**Assignment 1 – Assembly Analyzing and Basic C# Programing**

**Part A – Sherlock Holmes**

**After running ILDASM and opening Ex01.exe with it, answer the following questions:**

* 1. **1. Is Ex01.exe a .NET Assembly? (Yes/No) – Circle the correct answer.**

**Is Ex01.exe a .NET PE? (Yes/No) – Circle the correct answer.**

* + 1. Please provide a short explanation that supports your answers:

Every of .Net App file is a .Net Assembly, regardless if it is a DLL file or an exe file.

The .Net format is based on Windows PE (Portable Executable) file format.

**Please provide the following info about the Assembly which is contained in Ex01.exe**

* + - * 1. a. Name: B23\_Ex01
      1. b. Version: 23:2:1:34949
      2. c. In which section in the assembly you can find the answers to the previous questions (a, b)? In the Manifest
      3. d. Which assemblies are being referenced by this assembly?

Name: \_\_\_\_\_\_\_mscorlib\_\_\_\_\_\_\_\_ Version: \_\_\_\_\_\_2:0:0:0\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_System.Xml\_\_\_\_\_\_ Version: \_\_\_\_\_\_2:0:0:0\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Version: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**2. Analyzing the Metadata and MSIL**

1. Please provide a full Metadata description about all the Types in the assembly:

a. **The type of the Type (class, struct, enum, etc..)**

* 1. b. **The name of the type**
  2. c. **List of members (data members / methods) declared in the Type, and for each one: Name, Type, satic/instance, Access Modifier (public / private), Return Value Type (if it’s a method), List of Parameter Types and Names (if it's a method).**

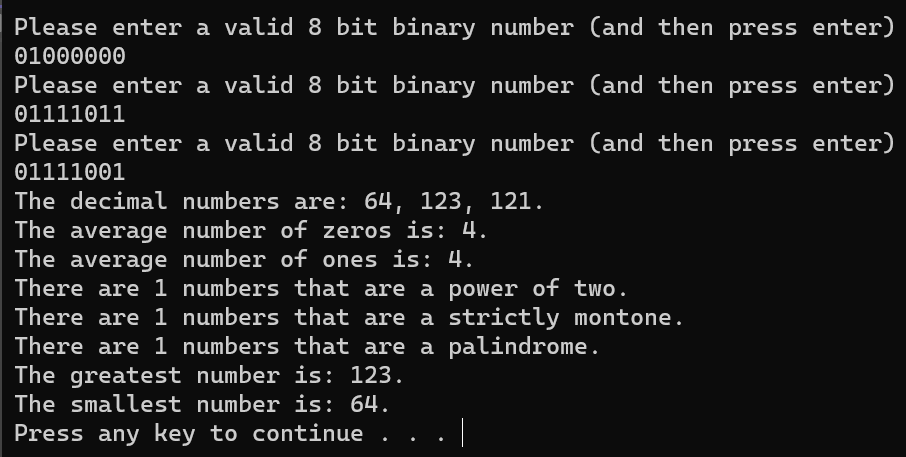
|  |  |  |
| --- | --- | --- |
| **Provide your answer in a table like such: Type (Struct/Class/Enum)** | **Name** | **Members (methods, fields)** |
| Class | Program | * public void Program() * public static void Main() |
| Class | DemosExecuter | * public void DemosExecuter() * public static void RunDemoApp() * private static bool authenticateUser() * private static DemosExecuter.eChoice getUserChoice() * public static void showMenu() |
| Class | DemoPrograms | * public void DemoPrograms() * public static void RunBinaryCheck() * public static void RunSandClockProgram() * private static int32 buildLine(System.Text.StringBuilder i\_SB, int i\_PlaceInText, int i\_Rows) * private static bool checkIfAscendingSeries(string i\_NumberStr) * private static bool checkIfDescendingSeries(string i\_NumberStr) * private static void drawAstrixClock(int i\_NumOfLines) * private static string getInputFromUser(out int o\_CurrentNumber) |
| Enum | eChoice | * public static int Abort   Enum Value: Abort (Literal value:0)   * public static int BinaryCheck   Enum Value: BinaryCheck (Literal value:1)   * Enum Value: StarClock (Literal value:2)   public static int StarClock   * public int32 value\_ |

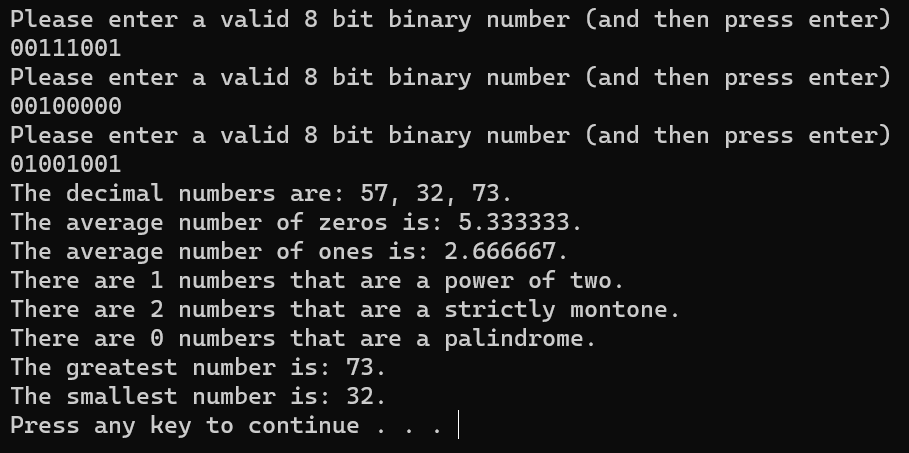
* + 1. **3**. What is the Username and Password that should be typed in order to run the application? (a small detective task..)
    2. Username = "Ex01\_23B"  
       Password = "C#isthebest"

**4.** Run the application and get a general understanding of what is expected from you in the next section of the assignment

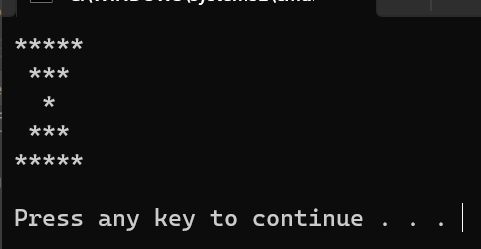
**Screenshots of the Exercise’s Output:**

Exercise 1:

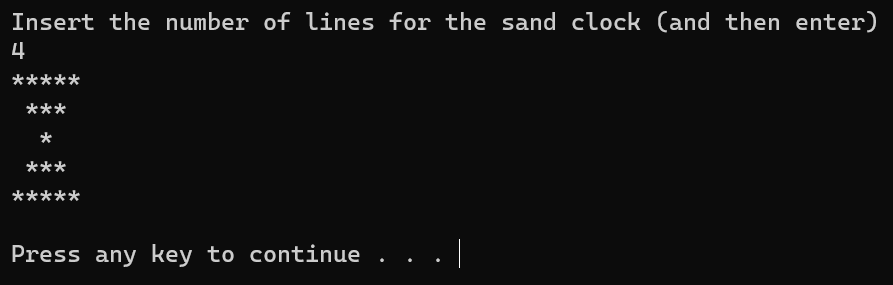


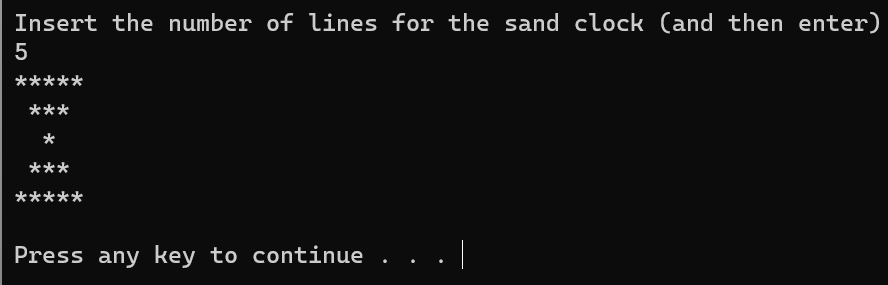


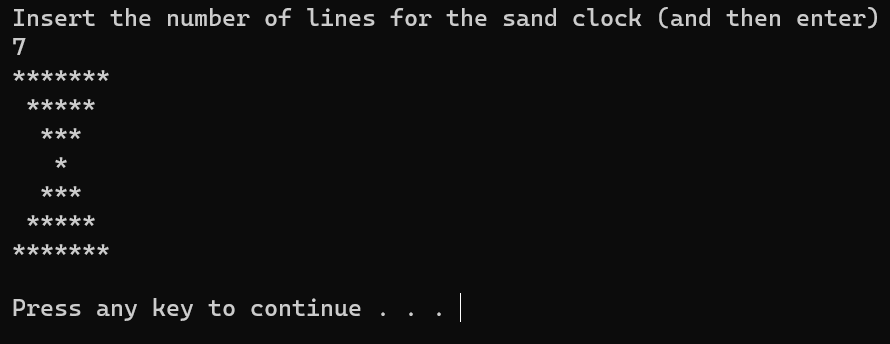
Exercise 2:

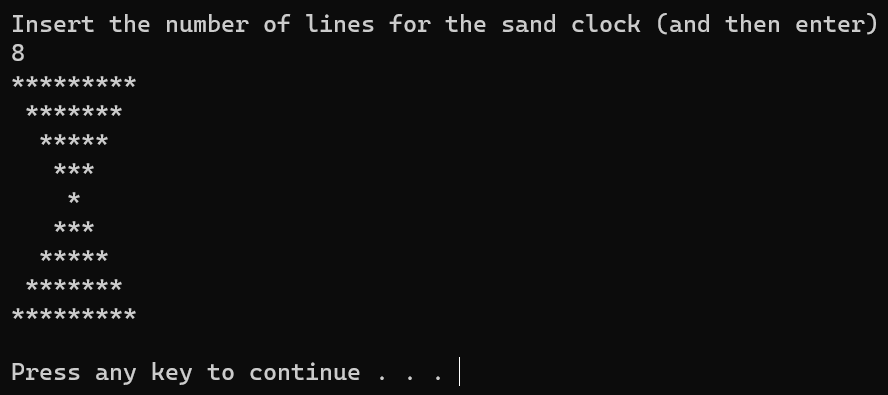


Exercise 3:

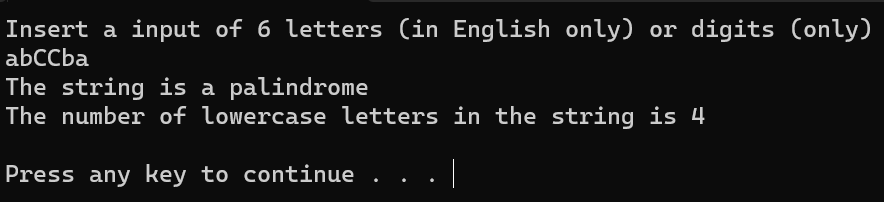


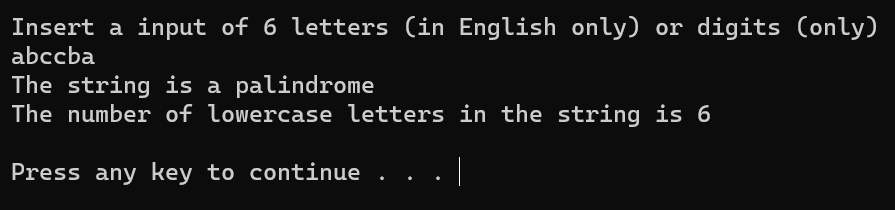


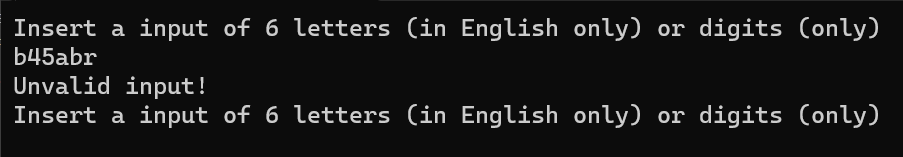
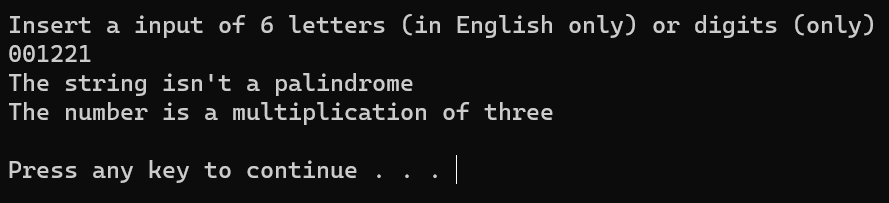




Exercise 4:







Exercise 5:

