

---+	Problem	Topic	Input Example	Output Example	Program Code
1	Convert miles into kilometers	Operators	Enter miles: 5	Kilometers: 8.05	<pre>#include <stdio.h> int main() { float miles, km; printf("Enter miles: "); scanf("%f", &miles); km = miles * 1.60934; printf("Kilometers: %.2f\n", km); return 0; }</pre>
2	Convert kilometer into meter	Operators	Enter kilometers: 3	Meters: 3000.00	<pre>#include <stdio.h> int main() { float km, meters; printf("Enter kilometers: "); scanf("%f", &km); meters = km * 1000; printf("Meters: %.2f\n", meters); return 0; }</pre>
3	Swap two numbers using a third variable	Operators	Enter two numbers: 4 9	Swapped numbers: a = 9, b = 4	<pre>#include <stdio.h> int main() { int a, b, temp; printf("Enter two numbers: "); scanf("%d %d", &a, &b); temp = a; a = b; b = temp; printf("Swapped numbers: a = %d, b = %d\n", a, b); return 0; }</pre>
4	Swap two numbers without using a third variable	Operators	Enter two numbers: 3 8	Swapped numbers: a = 8, b = 3	<pre>#include <stdio.h> int main() { int a, b; printf("Enter two numbers: "); scanf("%d %d", &a, &b); a = a + b; b = a - b; a = a - b; printf("Swapped numbers: a = %d, b = %d\n", a, b); return 0; }</pre>
5	Swap two numbers using the bitwise XOR operator	Logical Operator	Enter two numbers: 2 5	Swapped numbers: a = 5, b = 2	<pre>#include <stdio.h> int main() { int a, b; printf("Enter two numbers: "); scanf("%d %d", &a, &b); a = a ^ b; b = a ^ b; a = a ^ b; printf("Swapped numbers: a = %d, b = %d\n", a, b); return 0; }</pre>
6	Convert temperature in Celsius into Fahrenheit	Operators	Enter temperature in Celsius: 25	Fahrenheit: 77.00	<pre>#include <stdio.h> int main() { float celsius, fahrenheit; printf("Enter temperature in Celsius: "); scanf("%f", &celsius); fahrenheit = (celsius * 9 / 5) + 32; printf("Fahrenheit: %.2f\n", fahrenheit); return 0; }</pre>
7	Print quotient and remainder	Operators	Enter dividend and divisor: 10 3	Quotient: 3, Remainder: 1	<pre>#include <stdio.h> int main() { int dividend, divisor, quotient, remainder; printf("Enter dividend and divisor: "); scanf("%d %d", &dividend, &divisor); quotient = dividend / divisor; remainder = dividend % divisor; printf("Quotient: %d, Remainder: %d\n", quotient, remainder); return 0; }</pre>
8	Find the sum and average of 3 numbers	Operators	Enter three numbers: 2 4 6	Sum: 12, Average: 4.00	<pre>#include <stdio.h> int main() { int a, b, c, sum; float average; printf("Enter three numbers: "); scanf("%d %d %d", &a, &b, &c); sum = a + b + c; average = (float)sum / 3; printf("Sum: %d, Average: %.2f\n", sum, average); return 0; }</pre>

---+	Problem	Topic	Input Example	Output Example	Program Code
9	Find the greatest of 3 numbers	Conditional Statements	Enter three numbers: 5 9 2	The greatest number is: 9	<pre>#include <stdio.h> int main() { int a, b, c; printf("Enter three numbers: "); scanf("%d %d %d", &a, &b, &c); if (a > b && a > c) { printf("The greatest number is: %d\n", a); } else if (b > a && b > c) { printf("The greatest number is: %d\n", b); } else { printf("The greatest number is: %d\n", c); } return 0; }</pre>
12	Program for NOT	Logical Operator	Enter a number (1 or 0): 1	The NOT of 1 is: 0	<pre>#include <stdio.h> int main() { int x; printf("Enter a number (1 or 0): "); scanf("%d", &x); if (!x) { printf("The NOT of %d is: 1\n", x); } else { printf("The NOT of %d is: 0\n", x); } return 0; }</pre>
13	Find odd or even number	Conditional Statements	Enter a number: 7	7 is odd.	<pre>#include <stdio.h> int main() { int num; printf("Enter a number: "); scanf("%d", &num); if (num % 2 == 0) { printf("%d is even.\n", num); } else { printf("%d is odd.\n", num); } return 0; }</pre>
14	Check whether a number is positive or not	Conditional Statements	Enter a number: -3	-3 is negative.	<pre>#include <stdio.h> int main() { int num; printf("Enter a number: "); scanf("%d", &num); if (num > 0) { printf("%d is positive.\n", num); } else if (num < 0) { printf("%d is negative.\n", num); } else { printf("The number is zero.\n"); } return 0; }</pre>
15	Conditional Statements	Check if a number is prime	Enter a number: 11	Prime	<pre>int main() { int i, n; printf("Enter the number to check:\n"); scanf("%d", &n); for(i = 2; i < n; i++) { if(n % i == 0) { break; } } if(i < n) { printf("Not Prime"); } else { printf("Prime"); } return 0; }</pre>

---+	Problem	Topic	Input Example	Output Example	Program Code
16	Conditional Statements	Check if a number is a palindrome	Enter a number: 121	Palindrome	<pre> #include <stdio.h> int main() { int num, reversed = 0, original, remainder; printf("Enter a number: "); scanf("%d", &num); original = num; while (num != 0) { remainder = num % 10; reversed = reversed * 10 + remainder; num /= 10; } if (original == reversed) printf("Palindrome\n"); else printf("Not Palindrome\n"); return 0; } </pre>
17	Conditional Statements	Check if a character is an alphabet, digit, or special character	Enter a character: \$	Special Character	<pre> #include <stdio.h> int main() { int num, reversed = 0, original, remainder; printf("Enter a number: "); scanf("%d", &num); original = num; while (num != 0) { remainder = num % 10; reversed = reversed * 10 + remainder; num /= 10; } if (original == reversed) printf("Palindrome\n"); else printf("Not Palindrome\n"); return 0; } </pre>
18	Conditional Statements	Display a digit in words	Enter a single digit number: 5	Five	<pre> #include <stdio.h> int main() { int digit; printf("Enter a single digit number: "); scanf("%d", &digit); switch (digit) { case 0: printf("Zero\n"); break; case 1: printf("One\n"); break; case 2: printf("Two\n"); break; case 3: printf("Three\n"); break; case 4: printf("Four\n"); break; case 5: printf("Five\n"); break; case 6: printf("Six\n"); break; case 7: printf("Seven\n"); break; case 8: printf("Eight\n"); break; case 9: printf("Nine\n"); break; default: printf("Invalid Input\n"); } return 0; } </pre>

---+	Problem	Topic	Input Example	Output Example	Program Code
19	Switch Case	Display the number of days in a month	Enter month number (1-12): 2	28 or 29 days	<pre> #include <stdio.h> int main() { int month; // Prompt the user for the month number printf("Enter month number (1-12): "); scanf("%d", &month); switch (month) { case 1: // January case 3: // March case 5: // May case 7: // July case 8: // August case 10: // October case 12: // December printf("31 days\n"); break; case 4: // April case 6: // June case 9: // September case 11: // November printf("30 days\n"); break; case 2: // February printf("28 or 29 days\n"); break; default: printf("Invalid month number!\n"); } return 0; // Program ends } </pre>
20	Conditional Statements	Check if a year is a leap year	Enter a year: 2020	Leap Year	<pre> #include <stdio.h> int main() { int year; printf("Enter a year: "); scanf("%d", &year); if ((year % 4 == 0 && year % 100 != 0) (year % 400 == 0)) printf("Leap Year\n"); else printf("Not a Leap Year\n"); return 0; } </pre>
21	FOR LOOP	C program to print the first 10 numbers.	N/A	1 2 3 4 5 6 7 8 9 10	<pre> #include <stdio.h> int main() { for (int i = 1; i <= 10; i++) { printf("%d ", i); } return 0; } </pre>
22	WHILE LOOP	C program to reverse a number.	123	Reversed Number: 321	<pre> #include <stdio.h> int main() { int number, reversed = 0; printf("Enter a number: "); scanf("%d", &number); while (number != 0) { reversed = reversed * 10 + number % 10; number /= 10; } printf("Reversed Number: %d\n", reversed); return 0; } </pre>

---+	Problem	Topic	Input Example	Output Example	Program Code
23	WHILE LOOP	Count the number of digits in a given number.	4567	Number of digits: 4	<pre>#include <stdio.h> int main() { int number, count = 0; printf("Enter a number: "); scanf("%d", &number); while (number != 0) { number /= 10; count++; } printf("Number of digits: %d\n", count); return 0; }</pre>
24	FOR LOOP	Program to find the factorial of a number.	5	Factorial: 120	<pre>#include <stdio.h> int main() { int number, factorial = 1; printf("Enter a number: "); scanf("%d", &number); for (int i = 1; i <= number; i++) { factorial *= i; } printf("Factorial: %d\n", factorial); return 0; }</pre>
25	FOR LOOP	C program to generate Fibonacci series.	5	Fibonacci Series: 0, 1, 1, 2, 3	<pre>#include <stdio.h> int main() { int n, t1 = 0, t2 = 1, nextTerm; printf("Enter the number of terms: "); scanf("%d", &n); printf("Fibonacci Series: %d, %d", t1, t2); for (int i = 3; i <= n; i++) { nextTerm = t1 + t2; printf(", %d", nextTerm); t1 = t2; t2 = nextTerm; } printf("\n"); return 0; }</pre>
26	WHILE LOOP	Find the sum of the digits.	123	Sum of digits: 6	<pre>#include <stdio.h> int main() { int number, sum = 0; printf("Enter a number: "); scanf("%d", &number); while (number != 0) { sum += number % 10; number /= 10; } printf("Sum of digits: %d\n", sum); return 0; }</pre>
27	Arrays	Store and Print Elements in an Array	Enter the number of elements: 5	Elements in the array are: 1 2 3 4 5	<pre>#include <stdio.h> int main() { int n, i; printf("Enter the number of elements: "); scanf("%d", &n); int arr[n]; printf("Enter %d elements:\n", n); for(i = 0; i < n; i++) { scanf("%d", &arr[i]); } printf("Elements in the array are:\n"); for(i = 0; i < n; i++) { printf("%d ", arr[i]); } return 0; }</pre>
			Enter 5 elements: 1 2 3 4 5		

---+	Problem	Topic	Input Example	Output Example	Program Code
28	Arrays	Display Array in Reverse Order	Enter the number of elements: 5	Array in reverse order: 5 4 3 2 1	<pre>#include <stdio.h> int main() { int n, i; printf("Enter the number of elements: "); scanf("%d", &n); int arr[n]; printf("Enter %d elements:\n", n); for(i = 0; i < n; i++) { scanf("%d", &arr[i]); } printf("Array in reverse order:\n"); for(i = n - 1; i >= 0; i--) { printf("%d ", arr[i]); } return 0; }</pre>
			Enter 5 elements: 1 2 3 4 5		
29	Arrays	Find the Sum of All Elements in an Array	Enter the number of elements: 5	Sum of all elements = 15	<pre>#include <stdio.h> int main() { int n, i, sum = 0; printf("Enter the number of elements: "); scanf("%d", &n); int arr[n]; printf("Enter %d elements:\n", n); for(i = 0; i < n; i++) { scanf("%d", &arr[i]); sum += arr[i]; } printf("Sum of all elements = %d\n", sum); return 0; }</pre>
			Enter 5 elements: 1 2 3 4 5		
31	Arrays	Copy Elements from One Array to Another	Enter the number of elements: 5	Copied elements in second array: 1 2 3 4 5	<pre>#include <stdio.h> int main() { int n, i; printf("Enter the number of elements: "); scanf("%d", &n); int arr1[n], arr2[n]; printf("Enter %d elements:\n", n); for(i = 0; i < n; i++) { scanf("%d", &arr1[i]); arr2[i] = arr1[i]; } printf("Copied elements in second array:\n"); for(i = 0; i < n; i++) { printf("%d ", arr2[i]); } return 0; }</pre>
			Enter 5 elements: 1 2 3 4 5		

---+	Problem	Topic	Input Example	Output Example	Program Code
32	Arrays	Find Maximum and Minimum Elements in an Array	Enter the number of elements: 5	Maximum element = 5	<pre>#include <stdio.h> int main() { int n, i, max, min; printf("Enter the number of elements: "); scanf("%d", &n); int arr[n]; printf("Enter %d elements:\n", n); for(i = 0; i < n; i++) { scanf("%d", &arr[i]); } max = min = arr[0]; for(i = 1; i < n; i++) { if(arr[i] > max) { max = arr[i]; } if(arr[i] < min) { min = arr[i]; } } printf("Maximum element = %d\n", max); printf("Minimum element = %d\n", min); return 0; }</pre>
			Enter 5 elements: 1 2 3 4 5	Minimum element = 1	
33	Loops	Display First 10 Natural Numbers and Their Sum	(No input required)	First 10 natural numbers: 1 2 3 4 5 6 7 8 9 10	<pre>#include <stdio.h> int main() { int i, sum = 0; printf("First 10 natural numbers:\n"); for(i = 1; i <= 10; i++) { printf("%d ", i); sum += i; } printf("\nSum = %d\n", sum); return 0; }</pre>
				Sum = 55	
34	Arrays	Find the Sum and Average of 10 Array Elements	Enter 10 elements: 1 2 3 4 5 6 7 8 9 10	Sum = 55	<pre>#include <stdio.h> int main() { int arr[10], i, sum = 0; float average; printf("Enter 10 elements:\n"); for(i = 0; i < 10; i++) { scanf("%d", &arr[i]); sum += arr[i]; } average = sum / 10.0; printf("Sum = %d\n", sum); printf("Average = %.2f\n", average); return 0; }</pre>
				Average = 5.50	