Bahria University

Karachi Campus



LAB EXPERIMENT NO.

**05**

LIST OF TASKS

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| TASK NO | OBJECTIVE |
| 1. | **Implement singleton pattern on printer functionality.** |
| 2. | **Implement singleton pattern on sessions** |
| 3. | **Implement singleton pattern for logger application.** |
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Submitted On:

**20-04-2022**

**Task No 1: Implement singleton pattern on printer functionality.**

**SOLUTION:**

**Printer class:**

class Printer

{public static Printer \_obj;

private Printer(){}

public static Printer Getobject()

{if (\_obj == null)

{ \_obj = new Printer();}

return \_obj;}

public void Print(string e)

{Console.WriteLine(e); }}}

**Main class:**

static void Main(string[] args)

{Printer PrinterObject = Printer.Getobject();

PrinterObject.Print("Leaser Printer");

Printer PrinterObject2 = Printer.Getobject();

PrinterObject2.Print("\nDot Matrix Printer");

Printer PrinterObject3 = Printer.Getobject();

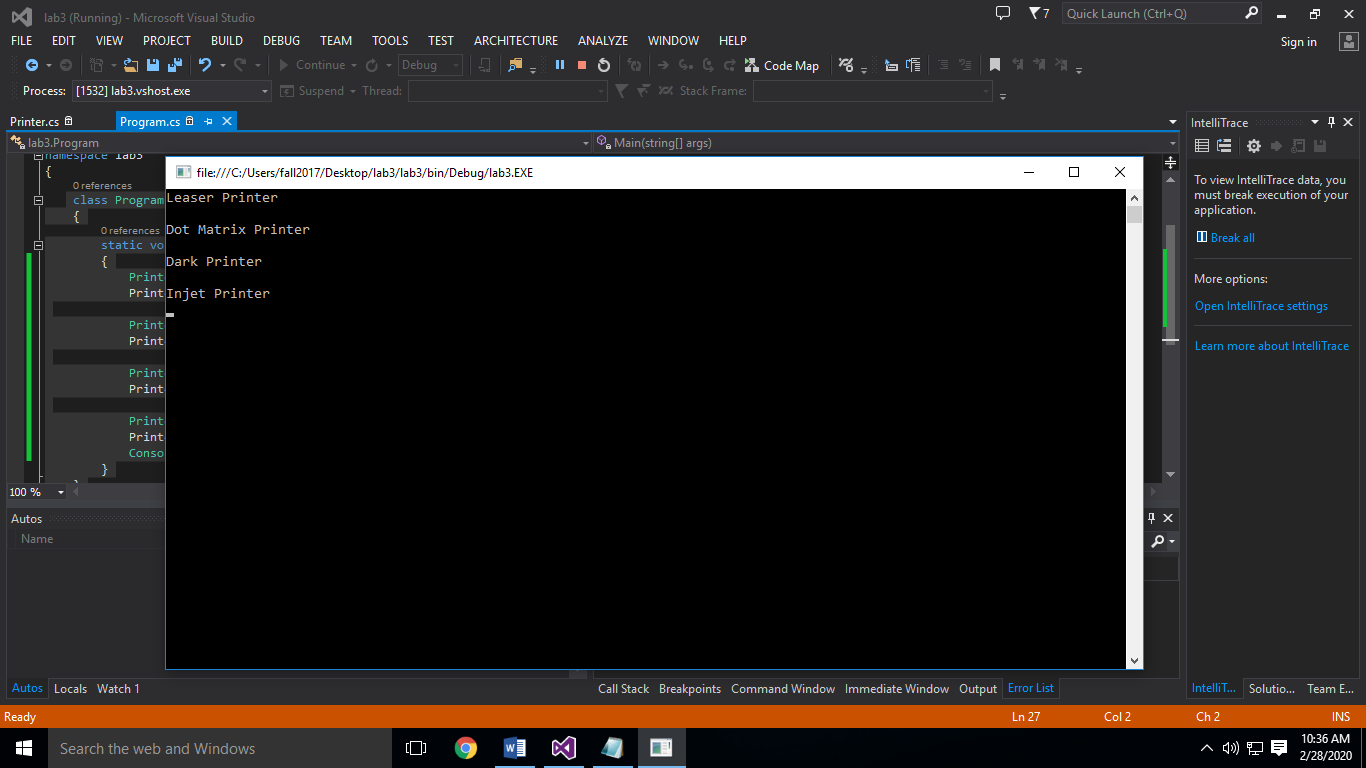
PrinterObject3.Print("\nDark Printer");

Printer PrinterObject4 = Printer.Getobject();

PrinterObject4.Print("\nInjet Printer");

Console.ReadLine();}}}

**Output:**



**Task No 2: Implement singleton pattern on sessions**

**SOLUTION:**

**Session Class:**

class Session

{public static Session \_obj;

private Session({}

public static Session Getobject({

if (\_obj == null){

\_obj = new Session()}

return \_obj}

public void Print(string e){

Console.WriteLine(e)}

**Main Class:**

static void Main(string[] args)

Session SingletonObject = Session.Getobject();

SingletonObject.Print("Session 1\n--------Welcome to Facebook---------\n\n");

Session SingletonObject2 = Session.Getobject();

SingletonObject2.Print("Session 2\n-------Please Login here----------\n\n");

Session SingletonObject3 = Session.Getobject();

SingletonObject3.Print("Session 3\n-----------Home---------------\n\n");

Session SingletonObject4 = Session.Getobject();

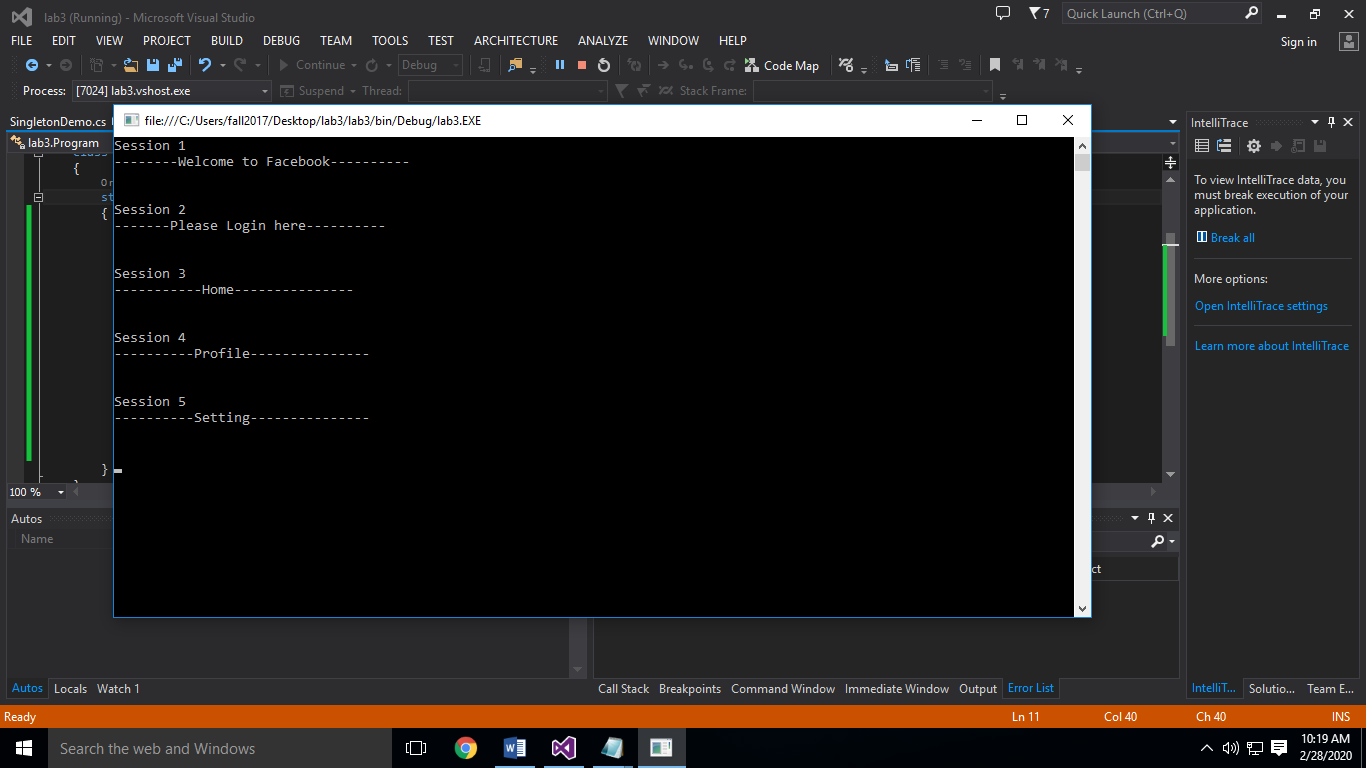
SingletonObject4.Print("Session 4\n----------Profile---------------\n\n");

Session SingletonObject5 = Session.Getobject();

SingletonObject5.Print("Session 5\n----------Setting---------------\n\n");

Console.ReadLine();}}}

**Output:**



**Task No 3: Implement singleton pattern for logger application.**

**Code:**

**Logger Class:**

public static Logger \_obj;

private Logger()

{

}

public static Logger Getobject() {

if (\_obj == null)

{

\_obj = new Logger(); }

return \_obj; }

public void Print(string e) {

Console.WriteLine(e); }}

**Main Class:**

static void Main(string[] args) {

Logger SingletonObject = Logger.Getobject();

SingletonObject.Print("Application 1\n========Runs efficiently========\n\n");

Logger SingletonObject2 = Logger.Getobject();

SingletonObject2.Print("Application 2\n======Found error during the login======\n\n");

Logger SingletonObject3 = Logger.Getobject();

SingletonObject3.Print("Application 3\n==========Intializing==========\n\n");

Logger SingletonObject4 = Logger.Getobject();

SingletonObject4.Print("Application 4\n=========Giving Warnings=========\n\n");

Logger SingletonObject5 = Logger.Getobject();

SingletonObject5.Print("Application 5\n=========Processing Completed=========\n\n");

Console.ReadLine(); }

**Output:**

