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Java Assignment

1. Write a program to print all natural numbers in reverse.

import java.util.Scanner;

class NaturalNoReverse {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the first and last number: ");

int first = sc.nextInt();

int last = sc.nextInt();

for(int i = last; i >= first; i--) {

System.out.println(i);

}

sc.close();

}

}

2. Write a program to print multiplication table of a number.

import java.util.Scanner;

class MultiplicationTable {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

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

int num = scanner.nextInt();

for(int i = 1; i <= 10; i++) {

System.out.println(num + " x " + i + " = " + num\*i);

}

scanner.close();

}

}

3. Write a program to print all alphabets from a to z.

class AllAlphabets {

public static void main(String[] args) {

for(char c = 'a'; c <= 'z'; c++) {

System.out.print(c + " ");

}

}

}

4. Write a program to print reverse alphabets from Z to A.

class ReverseAlphabet {

public static void main(String[] args) {

for(char c = 'z'; c >= 'a'; c--) {

String upperCaseCh = String.valueOf(c).toUpperCase();

System.out.print(upperCaseCh + " ");

}

}

}

5. Write a program to print all even numbers between 1 to 50.

// Source code is decompiled from a .class file using FernFlower decompiler.

import java.util.Scanner;

class EvenNumber {

EvenNumber() {

}

public static void main(String[] var0) {

Scanner var1 = new Scanner(System.in);

System.out.println("Enter the first and last number: ");

int var2 = var1.nextInt();

int var3 = var1.nextInt();

for(int var4 = var2; var4 <= var3; ++var4) {

if (var4 % 2 == 0) {

System.out.println(var4);

}

}

var1.close();

}

}

6. Write a program to print sum of odd numbers between 1 to 50.

import java.util.Scanner;

class SumOddNumbers {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the first and last number: ");

int first = scanner.nextInt();

int last = scanner.nextInt();

int sum = 0;

for(int i = first; i <= last; i++) {

if(i % 2 != 0) {

sum += i;

}

System.out.println("Sum of odd numbers between " + first + " and " + last + " is " + sum);

}

scanner.close();

}

}

7. Write a program to read a weekday number and print weekday name using switch statement.

import java.util.Scanner;

class WeeklyNoSwitch {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the day number: ");

int day = sc.nextInt();

switch (day) {

case 1:

System.out.println("Monday");

break;

case 2:

System.out.println("Tuesday");

break;

case 3:

System.out.println("Wednesday");

break;

case 4:

System.out.println("Thursday");

break;

case 5:

System.out.println("Friday");

break;

case 6:

System.out.println("Saturday");

break;

case 7:

System.out.println("Sunday");

break;

default:

System.out.println("Invalid day");

break;

}

sc.close();

}

}

8. Write a program to Check whether a character is a vowel or consonant using switch statement.

import java.util.Scanner;

class VowelOrConsonant {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter a character: ");

char ch = sc.next().charAt(0);

ch = Character.toLowerCase(ch);

switch (ch) {

case 'a':

case 'e':

case 'i':

case 'o':

case 'u':

System.out.println("Vowel");

break;

default:

System.out.println("Consonant");

break;

}

sc.close();

}

}

9. Write a program to reverse the digits of a given integer number.

import java.util.Scanner;

class ReverseIntegerNo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int num = sc.nextInt();

int reversed = 0;

int rev = 0;

while(num != 0) {

int digit = num % 10;

reversed = reversed \* 10 + digit;

num /= 10;

rev= reversed;

}

System.out.println("Reversed Number: " + rev);

sc.close();

}

}

10.Write a program to find sum of digits of a number.

import java.util.Scanner;

class SumIntegerNo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

long num = sc.nextLong();

long sum = 0;

long totalsum = 0;

while(num != 0) {

long digit = num % 10;

sum = sum + digit;

num /= 10;

totalsum = sum;

}

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

sc.close();

}

}

11.WAP to check whether the inputted number is Armstrong Number or not.

import java.util.Scanner;

class Armstrong {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int num = sc.nextInt();

int originalNum, remainder, result = 0;

originalNum = num;

while (originalNum != 0) {

remainder = originalNum % 10;

result += Math.pow(remainder, 3);

originalNum /= 10;

}

if (result == num)

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

else

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

sc.close();

}

}

12.Write a Java program to check if a given number is a prime number.

import java.util.Scanner;

class PrimeNo {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

int num = sc.nextInt();

boolean flag = false;

for(int i = 2; i <= num/2; ++i){

if(num % i == 0){

flag = true;

break;

}

}

if(flag == true)

System.out.println(num + " is not a prime number.");

else

System.out.println(num + " is a prime number.");

sc.close();

}

}

13.Write a menu based Java program for performing different arithmetic operations.

import java.util.Scanner;

class ArithmeticOperations {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter two numbers: ");

int num1 = sc.nextInt();

int num2 = sc.nextInt();

System.out.println("Enter operation to perform (1 for Sum, 2 for Difference, 3 for Multiplication, 4 for Division, 5 for Modulus, q to quit): ");

String choice = sc.next();

first: do {

second :

System.out.println("Do you want to continue? (yes/no): ");

choice = sc.next();

if (choice.equals("no")) {

break first;

}

System.out.println("Enter operation to perform (1 for Sum, 2 for Difference, 3 for Multiplication, 4 for Division, 5 for Modulus, q to quit): ");

String operation = sc.next();

third: switch (operation) {

case "1":

int sum = num1 + num2;

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

break third;

case "2":

int diff = num1 - num2;

System.out.println("Difference: " + diff);

break;

case "3":

int mul = num1 \* num2;

System.out.println("Multiplication: " + mul);

break third;

case "4":

if (num2 != 0) {

int div = num1 / num2;

System.out.println("Division: " + div);

} else {

System.out.println("Cannot divide by zero.");

}

break third;

case "5":

int mod = num1 % num2;

System.out.println("Modulus: " + mod);

break;

case "q":

case "quit":

choice = "no";

break first;

default:

System.out.println("Invalid operation. Please try again.");

}

if (!operation.equals("q") && !operation.equals("quit")) {

System.out.println("Do you want to continue? (yes/no): ");

choice = sc.next();

}

} while (choice.equals("yes"));

sc.close();

}

}

14.WAP to find average of consecutive N Odd numbers and even numbers.

import java.util.Scanner;

class SumConNumber {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the value of n: ");

int n = sc.nextInt();

int oddSum = 0;

int evenSum = 0;

int oddCount = 0;

int evenCount = 0;

int i = 1;

while(oddCount < n || evenCount < n) {

if(i % 2 != 0) {

oddSum += i;

oddCount++;

} else {

evenSum += i;

evenCount++;

}

i++;

}

System.out.println("Average of first " + n + " odd numbers: " + (oddSum / n));

System.out.println("Average of first " + n + " even numbers: " + (evenSum / n));

sc.close();

}

}