Assignment - 03

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Requirements : gcc (or mingw<windows>), vscode(<ANY IDE> | CLI) , git, github account , internet access.

(Windows or linux)

1. Fork repository https://github.com/akash-nagwanshi/hello_world ; hello_world/
2. Setup this repo to your local machine as we discussed in our class using Vs code.
3. Create a branch named as feature-branch.
4. Create two folders as **src/** and **include/** in base repo.
5. Create source file in **src/** folder and header file in **include/** folder.
6. Create a pull request
7. If all goes well I update the main branch with your request

S. No.	Enrollment_No	Name	Batch	Questions
1	0801cs193d02	Aryan Jain		
2	0801CS201001	Aarjav Jain		
3	0801CS201003	Abdul Qadir Boxwala		
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7	0801CS201007	Abhishek Patidar		
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9	0801CS201010	Akshat Samdani		
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11	0801CS201012	Anekant singhai		
12	0801CS201013	Aniket Kanodia	2	

13	0801CS201014	Animesh Pathak		
14	0801CS201015	Anshul Agrawal		
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16	0801cs201017	Anurag kumar Choudhary		
17	0801CS201018	Anushka Gamad		
18	0801CS201019	Arpit Jain	3	
19	0801CS201020	Aryan Jain		
20	0801CS201021	Aryan Raj Shrivastava		
21	0801CS201022	Ashi Bagedi		
22	0801CS201023	Ashwin Parmar		
23	0801CS201024	Avni Sharma		
24	0801CS201026	Charvi Sharma	4	
25	0801CS201027	CHEVI PARSAI		
26	0801CS201028	Chinmay Dubey		
27	0801CS201029	Chirag Raghuwanshi		
28	0801CS201030	Dipti Sharma		
29	0801CS201031	Drashti Nihalani		
30	0801CS201032	Gaurav Bairagi	5	
31	0801CS201033	Gaurav Gupta		
32	0801CS201034	Gourav Jodhwani		
33	0801CS201035	Goutam Patidar		
34	0801CS201036	GURDEEP SINGH		
35	0801CS201037	Harsh Bishnoi		
36	0801CS201038		6	
38	0801CS201039	Harshal solanki		
39	0801CS201041	Harshita Ashirwal		
40	0801CS201042	Hussain Diwan		
41	0801CS201044	Sakshi Jhinjhore		
42	0801CS201045	JUGNU CHOURIYA	7	

43	0801CS201046	Kanchan Hingorani		
44	0801CS201047	Karishma Kesharwani		
45	0801cs201048	Keshav bhattad		
46	0801CS201049	Keshav Yadav		
47	0801CS201050	Keyush Parwal		
48	0801CS201051	Kush sharma	8	
49	0801CS201052	Lalit Patidar		
50	0801CS201053	Manal Choudhary		
51	0801CS201054	Manasvi Patidar		
52	0801CS201055	Manish Badole		
53	0801CS201056	MANOJ PARMAR		
54	0801cs201057	Megha joshi	9	
55	0801cs193d03	MOHD. FARHAN KHAN		
56	0801CS201001	Mohit Khatri		
57	0801CS201003	Mohit Rane		
58	0801CS201004	Naman Chandak		
59	0801CS201005	Naman deep Khakha		
60	0801CS201006	Naman Hajela	10	
61	0801CS201007	Niket Pathak		
62	0801CS201009	Pankaj nagava		
63	0801CS201010	Prabal Pophaley		
64	0801CS201011	Pradyumn Chandore		
65	0801CS201012	Pragati gupta		
66	0801CS201013	Pragati Sawaliya	11	
67	0801CS201017	Pranjal Jhawar		
68	0801CS201018	PULKIT PARAMHANS		
69	0801CS201019	Puneet Agarwal		
70	0801cs201018	Pushpendra amoliya	12	

71	0801CS201020	Rishabh Barwe		
72	0801CS201021	Ruchika parmar		
73	0801CS201020	Samiksha Rathore		
74	0801CS201021	samoil bohra		
75	0801CS201022	Samyak Jain		
76	0801CS201023	Sanjay kanesh		
77	0801CS201024	Sanyam Agrawal		
78	0801CS201083	Saransh Bhandari	13	
79	0801CS201084	Satyam Singh		
80	0801CS201085	Shaily udiya		
81	0801CS201086	Shubham Jain		
82	0801CS201087	Shubham Shukla		
83	0801CS201088	Siddhant Patil		
84	0801CS201089	siddharth swami warke	14	
85	0801CS201090	Sidharth Jain		
86	0801cs201091	Simran rathore		
87	0801CS201092	Somya agrawal		
88	0801CS201093	Sooyash Jaju		
89	0801CS201094	Srishti Shukla		
90	0801CS201095	Sudeep choudhary	15	
91	0801CS201096	SURAJ IVNATI		
92	0801CS201097	Swaraj Gupta		
93	0801cs201098	Umang Tiwari		
94	0801CS201099	Umesh Mehta		
95	0801CS201100	Vanshika Agrawal		
96	0801CS201101	Vikas Dahiya	16	
97	0801CS201102	Vinayak Agrawal		
98	0801CS201103	Vishal		
99	0801CS201104	VISHAL UIKEY		
100	0801CS201107	yuvraj bundela	17	

101	0801CS2011015	Yash Titoriya		
102		isha		
103		ABHINAV P		
104		ADNAN KHA P		
105	O8 P	VIvek P		
106		adnan KHAN	18	

Functions :

1. char *sgs_clib_strcat(char *dest, const char *src)

Appends the string pointed to, by src to the end of the string pointed to by dest.

(for 1 to 3) // serial number wise

2. Int sgs_clib_addition(int number_1, int number_2);
   Adds number_1 and number_2 and returns result

(for 4 to 6)

3. Float sgs_clib_division(int number_1, int number_2);
   divide number_1 by number_2 and returns result

(for 7 to 9)

4. Int sgs_clib_subtract(int number_1, int number_2);
   subtract number_1 from number_2 and returns result

(for 10 to 12)

5. char * sgs_clib_strncat(char *dest, const char *src, size_t n)
   Appends the string pointed to, by src to the end of the string pointed to, by dest up to n characters long.

(for 13 to 15)

6. Int sgs_clib_multiply(int number_1, int number_2);
   multiply number_1 and number_2 and returns result

(for 16 to 18)

7. char * sgs_clib_strchr(const char *str, int c)
   Searches for the first occurrence of the character c (an unsigned char) in the string pointed to, by the argument str.

(for 19 to 21)

8. int sgs_clib_strcmp(const char *str1, const char *str2)
   Compares the string pointed to, by str1 to the string pointed to by str2.

(for 22 to 24)

9. int sgs_clib_strncmp(const char *str1, const char *str2, size_t n)
   Compares at most the first n bytes of str1 and str2.

(for 25 to 27)

10. Int sgs_clib_remainder(int number_1, int number_2);
    Find remainder and returns result

(for 28 to 30)

11. int sgs_clib_strcoll(const char *str1, const char *str2)
    Compares string str1 to str2. The result is dependent on the LC_COLLATE setting of the location.

(for 31 to 33)

12. char * sgs_clib_strcpy(char *dest, const char *src)
    Copies the string pointed to, by src to dest.

(for 34 to 36)

13. File * sgs_clib_open_file(char *filename, int mode)

Open file and returns its file pointer

(for 37 to 39)

14. char * sgs_clib_strncpy(char *dest, const char *src, size_t n)
    Copies up to n characters from the string pointed to, by src to dest.

(for 40 to 42)

15. size_t sgs_clib_strcspn(const char *str1, const char *str2)
    Calculates the length of the initial segment of str1 which consists entirely of characters not in str2.

(for 43 to 45)

16. char * sgs_clib_strerror(int errnum)
    Searches an internal array for the error number errnum and returns a pointer to an error message string.

(for 46 to 48)

17. size_t sgs_clib_strlen(const char *str)
    Computes the length of the string str up to but not including the terminating null character.

(for 49 to 51)

18. char * sgs_clib_strpbrk(const char *str1, const char *str2)
    Finds the first character in the string str1 that matches any character specified in str2.

(for 52 to 54)

19. char * sgs_clib_strrchr(const char *str, int c)
    Searches for the last occurrence of the character c (an unsigned char) in the string pointed to by the argument str.

(for 55 to 57)

20. size_t sgs_clib_strspn(const char *str1, const char *str2)
    Calculates the length of the initial segment of str1 which consists entirely of characters in str2.

(for 58 to 60)

21. char * sgs_clib_strstr(const char *haystack, const char *needle)
    Finds the first occurrence of the entire string needle (not including the terminating null character) which appears in the string haystack.

(for 61 to 63)

22. char * sgs_clib_strtok(char *str, const char *delim)
    Breaks string str into a series of tokens separated by delim.

(for 64 to 66)

23. Int * sgs_clib_1d_int_array(size_t size_of_array);

    Create 1D int array and returns a pointer to that array.

(for 67 to 69)

24. float * sgs_clib_1d_float_array(size_t size_of_array);

    Create 1D float array and returns a pointer to that array.

(for 70 to 72)

25. double * sgs_clib_1d_double_array(size_t size_of_array);

    Create 1D float array and returns a pointer to that array.

(for 73 to 75)

26. Int ** sgs_clib_2d_int_array(size_t size_of_array);

Create 2D int array and returns a pointer to that array.

(for 76 to 78)

27. float ** sgs_clib_2d_float_array(size_t size_of_array);

    Create 2D float array and returns a pointer to that array.

(for 79 to 81)

28. double **sgs_clib_2d_double_array(size_t size_of_array);

    Create 2D float array and returns a pointer to that array.

(for 82 to 84)

29. Create new data type as sgs_clib_string using typedef which can store character array.
    (for 85)

30. Create new data type as sgs_clib_int using typedef which can store int.
    (for 86)

31. Int sgs_clib_count_vowels(File *filename);
    count the number of vowels in a line of text.
    (for 87 to 89)

32. Int *sgs_clib_generate_random_numbers(size_t how_many, size_t from, size_t to);

    Generate **how_many** random number **from** to **to** returns pointer to that array.

    (for 90 to 92)

33. Void sgs_clib_printAsciiChart();

    Print ASCII values

    (for 93 to 95)

34. Int sgs_clib_find_MaxMin_in_array(int *array, int mode);
    Find max or min value in an array. If mode = =1 → find max. else mode == 0 find min.
    (for 96 to 98)

35. Int sgs_clib_check_pallindrome(char * message);
    Palindrome of not, returns 1 if true else return 0
    (for 99 to 101)

36. void sgs_clib_convert_to_upper(char *message);
    convert a string/message to upper case
    (for 102 to 104)

37. void sgs_clib_convert_to_lower(char *message);
    convert a string/message to lower case
    (for 105 to 107)

38. int sgs_clib_calculate_factorial(int number);
    find factorial of a number and returns result
    (for 108 to 110)

39. int sgs_clib_calculate_average(int *array);
    find average of numbers in array and returns result
    (for 111 to 113)

Outcomes:

1. GIT
2. GITHUB
3. IDE -> VS code
4. Open Source and Open Collaboration
5. C && BASH && MAKE

$ Write.onConsolse("⊂(◉‿◉)つ **Happy Coding** ⊂(◉‿◉)つ ");