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for **BE, BCA,BIT**

Lab No:03
Title: To be familiar with formatted and unformatted I/O in C, with preprocessor directives

Lab Excercise :

1) Write a program to produce the output as shown below.

x	y	expressions	results
6	3	x=y+3	x=6
6	3	x=y-2	x=1
6	3	x=y*5	x=15
6	3	x=x/y	x=2
6	3	x=x%y	x=0

2) Given x=3.0, y=12.5, z= 523.3, A=300.0, B=1200.5, C=5300.3, Write a program to display the following:

```
X   y   z=      3.0|    12.5|    523.3|
A   B   C=    300.0|  1200.5|   5300.3|
-------------------------------------------------------
X   y   z=    |3.00       |12.50     |523.30
A   B   C=    |300.00     |1200.50   |52300.30
```

3) Given the three numbers a(=8), b(=4),c and constant value PI=3.1415, calculate and display the following result using macros (preprocessor directives).
   a) c = PI * mult(a,b) /* the macro mult(a,b) perform the multiplication of a & b*/
   b) c = PI * sum(a,b) /* the macro sum(a,b) perform the addition of a & b*/
   c) c = PI * sub(a,b) /* the macro sub(a,b) perform the subtraction of a & b*/
   d) c = PI * div(a,b) /* the macro div(a,b) perform the division of a & b*/

4) Write a program to take a character input from keyboard and check if it is a number or alphabet or special character using ASCII CODE Again check if the character is using character functions below:
   a. Alphanumeric => isalnum()
   b. Blank character => isblank()
   c. Alphabetic => isalpha()
   d. Control character => iscntrl()
   e. Number-digit => isdigit()
   f. Upper case => isupper()

g. Lower case => islower()
h. Hexadecimal digit => ixdigit()
i. Graphical character => isgraph()

5) Write a program to print the integer number 32106, in the following format.

Decimal : 32106
Octal : 76552
Hex : 7d6a
HEX : 7D6A