

Detyra te shtepise

Hyrje ne Struktura e te te Dhenave

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Viti I-Grupi II

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1.Write an if –statement that takes two integer variables and exchanges their values if the first one is greater than the second one.

using System;

namespace ConsoleApp1

{

class Program

{

static void Main(string[] args)

{

int a, b, c;

Console.Write("Enter the first number a:");

bool isaInt = int.TryParse(Console.ReadLine(), out a);

Console.Write("Enter the second number b:");

bool isbInt = int.TryParse(Console.ReadLine(), out b);

if (isaInt && isbInt)

{

if (a > b)

{

c = a;

a = b;

b = c;

}

Console.WriteLine("a={0}", a);

Console.WriteLine("b={0}", b);

}

else

{

Console.WriteLine("Not a valid entery! Some of the values are not integer");

}

}

}

}

2.Write a program that shows the sign(+ or -)of the product of three real numbers,without calculating it.Use a sequence of if operators.

using System;

namespace ConsoleApp2

{

class Program

{

static void Main(string[] args)

{

double a, b, c;

byte positiveNumbers = 0;

Console.Write("Enter the first number a:");

bool isaDouble = double.TryParse(Console.ReadLine(), out a);

Console.Write("Enter the second number b:");

bool isbDouble = double.TryParse(Console.ReadLine(), out b);

Console.Write("Enter the third number c:");

bool iscDouble = double.TryParse(Console.ReadLine(), out c);

if (isaDouble && isbDouble && iscDouble)

{

if (Math.Sign(a) == 1)

{

positiveNumbers = (byte)(positiveNumbers + 1);

}

if (Math.Sign(b) == 1)

{

positiveNumbers = (byte)(positiveNumbers + 1);

}

if (Math.Sign(c) == 1)

{

positiveNumbers = (byte)(positiveNumbers + 1);

}

if (positiveNumbers % 2 == 0)

{

Console.WriteLine("The sign of the product is (-)");

}

else

{

Console.WriteLine("The sign of the product is (+)");

}

}

else

{

Console.WriteLine("Not a valid enetry1 Some of the values are not double!");

}

}

}

}

3.Write a program that finds the biggest of three integers,using nested if statements.

using System;

namespace ConsoleApp3

{

class Program

{

static void Main(string[] args)

{

int a, b, c, biggestNumber;

Console.Write("Enter the first number a:");

bool isaInt = int.TryParse(Console.ReadLine(), out a);

Console.Write("Enter the second number b: ");

bool isbInt = int.TryParse(Console.ReadLine(), out b);

Console.Write("Enter the third number c: ");

bool iscInt = int.TryParse(Console.ReadLine(), out c);

if (isaInt && isbInt && iscInt)

{

if (a > b)

{

if (b > c)

{

biggestNumber = a;

}

else

{

if (c > a)

{

biggestNumber = c;

}

else

{

biggestNumber = a;

}

}

}

else

{

if (a > c)

{

biggestNumber = c;

}

else

{

if (c > b)

{

biggestNumber = c;

}

else

{

biggestNumber = b;

}

}

}

Console.WriteLine("The biggest number={0}", biggestNumber);

}

else

{

Console.WriteLine("Not a valid entery! Some of the values are not integer!");

}

}

}

}

4.Sort 3 real numbers is descending order.Use nested if statements.

using System;

namespace ConsoleApp4

{

class Program

{

static void Main(string[] args)

{

double a, b, c;

double[] array = { 0, 0, 0 };

Console.Write("Enter the first number a:");

bool isaDouble = double.TryParse(Console.ReadLine(), out a);

Console.Write("Enter the second number b:");

bool isbDouble = double.TryParse(Console.ReadLine(), out b);

Console.Write("Enter the third number c:");

bool iscDouble = double.TryParse(Console.ReadLine(), out c);

if (isaDouble && isbDouble && iscDouble)

{

if (a > b)

{

if (b > c)

{

array[0] = a;

array[1] = b;

array[2] = c;

}

else

{

if (c > a)

{

array[0] = c;

array[1] = a;

array[2] = b;

}

else

{

array[0] = a;

array[1] = c;

array[2] = b;

}

}

}

else

{

if (c > b)

{

array[0] = c;

array[1] = b;

array[2] = a;

}

else

{

array[0] = b;

array[1] = c;

array[2] = a;

}

}

}

Console.WriteLine("The descending order is {0};{1};{2}", array[0], array[1], array[2]);

}

}

}

5.Write a program that asks for a digit(0-9), and depending on the input,shows the digit as a word(in English).Use a switch statement.

using System;

namespace ConsoleApp5

{

class Program

{

static void Main(string[] args)

{

byte digit;

Console.Write("Enter the digit:");

bool isDigit = byte.TryParse(Console.ReadLine(), out digit);

if (isDigit)

{

switch (digit)

{

case 0: Console.WriteLine("zero"); break;

case 1: Console.WriteLine("one"); break;

case 2: Console.WriteLine("two"); break;

case 3: Console.WriteLine("three"); break;

case 4: Console.WriteLine("four"); break;

case 5: Console.WriteLine("five"); break;

case 6: Console.WriteLine("six"); break;

case 7: Console.WriteLine("seven"); break;

case 8: Console.WriteLine("eight"); break;

case 9: Console.WriteLine("nine"); break;

default: Console.WriteLine("This is not one digit entry!"); break;

}

}

else

{

Console.WriteLine("Not a valid entry! This is not one digit entry!");

}

}

}

}

6.Write a program that gets the coefficients a,b and c of a quadratics equation:ax2 + bx + c,calculates and prints its real roots (if they exist).Quadratic equations may have 0,1 or 2 real roots.

using System;

namespace ConsoleApp6

{

class Program

{

static void Main(string[] args)

{

static void Main(string[] args)

{

Console.Write("Input A (not 0): ");

sbyte a = Convert.ToSByte(Console.ReadLine());

Console.Write("Input B: ");

sbyte b = Convert.ToSByte(Console.ReadLine());

Console.Write("Input C: ");

sbyte c = Convert.ToSByte(Console.ReadLine());

sbyte d = (sbyte)(b \* b - 4 \* a \* c);

if (d < 0)

Console.WriteLine("\nD={0}\nThere are no real roots.", d);

else if (d == 0)

{

sbyte x1 = (sbyte)(-b / 2 \* a);

Console.WriteLine("\nX={0}", x1);

}

else

{

sbyte x1 = (sbyte)((-b + Math.Sqrt(d)) / (2 \* a));

sbyte x2 = (sbyte)((-b - Math.Sqrt(d)) / (2 \* a));

Console.WriteLine("\nX1={0}\nX2={1}", x1, x2);

}

Console.ReadLine();

}

}

}

}

7.Write a program that finds the greatest of given 5 numbers.

using System;

namespace ConsoleApp7

{

class Program

{

static void Main(string[] args)

{

double[] array = { 0, 0, 0, 0, 0 };

bool isNumber = true;

double greatest = double.MinValue;

for (int i = 0; i < 5; i++)

{

Console.Write("Enter the {0} variable:", i + 1); isNumber = double.TryParse(Console.ReadLine(), out array[i]); if (isNumber == false) { Console.WriteLine("Not a valid entry! This is not a number entry!"); break; }

else

{

if (array[i] > greatest)

{

greatest = array[i];

}

}

}

if (isNumber)

{

Console.WriteLine("The greatest number = {0}", greatest);

}

}

}

}

8.Write a program that,depending on the user’s choice,inputs int double or string variable.If the variable is int or double,the program increases it by 1.If the variable is a string,the program appends”\*”at the end.Print the result at the console.Use switch statement.

using System;

namespace ConsoleApp8

{

class Program

{

static void Main(string[] args)

{

double doubleNumber = 0;

int intNumber = 0;

string stringInput;

byte entryType;

Console.Write("Please do the data entry:");

stringInput = Console.ReadLine();

bool isDouble = double.TryParse(stringInput, out doubleNumber);

if (isDouble)

{

if (doubleNumber % 1 == 0)

{

intNumber = (int)doubleNumber;

entryType = 1; //Integer entry

}

else

{

entryType = 2; // Double entry

}

}

else

{

entryType = 3; // String entry

}

switch (entryType)

{

case 1: Console.WriteLine("Integer input. The output is:{0}", intNumber + 1); break;

case 2: Console.WriteLine("Double input. The output is:{0}", doubleNumber + 1); break;

case 3: Console.WriteLine("String input. The output is:{0}", stringInput + "\*"); break;

}

}

}

}

9.We are given 5 integers.Write a program that finds those subsets whose sum is 0.Examples:

-If we are given the numbers {3,-2,1,1,8}, the sum of -2,1 and 1 is 0.

-If we are given the numbers {3,1,-7,35,22}, there are no subsets with sum 0.

using System;

namespace ConsoleApp9

{

class Program

{

static void Main(string[] args)

{

Console.Write("Enter first number: ");

sbyte first = Convert.ToSByte(Console.ReadLine());

Console.Write("Enter second number: ");

sbyte second = Convert.ToSByte(Console.ReadLine());

Console.Write("Enter third number: ");

sbyte third = Convert.ToSByte(Console.ReadLine());

Console.Write("Enter fourth number: ");

sbyte fourth = Convert.ToSByte(Console.ReadLine());

Console.Write("Enter fifth number: ");

sbyte fifth = Convert.ToSByte(Console.ReadLine());

if (first + second == 0)

Console.WriteLine("{0}+ {1} = 0", first, second);

if (first + third == 0)

Console.WriteLine("{0}+ {1} = 0", first, third);

if (first + fourth == 0)

Console.WriteLine("{0}+ {1} = 0", first, fourth);

if (first + fifth == 0)

Console.WriteLine("{0}+ {1} = 0", first, fifth);

if (second + third == 0)

Console.WriteLine("{0}+ {1} = 0", second, third);

if (second + fourth == 0)

Console.WriteLine("{0}+ {1} = 0", second, fourth);

if (second + fifth == 0)

Console.WriteLine("{0}+ {1} = 0", second, fifth);

if (third + fourth == 0)

Console.WriteLine("{0}+ {1} = 0", third, fourth);

if (third + fifth == 0)

Console.WriteLine("{0}+ {1} = 0", third, fifth);

if (fourth + fifth == 0)

Console.WriteLine("{0}+ {1} = 0", fourth, fifth);

if (first + second + third == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", first, second, third);

if (first + second + fourth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", first, second, fourth);

if (first + second + fifth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", first, second, fifth);

if (first + third + fourth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", first, third, fourth);

if (first + third + fifth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", first, third, fifth);

if (second + third + fourth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", second, third, fourth);

if (second + third + fifth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", second, third, fifth);

if (third + fourth + fifth == 0)

Console.WriteLine("{0}+ {1}+ {2} = 0", third, fourth, fifth);

Console.ReadLine();

}

}

}

10.Write a program that applies bonus points to given scores in the range[1…9]by following the rules:

-If the score is between 1 and 3,the program multiplies is by 10.

-If the score is between 4 and 6,the program multiplies is by 100.

-If the score is between 7 and 9,the program multiplies is by 1000.

-If the score is 0 or more than 9,the program prints an error message.

using System;

namespace ConsoleApp10

{

class Program

{

static void Main(string[] args)

{

int n;

Console.Write("Enter a digit in the range of [1-9]:");

bool isnInt = int.TryParse(Console.ReadLine(), out n);

if (isnInt && n > 0 && n < 10)

{

switch (n)

{

case (1): n = n \* 10; break;

case (2): n = n \* 10; break;

case (3): n = n \* 10; break;

case (4): n = n \* 100; break;

case (5): n = n \* 100; break;

case (6): n = n \* 100; break;

case (7): n = n \* 1000; break;

case (8): n = n \* 1000; break;

case (9): n = n \* 1000; break;

}

Console.WriteLine(n);

}

else

{

Console.WriteLine("Not a valid entry!");

}

}

} }

11.Write a program that converts a number in the range [0…999] to words, corresponding to the English pronunciation.Examples:

- 0 🡪”Zero”

- 12🡪”Twelve”

- 98🡪”Ninety eight”

- 273🡪”Two hundred seventy three”

- 400🡪”Four hundred”

- 501🡪”Five hundred and one”

- 701🡪”Seven hundred and eleven”

using System;

namespace ConsoleApp11

{

class Program

{

static void Main(string[] args)

{

Console.Write("Enter a number between 0 and 999: ");

short number = Convert.ToInt16(Console.ReadLine());

byte hundreds = (byte)(number / 100 | 0);

byte tensAndOnes;

if (number > 99) tensAndOnes = (byte)(number % 100);

else tensAndOnes = (byte)(number \* 1);

byte ones = (byte)(number % 10);

switch (hundreds)

{

case 1: Console.Write("One hundred "); break;

case 2: Console.Write("Two hundred "); break;

case 3: Console.Write("Three hundred "); break;

case 4: Console.Write("Four hundred "); break;

case 5: Console.Write("Five hundred "); break;

case 6: Console.Write("Six hundred "); break;

case 7: Console.Write("Seven hundred "); break;

case 8: Console.Write("Eight hundred "); break;

case 9: Console.Write("Nine hundred "); break;

}

if (hundreds >= 1 && tensAndOnes >= 1) Console.Write("and ");

if (tensAndOnes >= 20 && tensAndOnes < 30) Console.Write("Twenty");

else if (tensAndOnes >= 30 && tensAndOnes < 40) Console.Write("Thirty");

else if (tensAndOnes >= 40 && tensAndOnes < 50) Console.Write("Fourty");

else if (tensAndOnes >= 50 && tensAndOnes < 60) Console.Write("Fifty");

else if (tensAndOnes >= 60 && tensAndOnes < 70) Console.Write("Sixty");

else if (tensAndOnes >= 70 && tensAndOnes < 80) Console.Write("Seventy");

else if (tensAndOnes >= 80 && tensAndOnes < 90) Console.Write("Eighty");

else if (tensAndOnes >= 90 && tensAndOnes < 100) Console.Write("Ninety");

switch (tensAndOnes)

{

case 1: Console.Write("One"); break;

case 2: Console.Write("Two"); break;

case 3: Console.Write("Three"); break;

case 4: Console.Write("Four"); break;

case 5: Console.Write("Five"); break;

case 6: Console.Write("Six"); break;

case 7: Console.Write("Seven"); break;

case 8: Console.Write("Eight"); break;

case 9: Console.Write("Nine"); break;

case 10: Console.Write("Ten"); break;

case 11: Console.Write("Eleven"); break;

case 12: Console.Write("Twelve"); break;

case 13: Console.Write("Thirteen"); break;

case 14: Console.Write("Fourteen"); break;

case 15: Console.Write("Fifteen"); break;

case 16: Console.Write("Sixteen"); break;

case 17: Console.Write("Seventeen"); break;

case 18: Console.Write("Eighteen"); break;

case 19: Console.Write("Nineteen"); break;

}

if (tensAndOnes > 20)

{

switch (ones)

{

case 1: Console.Write("-one"); break;

case 2: Console.Write("-two"); break;

case 3: Console.Write("-three"); break;

case 4: Console.Write("-four"); break;

case 5: Console.Write("-five"); break;

case 6: Console.Write("-six"); break;

case 7: Console.Write("-seven"); break;

case 8: Console.Write("-eight"); break;

case 9: Console.Write("-nine"); break;

}

}

if (number == 0) Console.Write("Zero");

Console.ReadLine();

}

}

}