|  |
| --- |
| Q.34 Calculate power of a number using a while loop |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter base"); |
|  |  | int base = sc.nextInt(); |
|  |  | System.out.println("Enter exponent"); |
|  |  | int exponent = sc.nextInt(); ; |
|  |  |  |
|  |  | long result = 1; |
|  |  |  |
|  |  | while (exponent != 0) { |
|  |  | result \*= base; |
|  |  | --exponent; |
|  |  | } |
|  |  |  |
|  |  | System.out.println("Answer = " + result); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.35 Calculate the power of a number using a for loop |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter base"); |
|  |  | int base = sc.nextInt(); |
|  |  | System.out.println("Enter exponent"); |
|  |  | int exponent = sc.nextInt(); ; |
|  |  |  |
|  |  | long result = 1; |
|  |  |  |
|  |  | for (; exponent != 0; --exponent) { |
|  |  | result \*= base; |
|  |  | } |
|  |  |  |
|  |  | System.out.println("Answer = " + result); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.36 Calculate the power of a number using pow() function |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter base"); |
|  |  | int base = sc.nextInt(); |
|  |  | System.out.println("Enter exponent"); |
|  |  | int exponent = sc.nextInt(); ; |
|  |  |  |
|  |  | double result = Math.pow(base, exponent); |
|  |  |  |
|  |  | System.out.println("Answer = " + result); |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.37 Compute Power of Negative Number |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter base"); |
|  |  | int base = sc.nextInt(); |
|  |  | System.out.println("Enter exponent"); |
|  |  | int exponent = sc.nextInt(); ; |
|  |  |  |
|  |  | double result = Math.pow(base, exponent); |
|  |  | System.out.println("Answer = " + result); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  | Q.38 Java Program to Check Palindrome String |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter string"); |
|  |  | String str = sc.nextLine(); |
|  |  | String reverseStr = ""; |
|  |  |  |
|  |  | int strLength = str.length(); |
|  |  |  |
|  |  | for (int i = (strLength - 1); i >=0; --i) { |
|  |  | reverseStr = reverseStr + str.charAt(i); |
|  |  | } |
|  |  |  |
|  |  | if (str.toLowerCase().equals(reverseStr.toLowerCase())) { |
|  |  | System.out.println(str + " is a Palindrome String."); |
|  |  | } |
|  |  | else { |
|  |  | System.out.println(str + " is not a Palindrome String."); |
|  |  | } |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.39 Java Program to Check Palindrome Number |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  | int num,t,s,rem; |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter any number "); |
|  |  | num=sc.nextInt(); |
|  |  | t=num; |
|  |  | for(s=0;num>0;num/=10) |
|  |  | { |
|  |  | rem=num%10; |
|  |  | s=(s\*10)+rem; |
|  |  | } |
|  |  | if(s==t) |
|  |  | System.out.println(t+" is a palindrome number "); |
|  |  | else |
|  |  | System.out.println(t+" is not a palindrome number "); |
|  |  |  |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.40 Program to Check Prime Number using a for loop |
|  |  |  |
|  |  | public class Main { |
|  |  |  |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | int num = 29; |
|  |  | boolean flag = false; |
|  |  | for (int i = 2; i <= num / 2; ++i) { |
|  |  | // condition for nonprime number |
|  |  | if (num % i == 0) { |
|  |  | flag = true; |
|  |  | break; |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  | if (!flag) |
|  |  | System.out.println(num + " is a prime number."); |
|  |  | else |
|  |  | System.out.println(num + " is not a prime number."); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.41 Program to Check Prime Number using a while loop |
|  |  |  |
|  |  | public class Main { |
|  |  |  |
|  |  | public static void main(String[] args) { |
|  |  |  |
|  |  | int num = 33, i = 2; |
|  |  | boolean flag = false; |
|  |  | while (i <= num / 2) { |
|  |  | // condition for nonprime number |
|  |  | if (num % i == 0) { |
|  |  | flag = true; |
|  |  | break; |
|  |  | } |
|  |  |  |
|  |  | ++i; |
|  |  | } |
|  |  |  |
|  |  | if (!flag) |
|  |  | System.out.println(num + " is a prime number."); |
|  |  | else |
|  |  | System.out.println(num + " is not a prime number."); |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  |  |
|  |  | Q.42 Display Prime Numbers Between Two Intervals |
|  |  |  |
|  |  | import java.util.Scanner ; |
|  |  | class Main { |
|  |  | public static void main(String[] args) { |
|  |  | int num,t,s,rem; |
|  |  | Scanner sc=new Scanner(System.in); |
|  |  | System.out.println("Enter any number1 "); |
|  |  | int low=sc.nextInt(); |
|  |  | System.out.println("Enter any number2 "); |
|  |  | int high=sc.nextInt(); |
|  |  |  |
|  |  |  |
|  |  | while (low < high) { |
|  |  | boolean flag = false; |
|  |  |  |
|  |  | for(int i = 2; i <= low/2; ++i) { |
|  |  |  |
|  |  | if(low % i == 0) { |
|  |  | flag = true; |
|  |  | break; |
|  |  | } |
|  |  | } |
|  |  |  |
|  |  | if (!flag && low != 0 && low != 1) |
|  |  | System.out.print(low + " "); |
|  |  |  |
|  |  | ++low; |
|  |  | } |
|  |  | } |
|  |  | } |