Pointers

A **pointer** is a variable whose value is the address of another variable, i.e., direct address of the memory location.

- int i - declares an int.
- int *p - declares a pointer to an int.
- int &r = i - declares a reference to an int, and initializes it to reference i.

1. Write a C program to return the addresses of the following 2 variables;
    - I.   int var1;
    - II.   char var2[10];
    - III.   int *ip;   /* pointer to an integer */
    - IV.   double *dp;   /* pointer to a double */
    - V.   float *fp;   /* pointer to a float */
    - VI.   char *ch;   /* pointer to a character */

2. Using your C knowledge, do the following exercises;
    - I.   Declare an integer variable "var" and assign 20 to it. Print the address of "var".
    - II.   Declare an integer pointer variable "ip". Print the address of "ip".
    - III.   Store address of "var" in a pointer variable. Print the address stored in "ip".
    - IV.   Print the value of "*ip".

3. Using your C knowledge, do the following exercises;
    - I.   Declare a pointer variable "pi".
    - II.   Assign it to NULL.
    - III.   Print the output.

Modular Programming

4. Try the codes in the given zip file. Then write another header file to calculate the Fibonacci number of the user input value for variable "num" in calculation.cpp.

Submit your answers to LMS as a zip file. The zip file format should be <Your_Index_Number>_Tutorial6.zip. The zip file should consist of folders for each question. Each folder should consist of the relevant C program and the screenshot of the relevant output.

1) **Question 1 folder - C program and screenshot**
2) **Question 2 folder - C program and screenshot for all the operations**
3) **Question 3 folder - C program and screenshot**
4) **Question 4 folder - C programs and screenshot**