

C PRACTICAL ASSIGNMENT

1. Write a program to display "hello world" in C.
2. Write a program to add two numbers (5&7) and display its sum.
3. Write a program to multiply two numbers (10&8) and display its product.
4. Write a program to calculate area of a circle having its radius (r=5).
5. Write a program to calculate area of an ellipse having its axes (minor=4cm, major=6cm).
6. Write a program to calculate simple interest for a given P=4000, T=2, R=5.5. ($I = P * T * R / 100$)
7. 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
8. 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
9. 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 ($a*b$)
b. $c = PI * sum(a,b)$ //the macro mult(a,b) perform the sum of a & b ($a+b$)
c. $c = PI * sub(a,b)$ //the macro mult(a,b) perform the subtraction of a & b ($a-b$)
10. Demonstrate the differences among getch(), getche(), getchar(). Demonstrate the difference between scanf() & gets(), printf() & puts().
11. 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 => isxdigit()
- i. Graphical character => isgraph()

To evaluate area of triangle $\sqrt{s(s-a)(s-b)(s-c)}$

12. Write a C program to find the area and volume of sphere. Formulas are:-

$$\text{Area} = 4 * \text{PI} * \text{R} * \text{R} \quad \text{Volume} = \frac{4}{3} * \text{PI} * \text{R} * \text{R} * \text{R}.$$

Note : Assume $\text{PI}=3.14$

13. Write a C program to print the multiply value of two accepted numbers

14. Write a C program to convert centigrade into Fahrenheit. Formula: $C = (F-32)/1.8$.

15. Write a C program to read in a three digit number and produce the following output (assuming

that the input is 347) 3 hundreds 4 tens 7 units

16. Write a C program to read in two integers and display one as a percentage of the other. Typically

your output should look like 20 is 50.00% of 40 assuming that the input numbers were 20 and 40. Display the percentage correct to 2 decimal places.

17. Write a C program to find out whether the character pressed through the keyboard is a digit or not

(using conditional operator).

18. Write a C program to swap variable values of i and j.

19. Write a program to read a floating point number from keyboard and print its integer and

fractional part separately.

20. Write a program to read and print a character using getchar(), getch(), getche(), putchar(),
putch().

21. Write a program to find the Simple Interest(Simple Interest, $I=P*N*R/100$) where P=Principal,N=no: of years, R= Rate of Interest