[1]

for (int i = 0; i < 10; i++) {

System.out.println("Hello World");

}

[2]

for (int i = 1; i <= 100; i++) {

System.out.println(i);

}

[3]

for (int i = 100; i >= 1; i--) {

System.out.println(i);

}

[4]

for (int i = 2; i <= 100; i += 2) {

System.out.println(i);

}

[5]

import java.util.Random;

Random random = new Random();

for (int i = 0; i < 10; i++) {

System.out.println(random.nextInt(101));

}

[6]

import java.util.Random;

Random random = new Random();

for (int i = 0; i < 10; i++) {

int num = random.nextInt(101);

if (num % 2 != 0) {

System.out.println(num);

}

}

[7]

for (char c = 'A'; c <= 'Z'; c++) {

System.out.println(c);

}

[8]

for (int i = 2; i <= 100; i++) {

boolean isPrime = true;

for (int j = 2; j <= Math.sqrt(i); j++) {

if (i % j == 0) {

isPrime = false;

break;

}

}

if (isPrime) {

System.out.println(i);

}

}

[9]

int num = 5; // example number

long factorial = 1;

for (int i = num; i >= 1; i--) {

factorial \*= i;

}

System.out.println("Factorial of " + num + " is " + factorial);

[10]

for (int num = 0; num <= 10; num++) {

long factorial = 1;

for (int i = num; i >= 1; i--) {

factorial \*= i;

}

System.out.println("Factorial of " + num + " is " + factorial);

}

[11]

import java.util.Scanner;

Scanner scanner = new Scanner(System.in);

int count = 0;

for (int i = 0; i < 50; i++) {

int num = scanner.nextInt();

if (num > 100) {

count++;

}

}

System.out.println("Numbers greater than 100: " + count);

[12]

import java.util.Scanner;

Scanner scanner = new Scanner(System.in);

int total = 0, max = Integer.MIN\_VALUE, min = Integer.MAX\_VALUE;

for (int i = 0; i < 10; i++) {

int mark = scanner.nextInt();

total += mark;

if (mark > max) max = mark;

if (mark < min) min = mark;

}

double average = total / 10.0;

System.out.println("Total: " + total);

System.out.println("Max: " + max);

System.out.println("Min: " + min);

System.out.println("Average: " + average);

[13]

import java.util.Scanner;

public class StudentStats {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int numberOfStudents = 100;

double totalHeight = 0, totalWeight = 0;

int validCount = 0;

for (int i = 0; i < numberOfStudents; i++) {

System.out.print("Enter height (in cm) for student " + (i + 1) + ": ");

double height = scanner.nextDouble();

System.out.print("Enter weight (in kg) for student " + (i + 1) + ": ");

double weight = scanner.nextDouble();

if (height > 0 && weight > 0) {

totalHeight += height;

totalWeight += weight;

validCount++;

} else {

System.out.println("Invalid input. Skipping this student.");

}

}

if (validCount > 0) {

double averageHeight = totalHeight / validCount;

double averageWeight = totalWeight / validCount;

System.out.println("Average Height: " + averageHeight + " cm");

System.out.println("Average Weight: " + averageWeight + " kg");

} else {

System.out.println("No valid data to calculate averages.");

}

}

}

[14]

import java.util.Scanner;

public class SalaryDisbursement {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int[] notes = {5000, 1000, 500, 100, 50, 20, 10, 5, 2, 1};

System.out.print("Enter the number of employees: ");

int numEmployees = scanner.nextInt();

for (int i = 0; i < numEmployees; i++) {

System.out.print("Enter salary for employee " + (i + 1) + ": ");

int salary = scanner.nextInt();

System.out.println("Currency distribution:");

for (int note : notes) {

int count = salary / note;

salary %= note;

System.out.println(note + " notes: " + count);

}

}

}

}

[15] ‘8 3’

[16]

// First loop: prints 0 to 9

for (int i = 0; i < 10; i++) {

System.out.println(i);

}

// Second loop: prints 0, 2, 4, 6, 8

for (int i = 0; i < 10; i++) {

System.out.println(i++);

}

// Third loop: prints 1, 3, 5, 7, 9

for (int i = 0; i < 10; i++) {

System.out.println(++i);

}

[17]

a. iilegal

b. legal

c. illegal

d.legal

[18]

Compiler Error: variable x and y might not have been initialized

[19]

5 4 4 5

[20]

A: for (int i = 100; i < 110; i++) { System.out.println(i); }

E: int k = 100; for (int i = 0; i < 10; i++) { System.out.println(k); k++; }

[21]

G,I,l

[22]

-1 -1

[23]

a: Infinite loop printing i : incrementally from 0 onward.

b: Prints i : from 0 to 9.

c: Prints i : from 0 to 8.

d: Prints characters A through Z.

e: Prints pairs of integers (i and j) as 0 10, 1 9, ..., up to 10 0.

f: Prints ASCII characters 0 through 127.

g: Prints 101 ten times.

h: Prints 100 ten times and then 110 outside the loop.

[24]

A: 1 2 3 4.

B: 2 3 4.

C: 3 4.

D and E: 4.

F: 4.

[25]

A: if (x > 0) { a = 0; }.

B: a = 0;.

E: if (true) { a = 0; }.

F: if (y > 0) { a = 0; } else { a = -1; }.

G: a = z > 0 ? 0 : -1;.

[26]

A (int x = 1): 1 2 3.

B (int x = 2): 2 3.

C (int x = 3): 3.

D (int x = 4): 4.

E (int x = 0): 4.

F (int x = 5): 4.

[28]

B: case b:.

F: case 'A':.

H: case (char) 66:.

[29]

A: Line 1.

B: Line 2.

C: Line 3.

D: Line 4.

E: Line 5.

F: Line 6.

H: Line 8.

[30]

A: for (int i = 0; i < 10; i++) {}.

C: for (int i = 0;; i++) {}.

D: for (int i = 0; i < 10;) {}.

E: for (double d = 0; d < 10; d++) {}.

F: for (;;) (infinite loop).

G: for (byte b = 0; b < 10; b++) {}.

J: for (int i = 0;;) {}.

[31]

A: char x = 'A';.

B: int x = 65;.

D: byte x = 65;.

E: short x = 66;.

[32]

// For-loop

for (int i = 0; i < 10; i++) {

System.out.println("Hello World");

}

// While-loop

int count = 0;

while (count < 10) {

System.out.println("Hello World");

count++;

}

[33]

int i = 1;

while (i <= 100) {

System.out.println(i);

i++;

}

[34]

int i = 2;

while (i <= 100) {

System.out.println(i);

i += 2;

}

[35]

int num = 2;

while (num <= 100) {

boolean isPrime = true;

int divisor = 2;

while (divisor <= Math.sqrt(num)) {

if (num % divisor == 0) {

isPrime = false;

break;

}

divisor++;

}

if (isPrime) {

System.out.println(num);

}

num++;

}

[36]

import java.util.Scanner;

public class SumOfDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int sum = 0;

while (num != 0) {

sum += num % 10;

num /= 10;

}

System.out.println("Sum of digits: " + sum);

}

}

[37]

import java.util.Scanner;

public class ReverseNumber {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int reversed = 0;

while (num != 0) {

reversed = reversed \* 10 + num % 10;

num /= 10;

}

System.out.println("Reversed number: " + reversed);

}

}

[38]

import java.util.Scanner;

public class ArmstrongNumber {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int original = num;

int sum = 0;

while (num != 0) {

int digit = num % 10;

sum += digit \* digit \* digit;

num /= 10;

}

if (sum == original) {

System.out.println(original + " is an Armstrong number.");

} else {

System.out.println(original + " is not an Armstrong number.");

}

}

}

[39]

import java.util.Scanner;

public class GCD {

public static int gcd(int a, int b) {

while (b != 0) {

int temp = b;

b = a % b;

a = temp;

}

return a;

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the first number: ");

int num1 = scanner.nextInt();

System.out.print("Enter the second number: ");

int num2 = scanner.nextInt();

int result = gcd(num1, num2);

System.out.println("GCD: " + result);

}

}

[40]

int sum = 0;

for (int i = 1; i < 1000; i++) {

if (i % 3 == 0 || i % 5 == 0) {

sum += i;

}

}

System.out.println("Sum of multiples of 3 or 5 below 1000: " + sum);

[41]

import java.util.Scanner;

public class NumberOfDigits {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int count = 0;

if (num == 0) {

count = 1;

} else {

while (num != 0) {

num /= 10;

count++;

}

}

System.out.println("Number of digits: " + count);

}

}

[42]

import java.util.Scanner;

public class PalindromeNumber {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int num = scanner.nextInt();

int original = num;

int reversed = 0;

while (num != 0) {

reversed = reversed \* 10 + num % 10;

num /= 10;

}

if (reversed == original) {

System.out.println(original + " is a palindrome.");

} else {

System.out.println(original + " is not a palindrome.");

}

}

}

[43]

public class SmallestMultiple {

public static boolean isDivisible(int number, int range) {

for (int i = 1; i <= range; i++) {

if (number % i != 0) {

return false;

}

}

return true;

}

public static void main(String[] args) {

int number = 20;

while (true) {

if (isDivisible(number, 20)) {

System.out.println("Smallest positive number evenly divisible by all numbers from 1 to 20: " + number);

break;

}

number += 20; // Increment by 20 to speed up checks

}

}

}

[44]

import java.util.Arrays;

public class SameDigits {

public static boolean hasSameDigits(int x, int y) {

char[] xChars = String.valueOf(x).toCharArray();

char[] yChars = String.valueOf(y).toCharArray();

Arrays.sort(xChars);

Arrays.sort(yChars);

return Arrays.equals(xChars, yChars);

}

public static void main(String[] args) {

int x = 1;

while (true) {

boolean valid = true;

for (int multiplier = 2; multiplier <= 6; multiplier++) {

if (!hasSameDigits(x, x \* multiplier)) {

valid = false;

break;

}

}

if (valid) {

System.out.println("Smallest positive integer x such that 2x, 3x, 4x, 5x, and 6x contain the same digits: " + x);

break;

}

x++;

}

}

}

[45]

import java.util.ArrayList;

import java.util.List;

public class ConsecutivePrimeSum {

public static boolean isPrime(int num) {

if (num < 2) return false;

for (int i = 2; i <= Math.sqrt(num); i++) {

if (num % i == 0) return false;

}

return true;

}

public static void main(String[] args) {

List<Integer> primes = new ArrayList<>();

int limit = 1000;

for (int i = 2; i < limit; i++) {

if (isPrime(i)) primes.add(i);

}

int maxLength = 0;

int maxPrime = 0;

for (int start = 0; start < primes.size(); start++) {

int sum = 0;

for (int end = start; end < primes.size(); end++) {

sum += primes.get(end);

if (sum >= limit) break;

if (isPrime(sum) && (end - start + 1) > maxLength) {

maxLength = end - start + 1;

maxPrime = sum;

}

}

}

System.out.println("Prime number below 1000 that is the sum of the most consecutive primes: " + maxPrime);

}

}

[46]

import java.util.Scanner;

public class HouseInquiries {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int[] inquiries = new int[7];

int below50kCount = 0;

int totalInquiries = 0;

int above5mCount = 0;

// Input inquiries and prices for 7 days

for (int i = 0; i < 7; i++) {

System.out.print("Enter the number of inquiries on day " + (i + 1) + ": ");

inquiries[i] = scanner.nextInt();

totalInquiries += inquiries[i];

System.out.println("Enter the price for each inquiry:");

for (int j = 0; j < inquiries[i]; j++) {

int price = scanner.nextInt();

if (price < 50000) {

below50kCount++;

} else if (price > 5000000) {

above5mCount++;

}

}

}

// Output results

System.out.println("Inquiries for houses costing less than 50,000 rupees: " + below50kCount);

double above5mPercentage = ((double) above5mCount / totalInquiries) \* 100;

System.out.printf("Percentage of inquiries for houses costing more than 5 million rupees: %.2f%%", above5mPercentage);

}

}

[47]

import java.util.Scanner;

public class AnalyzeIntegers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int lessThan1000 = 0;

int greaterThan1000 = 0;

while (true) {

System.out.print("Enter a positive integer (-1 to stop): ");

int num = scanner.nextInt();

if (num == -1) break;

if (num < 1000) {

lessThan1000++;

} else {

greaterThan1000++;

}

}

System.out.println("Numbers less than 1000: " + lessThan1000);

System.out.println("Numbers greater than 1000: " + greaterThan1000);

}

}

[48]

int x = 0;

int y = 11; // Initialize y as 11

do {

} while (x++ < y);

System.out.println(x); // Will print 12

[49]

import java.util.Scanner;

public class TeacherProgress {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int numStudents = 0;

int totalMarks = 0;

int max = Integer.MIN\_VALUE;

int min = Integer.MAX\_VALUE;

int marks;

System.out.println("Enter marks for each student (-1 to stop):");

while ((marks = scanner.nextInt()) != -1) {

totalMarks += marks;

numStudents++;

if (marks > max) max = marks;

if (marks < min) min = marks;

}

if (numStudents > 0) {

double average = (double) totalMarks / numStudents;

System.out.println("No. of Students: " + numStudents);

System.out.println("Total Marks: " + totalMarks);

System.out.println("Maximum: " + max);

System.out.println("Minimum: " + min);

System.out.printf("Average: %.3f", average);

} else {

System.out.println("No students available.");

}

}

}

[61]

int rows = 10;

for (int i = 1; i <= rows; i++) {

for (int j = 0; j < i; j++) {

System.out.print("\* ");

}

System.out.println();

}

[62]

int rows = 10;

for (int i = rows; i >= 1; i--) {

for (int j = 0; j < i; j++) {

System.out.print("\* ");

}

System.out.println();

}

[62]

int rows = 10;

// Top half

for (int i = 1; i <= rows; i++) {

for (int j = 1; j <= i; j++) {

System.out.print("\* ");

}

System.out.println();

}

// Bottom half

for (int i = rows - 1; i >= 1; i--) {

for (int j = 1; j <= i; j++) {

System.out.print("\* ");

}

System.out.println();

}