C Programming Practice Question

Chapter-1(Variable, Data type and Operators)

Prepared By – YOUTH CAREER HUB

Course Name: CPP: Certified C Programming

Teacher Name: Mr. Indranil Chakraborty

1. WAP in C to add two number and display the result.
2. WAP in C to enter length and breadth of a rectangle and calculate the perimeter.
3. WAP in C to calculate the Area of a Triangle.
4. WAP in C to Calculate the Area of a Triangle by using “Heron’s” Formula. Formula is:

   $$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

   Where,

   S=semi perimeter

   $$S=\frac{a+b+c}{2}$$

   A=length of side a

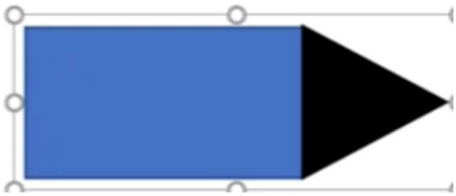
   B=length of side b

   C=length of side c
5. WAP in C to find the area, diameter, radius and circumference of a Circle
6. WAP in C to enter the temperature into Celsius and convert it into a Fahrenheit. [Formula: F= C*9/5 + 32 , where C = Celsius and F=Fahrenheit]
7. WAP in C to enter the temperature into Fahrenheit and convert it into a Celsius. [Formula: C = (F-32)*5/9]
8. WAP in C to enter two number and find out the power value.
9. WAP in C to enter any number by user and find out the square root value.
10. WAP in C two enter two angles of a triangle and find the third angle.

11. WAP in C it takes days as a input and determine number of years, months, weeks and rest days.
12. WAP in C to calculate area of a Equilateral Triangle.
13. WAP in C to enter marks of 5 subject and calculate total ,average and percentage.
14. WAP in C to enter P, T ,R and calculate Simple Interest(S.I), where P=Principle Amount, T=Time and R=Rate of Interest.
15. WAP in C to enter P, T ,R and calculate Compound Interest(C.I), where P=Principle Amount, T=Time and R=Rate of Interest

Problem Statement – 1

Suppose the area of MAKAUT campus consist of a rectangular shape and a triangle shape building (as shown on figure). If the values of length, width of the rectangle as well as the lengths of three sides of the triangle are given as input, develop a program to calculate the total area of MAKAUT campus.



Solution:

Calculating area of rectangle shape:

Let,

width = 5, length = 5

So, Area of rectangle shape = (length * width) = (5*5) = 25

Calculating area of triangle shape:

Calculating area of rectangle shape:

Let,

width = 5, length = 5

So, Area of rectangle shape = (length * width) = (5*5) = 25

Calculating area of triangle shape:

Let,

a=2,b=2,c=2

so, S = (a+b+c)/ 2 = (2+2+2) / 2 = 3

Area of triangle shape = $\sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{3(3-2)(3-2)(3-2)} = \sqrt{3}$

Total Area of MAKAUT Campus

= Area of Rectangle Shape + Area of Triangle Shape

= 25 + $\sqrt{3}$ = **26.73**

Problem Statement – 2

Suppose you are to calculate income tax of your client. The income tax is 15% of the net annual income. TA, DA 10% and PF 5% of the **basic monthly income.** Develop a program in c language that will take an income amount as input and show the tax amount, TA, DA and PF.

Solution:

Let,

Annual income = 120000

Basic Monthly income = 120000 / 12 = 10000

Income tax = 120000 * 0.15 = 18000

TA = 10000 * 0.1 = 1000

DA = 10000 * 0.1 = 1000

PF = 10000*0.05 = 500