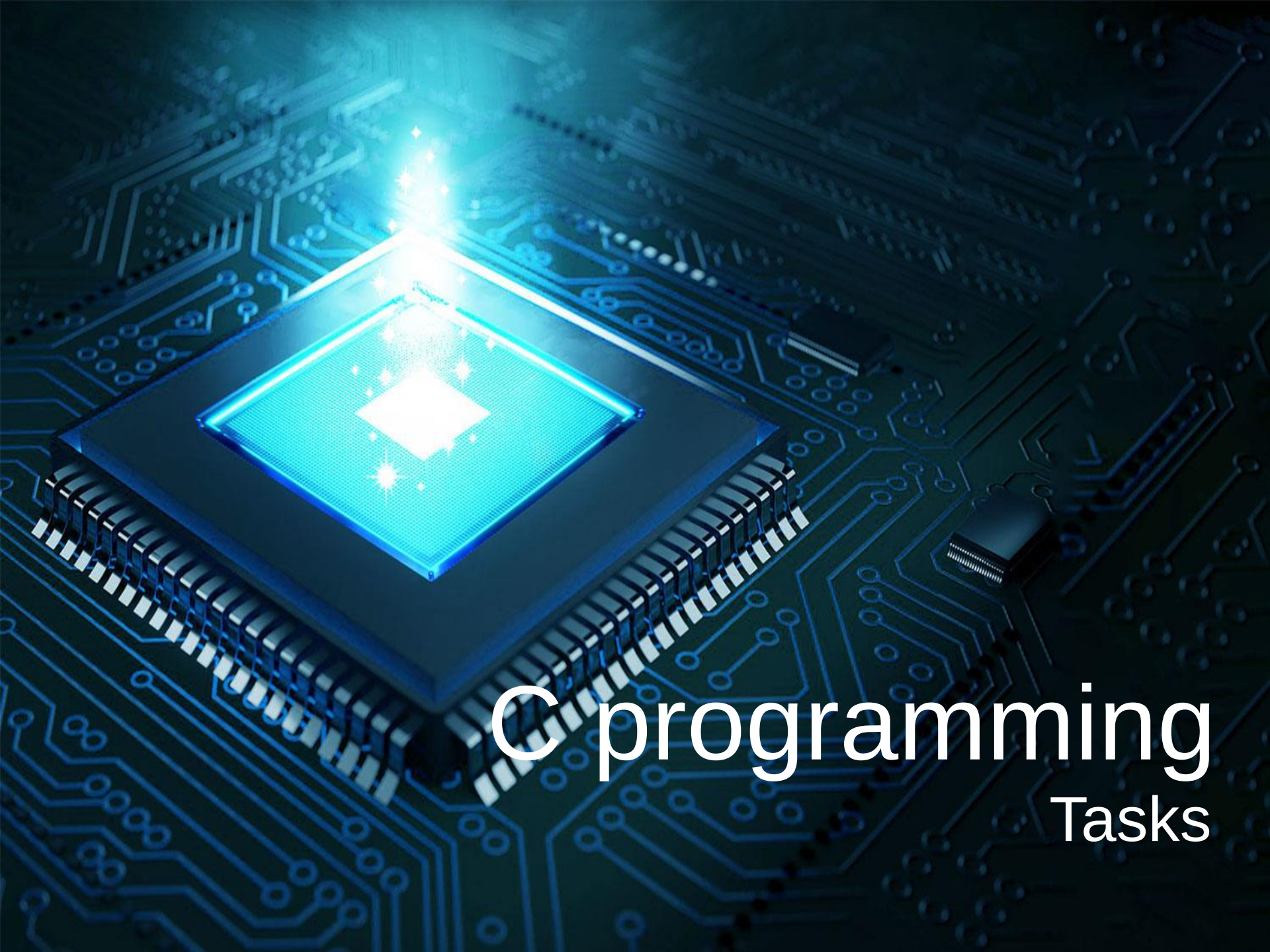


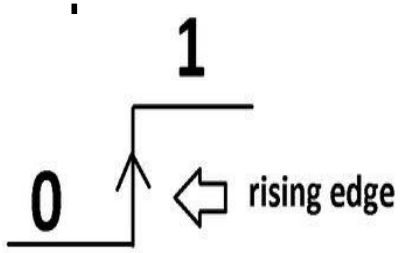
C programming

Tasks

Task1

Write a C function that counts the number of rising edges(ex : change from low to high that occurs on a digital input pin) .
The function will be called periodically and contains only one input which is the last reading of the port pin(ex : 0 :Low, 1: High) and returns accumulated number of falling edges science the first function call .

Tips :
-the value received by first call shall be consid as initial pin value



Function prototype :
unsigned int risingEdgeCounter(unsigned char

Task 2

Given a string , create a string made up of its last 2 letters, reversed and separated by a space.
For example : the word is “car” , return “r a”
For example : the word is “APPLE” , return “E L”

constraints :
1 <=Length of word <= 100

Function prototype :
char* lastLetters(char * string);

Task 3

Problem solving pdf file 2 and file 3

link :
https://drive.google.com/drive/u/1/folders/17syUROfPMfiRE17I8aDbq2dy7jws-Avh

Note :
if the output required is an array you may use static local or dynamic allocation to avoid dangling ptr

Task 4

1- Implementation of Stack using arrays

2- Implementation of Stack using single Linked list

Task 5

1- Implementation of Queue using arrays

2- Implementation of Queue using single Linked list

Task 6

leetCode problem solving , solve using stack :

link :
https://leetcode.com/problems/valid-parentheses/

you need to submit a screen shot of your code and results

Task 7

leetCode problem solving , solve using queue :

link :
https://leetcode.com/problems/number-of-students-unable-to-eat-lunch/

you need to submit a screen shot of your code and results

Task 8

Implementation of Doubly Linked list , full code as we did it in class