1) Write a program that will take an input from user as number and print all the numbers from 0 to the given number.

static void PrintZeroToGivenNumber()

{

Console.Write("Please enter a number:");

int num = Convert.ToInt32(Console.ReadLine());

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

{

Console.WriteLine(i);

}

}



2) Create a program that will find out if the given number is odd or even

static void CheckIfGivenNumIsOddOrEven()

{

Console.Write("Please enter a number:");

int num = Convert.ToInt32(Console.ReadLine());

if (num % 2 == 0)

{

Console.WriteLine("It is a even number");

}

else

{

Console.WriteLine("It is a odd number");

}

}





3) Create a program that will take 2 numbers and find out the greatest of the 2

static void FindGreatestOfTwoNums()

{

Console.WriteLine("Please enter 2 numbers");

int num1 = Convert.ToInt32(Console.ReadLine());

int num2 = Convert.ToInt32(Console.ReadLine());

if (num1 > num2)

{

Console.WriteLine("The greatest of the 2 numbers is the first number");

}

else

{

Console.WriteLine("The greatest of the 2 numbers is the second number");

}

}





4) Inprove the program written in question 3 to find the greatest of 3 numbers

static void FindGreatestOfThreeNums()

{

Console.WriteLine("Please enter 3 numbers");

int greatest = 0;

int[] array =

{

Convert.ToInt32(Console.ReadLine()),

Convert.ToInt32(Console.ReadLine()),

Convert.ToInt32(Console.ReadLine())

};

for (int i = 0; i < array.Length; i++)

{

if (array[i] > greatest)

{

greatest = array[i];

}

}

Console.WriteLine("Number " + greatest + " is the greatest number");

}







5) Take the minimum and maximum number from user and find all numbers inbetween

static void PrintAllNumbersBetweenTwoNumbers()

{

Console.Write("Please enter a minimum number:");

int min = Convert.ToInt32(Console.ReadLine());

Console.Write("Please enter a maximum number:");

int max = Convert.ToInt32(Console.ReadLine());

for (int i = min + 1; i < max; i++)

{

Console.WriteLine(i);

}

}





6) Find if a given number is prime

static void CheckIfNumberIsPrime()

{

Console.Write("Please enter a number:");

int num = Convert.ToInt32(Console.ReadLine());

var check = true;

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

{

if (num % i == 0)

{

check = false;

break;

}

}

if (check)

{

Console.WriteLine("It is a prime number");

}

else

{

Console.WriteLine("It is not a prime number");

}

}





7) Improve the program in 5 to find all the prime numbers between the gven numbers

static void FindPrimeBetweenTwoNumbers()

{

Console.Write("Please enter a minimum number:");

int min = Convert.ToInt32(Console.ReadLine());

Console.Write("Please enter a maximum number:");

int max = Convert.ToInt32(Console.ReadLine());

for (int i = min + 1; i < max; i++)

{

var check = true;

for (int j = 2; j < i; j++)

{

if (i % j == 0)

{

check = false;

break;

}

}

if (check)

{

Console.WriteLine(i + " is a prime number");

}

else

{

Console.WriteLine(i + " is not a prime number");

}

}

}





8) Take input from user until the user enters a negative number and find the sum of all the numbers that are divisible by 7

static void FindSumOfGivenNumsDivisibleBySeven()

{

Console.WriteLine("Please enter numbers and enter a negative number to stop");

var list = new List<int>();

int input = 1;

while (input > 0)

{

input = Convert.ToInt32(Console.ReadLine());

list.Add(input);

}

int sum = 0;

for (int i = 0; i < list.Count; i++)

{

if (list[i] % 7 == 0)

{

sum += list[i];

}

}

Console.WriteLine("The sum of given numbers divisible by 7 is " + sum);

}



9) Take a 4 digit number from user and find the sum of all the digits example - 1234 result should be 10

static void SumOfDigits()

{

Console.Write("Please enter a four digit number:");

string num = Console.ReadLine();

int sum = 0;

for (int i = 0; i < num.Length; i++)

{

sum += Convert.ToInt32(num[i].ToString());

}

Console.WriteLine("The sum is " + sum);

}





10) Take a 4 digit number from user and find if it is a palindrome or not example - 1234 result should be Not a plaindrome example - 1221 result should be Plaindrome

static void CheckIfNumIsPalindrome()

{

Console.Write("Please enter a four digit number:");

string num = Console.ReadLine();

string rev = "";

for (int i = num.Length - 1; i >= 0; i--)

{

rev += num[i].ToString();

}

if (Convert.ToInt32(num) == Convert.ToInt32(rev))

{

Console.WriteLine("Palindrome");

}

else

{

Console.WriteLine("Not a Palindrome");

}

}





11) <https://leetcode.com/problems/powx-n/>

public class Solution {

public double MyPow(double x, int n) {

return Math.Pow(x, n);

}

}



12) <https://leetcode.com/problems/happy-number/>

static bool IsHappy(int n)

{

string input = n.ToString();

var check = false;

var listOfInputs = new List<string>();

while (check == false)

{

int sum = 0;

for (int i = 0; i < input.Length; i++)

{

sum += Convert.ToInt32(Math.Pow(Convert.ToDouble(input[i].ToString()), 2.0));

}

if (sum == 1)

{

check = true;

break;

}

input = sum.ToString();

if (listOfInputs.Count < 0)

{

listOfInputs.Add(input);

}

else

{

if (listOfInputs.Contains(input))

{

break;

}

else

{

listOfInputs.Add(input);

}

}

}

return check;

}

