# Basic C program

Q1. "Hello, World!" Program
Q2. C Program to Print an Integer (Entered by the User)
Q3. C Program to Add Two Integers.
Q4. C Program to Multiply Two Floating-Point Numbers.
Q5. C Program to Find ASCII Value of a Character.
Q6. C Program to Compute Quotient and Remainder.
Q7. C Program to Find the Size of int, float, double and char.
Q8. C Program to Demonstrate the Working of Keyword long.
Q9. C Program to Swap Two Numbers.
Q10. C Program to solve area of square.
Q11. C Program to find area of triangle using heron's formula.
Q12. C program to find area of trapezium.
Q13. C program to find volume of sphere.
Q14. Write a C program to perform input/output of all basic data types.
Q15. Write a C program to enter two numbers and find their sum.
Q16. Write a C program to enter two numbers and perform all arithmetic operations.
Q17. Write a C program to enter length and breadth of a rectangle and find its perimeter.
Q18. Write a C program to enter length and breadth of a rectangle and find its area.
Q19. Write a C program to enter radius of a circle and find its diameter, circumference and area.
Q20. Write a C program to enter length in centimeter and convert it into meter and kilometer.
Q21. Write a C program to enter temperature in Celsius and convert it into Fahrenheit.
Q22. Write a C program to enter temperature in Fahrenheit and convert to Celsius
Q23. Write a C program to convert days into years, weeks and days.
Q24. Write a C program to find power of any number x ^ y.
Q25. Write a C program to enter any number and calculate its square root.
Q26. Write a C program to enter two angles of a triangle and find the third angle.
Q27. Write a C program to enter base and height of a triangle and find its area.
Q28. Write a C program to calculate area of an equilateral triangle.
Q29. Write a C program to enter marks of five subjects and calculate total, average and percentage.
Q30. Write a C program to enter P, T, R and calculate Simple Interest.
Q31. Write a C program to enter P, T, R and calculate Compound Interest.
Q32. Write a C program to show the working of escape characters in C programming.
Q33. Write a C program to input a mobile number and display 10 digits on the screen.
Q34. Write a C program to addition of float same numbers without using 3 and – and +.
Q35. Write a program to print the following line ( Assume the total value is contained in a variable named cost)

The sales total is : $ 172.53

Q36. Raju got 6 and half apples from each of Raghu, Sheenu and Akash. He wants to know how many apples he has in total without adding them. Write a program which could help Raju in doing this.

Q37. Write a program that prints the floating point value in exponential format correct to two decimal places.

Q38. The population of a city is 30000. It increases by 20 % during first year and 30% during the second year. Write a program to find the population after two years?

Q39. Write a program to calculate salary of an employee, given his basic pay (entered by user), HRA=15% of the basic pay and TA=20% of the basic pay.

Q40. Write a program to find the slope of a line and angle of inclination that passes through two points P and Q with coordinates $(x_p, y_p)$ and $(x_q, y_q)$ respectively.

Q41. The SPI (Semester Performance Index) is a weighted average of the grade points earned by a student in all the courses he registered for in a semester. If the grade points associated with the letter grades awarded to a student are $g_1, g_2, g_3, \ldots\ldots g_k$ etc. and the corresponding credits are $c_1, c_2, c_3, \ldots\ldots c_k$, the SPI is given by:

$$\boldsymbol{SPI} = \frac{\sum_{i=1}^{k} \boldsymbol{c_i g_i}}{\sum_{i=1}^{k} \boldsymbol{c_i}}$$

Where, k is the number of courses for which the candidate remains registered for during the semester/ trimester. Write a program in C to calculate SPI.

Q42. Write a program to calculate the frequency (f) of a given wave with wavelength (λ) and speed (c), where $c=\lambda * f$.

Q43. A car travelling at 30 m/s accelerates steadily at 5 $m/s^2$ for a distance of 70 m. What is the final velocity of the car? [Hint: $v^2 = u^2 + 2as$]

Q44. A horse accelerates steadily from rest at 4 $m/s^2$ for 3s.
(a) What is its final velocity?
(b) How far has it travelled?
[Hint: (a) $v = u + at$ (b) $s = ut + \frac{1}{2}at^2$ ]

Q45. Write a C program to read an amount (integer value) and break the amount into smallest possible number of bank notes.

Q46. Write a C program to convert a given integer (in seconds) to hours, minutes and seconds.

Q47. Write a C program to convert a given integer (in days) to years, months and days, assumes that all months have 30 days and all years have 365 days.