|  |
| --- |
| Q.1 Swap two numbers using temporary variable |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner number = new Scanner(System.in); |
|  |  | System.out.println("Enter x"); |
|  |  |  |
|  |  | int x = number.nextInt(); |
|  |  | System.out.println("Enter y"); |
|  |  |  |
|  |  | int y = number.nextInt(); |
|  |  | System.out.println("Value of x is " + x |
|  |  | + " and Value of y is " + y); |
|  |  | int temp = x; |
|  |  | x = y; |
|  |  | y = temp; |
|  |  | System.out.println("Value of x is " + x |
|  |  | + " and Value of y is " + y); |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.2-Swap two numbers without using temporary variable |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner number = new Scanner(System.in); |
|  |  | System.out.println("Enter x"); |
|  |  |  |
|  |  | int x = number.nextInt(); |
|  |  | System.out.println("Enter y"); |
|  |  |  |
|  |  | int y = number.nextInt(); |
|  |  | System.out.println("Value of x is " + x |
|  |  | + " and Value of y is " + y); |
|  |  |  |
|  |  | x = x - y; |
|  |  | y = x + y; |
|  |  | x = y - x; |
|  |  | System.out.println("Value of x is " + x |
|  |  | + " and Value of y is " + y); |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.3 Check whether a number is even or odd using ternary operator |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner number = new Scanner(System.in); |
|  |  | System.out.println("Enter a number"); |
|  |  |  |
|  |  | int x=number.nextInt(); |
|  |  |  |
|  |  | String result = x%2==0 ? "Even" : "Odd"; |
|  |  | System.out.println(x +" is "+ result); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.4 Check whether an alphabet is vowel or consonant using if..else statement |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter an Alphabet"); |
|  |  |  |
|  |  | char ch = sc.next().charAt(0); |
|  |  | if(ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' || ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch == 'U' ) |
|  |  | System.out.println(ch + " is vowel"); |
|  |  | else |
|  |  | System.out.println(ch + " is consonant"); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.5 Check whether an alphabet is vowel or consonant using switch statement |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter an Alphabet"); |
|  |  |  |
|  |  | char ch = sc.next().charAt(0); |
|  |  | switch(ch) |
|  |  | { |
|  |  | case 'a': |
|  |  | case 'e': |
|  |  | case 'i': |
|  |  | case 'o': |
|  |  | case 'u': |
|  |  | case 'A': |
|  |  | case 'E': |
|  |  | case 'I': |
|  |  | case 'O': |
|  |  | case 'U': |
|  |  | System.out.println("Vowel"); |
|  |  | break; |
|  |  |  |
|  |  | default: System.out.println("consonant"); |
|  |  | } |
|  |  |  |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.6 Find Largest Among three numbers using if..else statement |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter Firstnumber"); |
|  |  | double n1=sc.nextDouble(); |
|  |  | System.out.println("Enter secondnumber"); |
|  |  | double n2=sc.nextDouble(); |
|  |  | System.out.println("Enter Thirdnumber"); |
|  |  | double n3=sc.nextDouble(); |
|  |  | if( n1 >= n2 && n1 >= n3) |
|  |  | System.out.println(n1 + " is the largest number."); |
|  |  |  |
|  |  | else if (n2 >= n1 && n2 >= n3) |
|  |  | System.out.println(n2 + " is the largest number."); |
|  |  |  |
|  |  | else |
|  |  | System.out.println(n3 + " is the largest number."); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.7 Find the largest number among three using nested if..else statement |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter Firstnumber"); |
|  |  | double n1=sc.nextDouble(); |
|  |  | System.out.println("Enter secondnumber"); |
|  |  | double n2=sc.nextDouble(); |
|  |  | System.out.println("Enter Thirdnumber"); |
|  |  | double n3=sc.nextDouble(); |
|  |  |  |
|  |  | if(n1 >= n2) { |
|  |  | if(n1 >= n3) |
|  |  | System.out.println(n1 + " is the largest number."); |
|  |  | else |
|  |  | System.out.println(n3 + " is the largest number."); |
|  |  | } else { |
|  |  | if(n2 >= n3) |
|  |  | System.out.println(n2 + " is the largest number."); |
|  |  | else |
|  |  | System.out.println(n3 + " is the largest number."); |
|  |  | } |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.8 Java Program to Find Roots of a Quadratic Equation |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter a"); |
|  |  | double a=sc.nextDouble(); |
|  |  | System.out.println("Enter b"); |
|  |  | double b=sc.nextDouble(); |
|  |  | System.out.println("Enter c"); |
|  |  | double c=sc.nextDouble(); |
|  |  | double firstroot, secondroot; |
|  |  | double det = b \* b - 4 \* a \* c; |
|  |  | if (det > 0) { |
|  |  | firstroot = (-b + Math.sqrt(det)) / (2 \* a); |
|  |  | secondroot = (-b - Math.sqrt(det)) / (2 \* a); |
|  |  |  |
|  |  | System.out.format( |
|  |  | "First Root = %.2f and Second Root = %.2f", |
|  |  | firstroot, secondroot); |
|  |  | } |
|  |  | else if (det == 0) { |
|  |  | firstroot = secondroot = -b / (2 \* a); |
|  |  |  |
|  |  | System.out.format( |
|  |  | "First Root = Second Root = %.2f;", |
|  |  | firstroot); |
|  |  | } |
|  |  | else { |
|  |  |  |
|  |  | double real = -b / (2 \* a); |
|  |  |  |
|  |  | double imaginary = Math.sqrt(-det) / (2 \* a); |
|  |  |  |
|  |  | System.out.printf("First Root = %.2f+%.2fi", |
|  |  | real, imaginary); |
|  |  | System.out.printf("\nSecond Root = %.2f-%.2fi", |
|  |  | real, imaginary); |
|  |  | } |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.9 Check if a Number is Positive or Negative using if else |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter number"); |
|  |  | double num=sc.nextDouble(); |
|  |  |  |
|  |  | if(num>0) |
|  |  | { |
|  |  | System.out.println("The number is positive."); |
|  |  | } |
|  |  |  |
|  |  | else if(num<0) |
|  |  | { |
|  |  | System.out.println("The number is negative."); |
|  |  | } |
|  |  | else |
|  |  | { |
|  |  | System.out.println("The number is zero."); |
|  |  | } |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.10 Java Program to Check Alphabet using if else |
|  |  |  |
|  |  | import java.util.\*; |
|  |  | public class Main |
|  |  | { |
|  |  | public static void main(String[] args) { |
|  |  | Scanner sc = new Scanner(System.in); |
|  |  | System.out.println("Enter character"); |
|  |  | char c = sc.next().charAt(0); |
|  |  | if( (c >= 'a' && c <= 'z') || (c >= 'A' && c <= 'Z')) |
|  |  | System.out.println(c + " is an alphabet."); |
|  |  | else |
|  |  | System.out.println(c + " is not an alphabet."); |
|  |  | } |
|  |  | } |