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*Assignment - II*

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## Assignment II

### Scanf:

In C programming language, scanf() function is used to read character, string, numeric data from keyboard scanf(“%variable type”,&variable name);

For example: If we read the integer variable through the scanf. scanf(“%d”,& variable name);

### Function

A large C program is divided into basic building blocks called C function. C function contains set of instructions enclosed by “{ }” which performs specific operation in a C program. Actually, Collection of these functions creates a C program.

function definition:Return\_typefunction\_name (arguments list)

{Body of function; }

function call:function\_name (arguments list);

function declaration:return\_typefunction\_name (argument list);

### Conditional expressions

Now you had wrote few program start deeper learning. In C programming we can easily evaluate condition. The statement is

if (condition)

{//means condition true}

Else{// means condition false.}

If -else if- else

In the condition we can use variables, number, function, typical condition can be:-

if (a>b) , if (a>=b) , if (a= =b), if (a<b), if (a<=b), if (a!=b), if (0), if (1), if (a<5) etc..

if condition is true then program will go into if curly, and if condition false then program will go into else part.

### For loop

*for-loop* (or simply for **loop**) is a control flow **statement** for specifying iteration, which allows code to be executed repeatedly. ... This allows the body of the **for-loop** (the code that is being repeatedly executed) to know about the sequencing of each iteration.for (initial; condition; increment){Statements ;}



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## While loop, do while

A while loop in C programming repeatedly executes a target statement as long as a given condition is true. `while(condition)`

```
{ statement(s); }
```

The do while in c programming repeatedly executes the statements and check the conditions.

```
do { }
```

```
While(test expression);
```

Section II: In all the program use function and scanf.

- 1) Repeat Assignment - I with functions.
- 2) Print your name until user say yes – ‘y’, once you say no – ‘n’ then stop the program.
- 3) Find the largest number from three given number.
- 4) Check number is positive or negative
- 5) Fibonacci series upto user choice count.
- 6) Prime number in C programming. –  
Validate input given by user, User given number should be positive and less than 10,000, otherwise input is invalid. In case of invalid input print and return.
- 7) Repeat 6<sup>th</sup> question to find all prime number till user said.
- 8) C program find given number is Armstrong number or not?
  - a) I.e. Armstrong number is all one digit number is armstrong number 1,2,3,4,5,6,7,8,9.
  - b) In case of two digit number, consider 35 and 29. if  $3^3 + 5^5 = 35$  then it is armstrong number. But  $9 + 25 = 34$ , so 35 is not a armstrong number.
  - c) In case of three digit number, consider 153. if  $1^3 + 5^3 + 3^3 = 153$  then it is armstrong number.  $1 + 125 + 27 = 153$ . So it is armstrong number.
  - d) Same ways for 4 digit number, 5 digit number.
  - e) So you need to write one function to find the number of digit. Function name if `digiSize(num)`. It will return the size of number (2 digit or 3 digit or 4 digit).
  - f) You also need to make one more function, which will take two input one is number of digit and unit digit. Function name `powerdigi (size, unidigi)`; this will return the unidigi with the power of size.
  - g) Above two function need to use in main function to find armstrong number.



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- 9) Find all armstrong number till the user given number.
- 10) Write program to check entered number is positive, negative or zero.
- 11) Check the for loop behavior.  
For(i=0;i<2;i++)  
For(i=0;i<2;++i)  
For(i=0;i<2;i+1)
- 12) Check while loop behavior by using condition value like while(1), while(2).

## 2. Theory question need to clear

- a. What is function? What is the use of function? What is advantage of function?
- b. How to give name of function?
- c. How for loop work? Which one is better up for loop or down for loop?
- d. How many times while(12) loop will work and why?
- e. What is the advantage of nested looping?
- f. What is the use of do while loop?
- g. Which loop is better while or for?
- h. What is function proto type? Why it required?
- i. What is function call? How to pass argument into the function?
- j. Can we write like this function1(function2(function3()))?
- k. Can we write like this **if (function1()) { } else { }**
- l. Why we having initialize variable at the beginning? What if we are not initialize variable and use directly?
- m. Why to reuse variable? How many variable we can make in one program.
- n. Can we make same variable name and same function name, what is the problem associated with same name?
- o. Which one is faster if - else if - else or Switch case?
- p. What is formal variable?
- q. What is the meaning of function definition, and function deceleration?
- r. What is the return type of a function?
- s.