**INTCDE21ID008**

**STAGE-3**

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**Day 3 – C# Additional Topics Async Programming, Multithreading**

**Hands-On 1:**

Async Await usage – 1

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading;

using System.Threading.Tasks;

namespace AsyncHandsOn

{

class Program

{

public static async Task Method1()

{

await Task.Run(() =>

{

string msg = Method2();

Console.WriteLine(msg);

});

}

public static string Method2()

{

Console.WriteLine("Wait until string returns");

Thread.Sleep(3340);

return "Call from 2nd method";

}

static void Main(string[] args)

{

Method1();

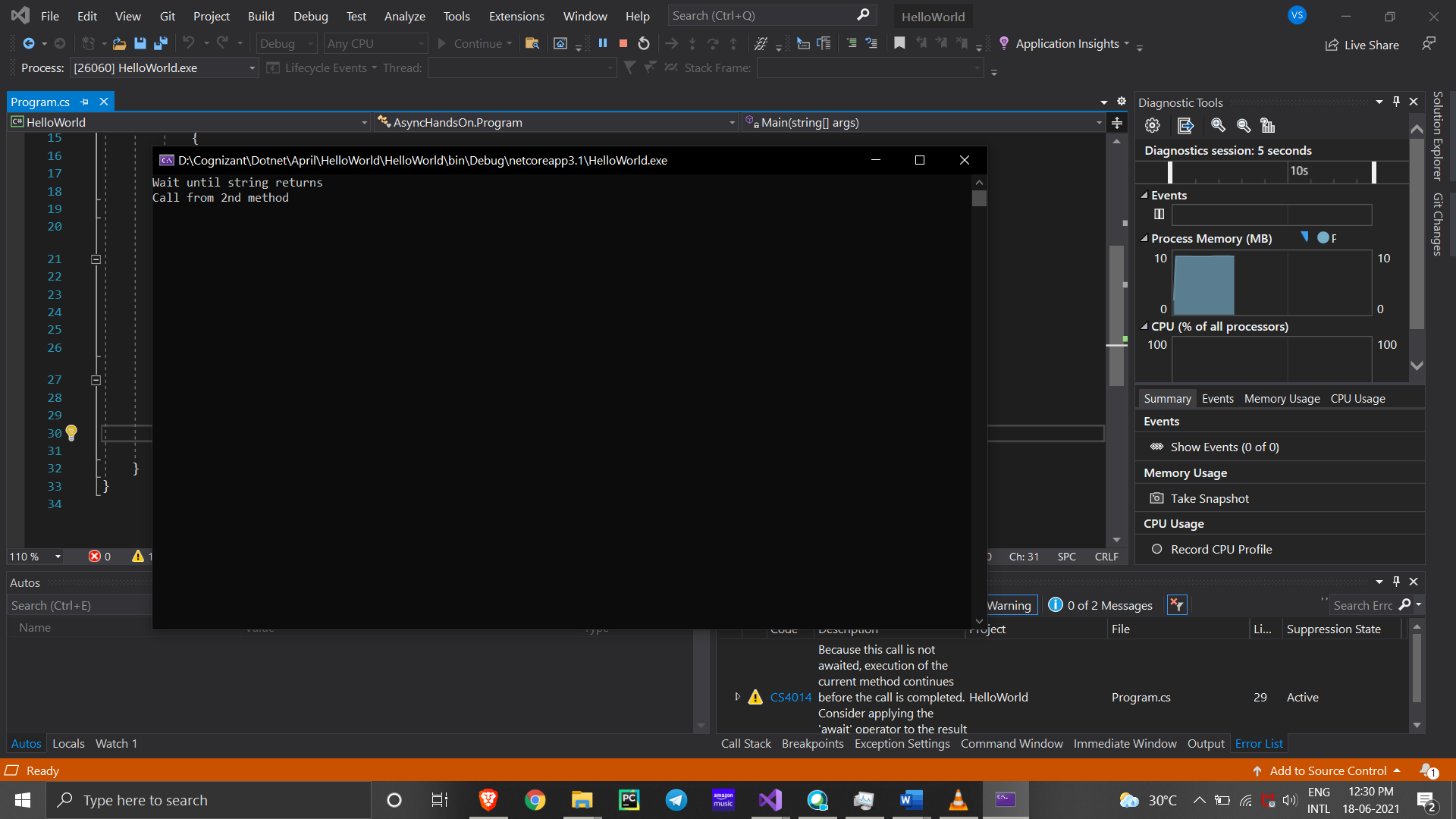
Console.ReadKey();

}

}

}

**OUTPUT:**



Async Await usage – 2

**Form1.cs**

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.IO;

using System.Linq;

using System.Text;

using System.Threading;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace WindowsFormsApp

{

public partial class Form1 : Form

{

public Form1()

{

InitializeComponent();

}

public int CountChars()

{

int count = 0;

using (StreamReader streamReader = new StreamReader("D:\\Day3\_Handson\\Kuttralam.txt"))

{

string content = streamReader.ReadToEnd();

count = content.Length;

Thread.Sleep(2000);

}

return count;

}

private void label1\_Click(object sender, EventArgs e)

{

}

private void Form1\_Load(object sender, EventArgs e)

{

}

private async void button1\_Click\_1(object sender, EventArgs e)

{

Task<int> task = new Task<int>(CountChars);

task.Start();

label1.Text = "File is processing";

int count = await task;

label1.Text = count.ToString() + " characters";

}

}

}

**Form1.Designer.cs**

using System;

using System.Collections.Generic;

using System.ComponentModel;

using System.Data;

using System.Drawing;

using System.IO;

using System.Linq;

using System.Text;

using System.Threading;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace WindowsFormsApp

{

partial class Form1

{

/// <summary>

/// Required designer variable.

/// </summary>

private System.ComponentModel.IContainer components = null;

/// <summary>

/// Clean up any resources being used.

/// </summary>

/// <param name="disposing">true if managed resources should be disposed; otherwise, false.</param>

protected override void Dispose(bool disposing)

{

if (disposing && (components != null))

{

components.Dispose();

}

base.Dispose(disposing);

}

#region Windows Form Designer generated code

/// <summary>

/// Required method for Designer support - do not modify

/// the contents of this method with the code editor.

/// </summary>

private void InitializeComponent()

{

this.label1 = new System.Windows.Forms.Label();

this.button1 = new System.Windows.Forms.Button();

this.SuspendLayout();

//

// label1

//

this.label1.AutoSize = true;

this.label1.Location = new System.Drawing.Point(300, 150);

this.label1.Name = "label1";

this.label1.Size = new System.Drawing.Size(0, 20);

this.label1.TabIndex = 1;

//

// button1

//

this.button1.Location = new System.Drawing.Point(643, 381);

this.button1.Name = "button1";

this.button1.Size = new System.Drawing.Size(94, 29);

this.button1.TabIndex = 2;

this.button1.Text = "button1";

this.button1.UseVisualStyleBackColor = true;

this.button1.Click += new System.EventHandler(this.button1\_Click\_1);

//

// Form1

//

this.AutoScaleDimensions = new System.Drawing.SizeF(8F, 20F);

this.AutoScaleMode = System.Windows.Forms.AutoScaleMode.Font;

this.ClientSize = new System.Drawing.Size(800, 450);

this.Controls.Add(this.button1);

this.Controls.Add(this.label1);

this.Name = "Form1";

this.SizeGripStyle = System.Windows.Forms.SizeGripStyle.Show;

this.Text = "Form1";

this.Load += new System.EventHandler(this.Form1\_Load);

this.ResumeLayout(false);

this.PerformLayout();

}

#endregion

private System.Windows.Forms.Label label1;

private System.Windows.Forms.Button button1;

}

}

**Program.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Threading.Tasks;

using System.Windows.Forms;

namespace WindowsFormsApp

{

static class Program

{

[STAThread]

static void Main()

{

Application.EnableVisualStyles();

Application.SetCompatibleTextRenderingDefault(false);

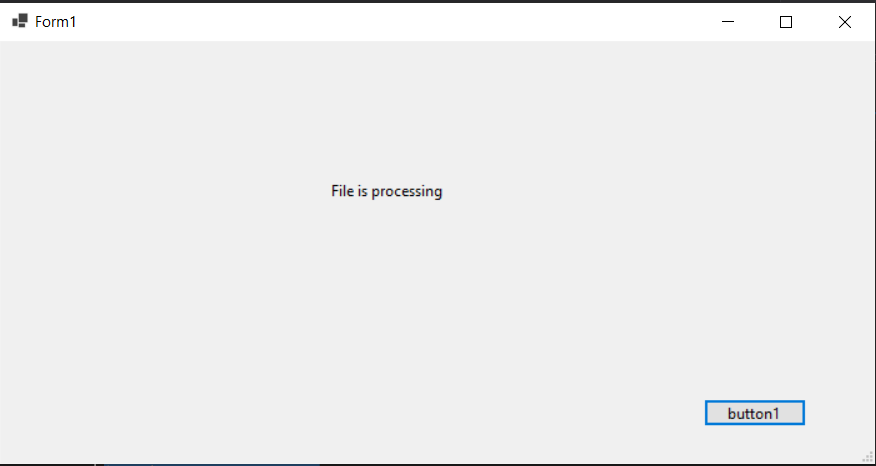
Application.Run(new Form1());

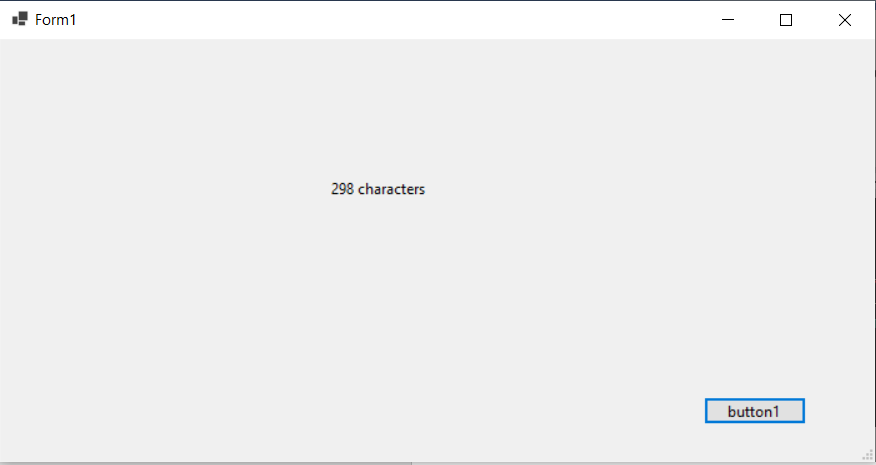
}

}

}

**OUTPUT:**





**NAMED PARAMETERS – ORDER OF ARGUMENTS AS PER THE FUNCTION AND MODIFY**

**Program.cs**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace named\_arguments

{

class Program

{

public static void GetCohortDetails(string Cohortname, int GenCcount, string Mode, string Track, string CurrentModule)

{

Console.WriteLine("It is {0} with {1} GenC Students undergoing training for {2} through {3}. The current module of training is {4}", Cohortname, GenCcount, Track, Mode, CurrentModule);

}

public static void OrderDetails(string Productname, string Sellername, int Orderquantity = 1, bool returnable = true)

{

Console.WriteLine("Here is the order details – {0} number of {1} by {2} is ordered. Its returnable status is {3}", Orderquantity, Productname, Sellername, returnable);

}

static void Main(string[] args)

{

Console.WriteLine("GetCohortDetails");

GetCohortDetails(Cohortname: "INTCDE21008", GenCcount: 18, Track: ".NET", Mode: "OBL", CurrentModule: "Stage-3");

Console.WriteLine("OrderDetails");

OrderDetails(Sellername: "sunil", Productname: "apples", Orderquantity: 10, returnable: false);

Console.Read();

}

}

}

**OUTPUT:**

