Data Structures and Algorithms Lab
01. Building the Basics

Lab Code: 17ECSP201   **Lab No:** 01   **Semester:** III

Date: 01 Aug, 2018   **Batch:** D1

Theme: DSA Marathon – Catch Me if You Can

Objective: Operating and Enhancing knowledge on Foundational Concepts of C

Below listed are tasks which you will carry out in a team of three. The end time will be decided by the professor (Yayy).

Look out! Your scores are getting updated on the spreadsheet scoreboard.

Task 01:

You are given with a file named 'array_sum.c'. It has some errors in it. Debug and correct the program.   **[Marks: 10]**

Task 02:

Write a code which will generate the following warning message: warning: return type of 'main' is not 'int'   **[Marks: 10]**

Task 03:

Yes or No? Call me and answer this question with 'Yes' or 'No'.

"_____, I don't like this faculty who teaches in DSA Lab"   **[Marks: 10]**

Task 04:

Give one real time example of 'do-while' and 'while'   **[Marks: 10]**

Task 05:

Write a program which would generate the output as in 5.exe   **[Marks: 20]**

Task 06:
Write a program which would generate the output as in 6.exe   **[Marks: 20]**

Task 07:
Write a program which would generate the output as in 7.exe   **[Marks: 20]**

Task 08:
Identify three C keywords in the word maze below: **[Marks: 30]**

m	a	n	g	o	a	p	p	l	e	o	n	c	e	u
p	o	n	a	t	i	m	e	i	w	h	i	l	e	n
m	g	o	f	l	d	p	u	m	a	b	a	g	s	r
u	d	d	o	d	o	c	t	o	r	i	s	g	o	o
m	m	y	r	c	c	d	o	n	a	l	d	s	d	d
b	h	e	l	p	r	c	h	e	n	n	a	i	x	p
a	e	w	w	k	k	g	e	t	p	a	r	t	y	s
i	y	m	y	o	u	f	r	i	e	d	e	g	g	r
z	h	c	t	i	w	s	c	a	u	u	d	i	i	s
h	a	r	r	y	p	o	t	t	e	r	z	o	k	e
g	o	o	g	l	e	f	a	c	e	b	o	o	k	s

Task 09:
Write a program to display Multiplication Table using for(), while() and do while( ). Accept a number from the user within the range 1 to 100 and display its multiplication table from:
- 1 to 10 using for()
- 11 to 20 using while() and
- 21 to 30 using do while()

Example: If input number is 3, output format should be like:

3 X 1 = 3

3 X 2 = 6

3 X 3 = 9

3 X 4 = 12 etc   **[Marks: 40]**

Task 10:

Write a C program to find the missing number from 0 to 9. In the main(), statically initialize the integer array with numbers from 0 to 9, by missing out a number.

Write a function called number_check(), which accepts array as input and finds out which is the missing number from 0 to 9. Print the number in the function itself. Handle all the required conditions appropriately.   **[Marks: 40]**

** May The Force Be With You **