

C-Programming Lab Sheet

I Year / I Part

Faculty: Computer/Electrical/Civil

Labsheet#E1.1

Objectives:

- To familiarized with data types.
- To familiarized with various *operators*.
- To familiarized with *arithmetic expressions*.
- To familiarized with *problem solving using computer program*.

1. WAP to read value of human height in cm and display the output in feet.
2. WAP to convert a temperature reading in degrees Fahrenheit to degrees Celsius.
[Hint: $-c = (f-32)/1.8$]
3. WAP to calculate area and volume of a sphere, if radius read through keyboard is negative number then display appropriate message. ($A=4\pi r^2$ & $V=4/3\pi r^3$)
4. WAP to read four nos. and find their sum and percentage of each numbers with respect to their sum.
5. WAP to evaluate the expression:
(i) $Z=1.5x^2-2xy+2.5y^2$
(ii) $Z=16x^{1/2}+(5y)^3$
[See what happens when you press F7 for whole program]
6. A cloth shop during festival season offers a discount of 10% on all purchases made in that shop. The bill amount for a customer is given as Rs 1000.5. WAP to calculate and display the discount, amount after discount.
7. WAP to convert Cartesian coordinate to polar coordinates.
E.g:- $x=1, y=1 \Rightarrow r=1.414214$ & $\theta=44.18$ [Hint: $r = \sqrt{x^2 + y^2}$, $\theta = \tan^{-1}(\frac{y}{x})$]
8. If $a=3, b=4$ & $c=9$ then evaluate the following arithmetic expression:

(i) $a*b+c*(8/b)$	(v) $2*((8/5)+(b*(5-3))\%(8+5-2))$
(ii) $(3/a)*a+b\%2$	(vi) $(a*8-2*5)\%(2*6-10)$
(iii) $c*a/b\%c$	(vii) $(8*a*5)\%(1/2*b)/(c-a+b)$
(iv) $2*b/(a*1)+c-2$	

Determine the values if the associativity of operation is taken into consideration.

9. Determine the value of following conditional expressions if $a=5, b=10$ & $c=15$:

(i) $b=(a>b)?a:c$	(iii) $c=(b<c)?++b:b--$
(ii) $c=(b<c)?++:--b$	(iv) $a=(a>b)?a+b:c-b$
10. WAP to convert given no. of days into year, month and days.
400 days \Rightarrow 1yr, 1month, 5 days
11. WAP to convert seconds into hour, minutes and seconds.
4000 seconds \Rightarrow 1Hr, 6minutes, 40 seconds
12. WAP to compute equivalent resistance of two resistors R1 and R2 when they are connected in series and parallel connection.
13. WAP to read two end points of a line, compute mid-point and display.