**Functions:**

1.Write a function to calculate factorial of a given number.

Prototype : int fact(int number);

2.Write a function to indicate whether given number is prime or not.

Prototype : void is\_prime(int number);

3.Write a function to check whether given year is leap year or not.

Prototype: void leap\_year(int year);

4.Write a function to do given operation on the two operands specified. Operation may be'+', '-', '\*', '/', '%'.

Hint:- Prototype:- float operate(float oprd1, float oprd2, char oprn);

5.Write a function to check whether given character is

a. Uppercase

b. Lowercase

c. Digit

Prototype:- void operate(char oprn);

6.Write a function to calculate sum & product of two integers. Print results in main. Prototype: - int sum(int oprd1, int oprd2); int product(int oprd1, int oprd2);

7.Write a program to print a given number of terms of Fibonacci series. Use Recursion. Fibonacci series is given as

1, 1, 2, 3, 5, 8, 13, 21, ...(void function)

8.Input values of base and index and calculate power. (return the answer)

9.Write a function to swap two numbers without using third variable (void function)

10. Write a function to calculate gcd of given numbers. (return the answer).

11.Write a function to implement the four function calculator +,-,\*,/

Add, subtract, multiply, divide functions returning the answer to calci function. Menu driven. (Do-while)

12.Write a function to count the number of 1’s in the given number.

13.Write a function to calculate the Binomial coefficient.

14.Write a function to print the Pascal triangle for given number of rows.

15.Write a function to convert character number to integer number

Input: 2 (char)

Output: 2 (int)

Print output in main

16.Write a function to check whether it is Armstrong no. (When sum of cube of all digits of Equals the number then the number is called as Armstrong number)

O/p in main

17.Write a function to Check whether given number is numeric palindrome or not (Output in main)

18.Write a function to reverse the number. (Output in main)

Write a function to Calculate sum of digits of integer.

(Output in main)

19. Write a function program to reverse the case of given alphabet.

**Array:-**

I.Basics

1. a Declare the integer array of 5 elements. Initialize the array elements using scanf and print the array elements. Do it for double and float data type

1.b char arr[30]="hello world";

int i;

for(i=0;arr[i]!='\0';i++)

{

printf("%c ",arr[i]);

}

printf("\nstring is = %s",arr);

1. c Declare the character array of 30 elements. Initialize the string and print the string. Find the string length using strlen function (include string.h header)

Find the size of string using sizeof function (include stdlib.h header)

2. a int arr[5] = {10,20,30,40,50};

a) print all the array addresses using array notation i.e. &arr[i] pointer notation i.e. (arr+i)

b. print all the array elements values using array notation i.e. arr[i] pointer notation i.e. \*(arr+i)

2. b char arr[5]=”Hello”;

a) print all the array addresses using array notation i.e. &arr[i] pointer notation i.e. (arr+i)

b. print all the array elements values using array notation i.e. arr[i] pointer notation i.e. \*(arr+i)

3.char size[30] = "hello world ";

int i;

printf("sized array \n"); for(i=0;size[i]!=’\0’;i++)

printf("%d ",size[i]);

}

i=strlen(size);

printf("\nlength of sized array=%d",i);

i=sizeof(size);

printf("\nsizeof sized array=%d",i);

4. char unsize[] = "hello world ";

int i;

printf("unsized array \n");   
for(i=0;unsize[i]!=’\0’;i++)

{   
printf("%d ",unsize[i]);

}   
i=strlen(unsize);   
printf("\nlength of unsized array=%d",i); i=sizeof(unsize);   
printf("\nsizeof sized array=%d",i);

1.Input marks of 6 subjects & find the sum of all Subjects. Also calculate the average.

2.Input the 5 array elements using scanf and print them.

Reverse the array elements.(Don’t modify the original array )

3.Write a function to accept the array elements from the user. Write another function to print the array. Re-use this function in rest of the assignments questions.

4.Write a function to calculate the maximum and minimum of the array elements.

5.Write a function to calculate the index of the maximum and minimum of the array elements.

6.Write a function to sort the array elements using selection/bubble sort.

7.Search a given number within an array using Sequential Search

8.Search a given number within an array using Binary Search.

9.Accept 10 elements from user. Then delete all duplicated elements & print them.