string.
- Write a program in C to compare two strings without using string library functions.
- Write a program in C to copy one string to another string.



**REMEMBER..
EVERYONE HAS HIS
OWN FIRST TIME!**