using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace TaskSnichApp

{

class Program

{

static void Main(string[] args)

{

string choice;

do

{

Console.Write("Enter Task Number1-4 to exit enter exit: ");

choice = Console.ReadLine();

switch (choice)

{

case "1": { task1();break; }

case "2": { task2(); break; }

case "3": { task3(); break; }

case "4": { task4(); break; }

}

} while (choice != "exit");

}

public static void task1()

{

Console.Write("Enter a number to check:");

//Assume user enters an integer

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

if (CheckForPower(number))

Console.WriteLine($"{number} is a power of 2");

else

Console.WriteLine($"{number} is not a power of 2");

Console.ReadLine();

}

public static void task2()

{

Console.Write("Enter a string to reverse:");

string input = Console.ReadLine();

string output = Reverse(input);

Console.WriteLine($"the orginal message is :{input} and the reversed is : {output}");

Console.ReadLine();

}

public static void task3()

{

Console.Write("Enter a string to replicate:");

string input = Console.ReadLine();

Console.Write("Howmany times should be replicated:");

int times =Convert.ToInt16( Console.ReadLine());

string output = Replicate(input,times);

Console.WriteLine($"the orginal message is :{input} and the Replicated is : {output}");

Console.ReadLine();

}

public static void task4()

{

PrintOdds(0, 100);

Console.ReadLine();

}

//2.A method that reverses a string(e.g. "Hello" gives "olleH").

public static string Reverse(string input)

{

string output = "";

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

{

output += input[i];

}

return output;

}

//A method that determines whether a number is a 2-power

public static bool CheckForPower(int number)

{

int remained = number;

while (remained >= 2)

{

if (!(number % 2 == 0)) return false;

else remained /= 2;

}

return true;

}

//3.One method that replicates a string a given number of times(e.g. ("Hi", 3) gives "HiHiHi")

public static string Replicate(string input,int times)

{

string output = "";

for (int i = times; i >0; i--)

{

output += input;

}

return output;

}

//4.One method that prints the odd numbers between 0 and 100.

public static void PrintOdds(int start, int end)

{

Console.WriteLine($"Odd numbers from {start} to {end}");

for (int n = start; n < (end + 1); n++)

{

if (n % 2 != 0)

{

Console.Write(n.ToString()+"\t");

}

}

}

}

}