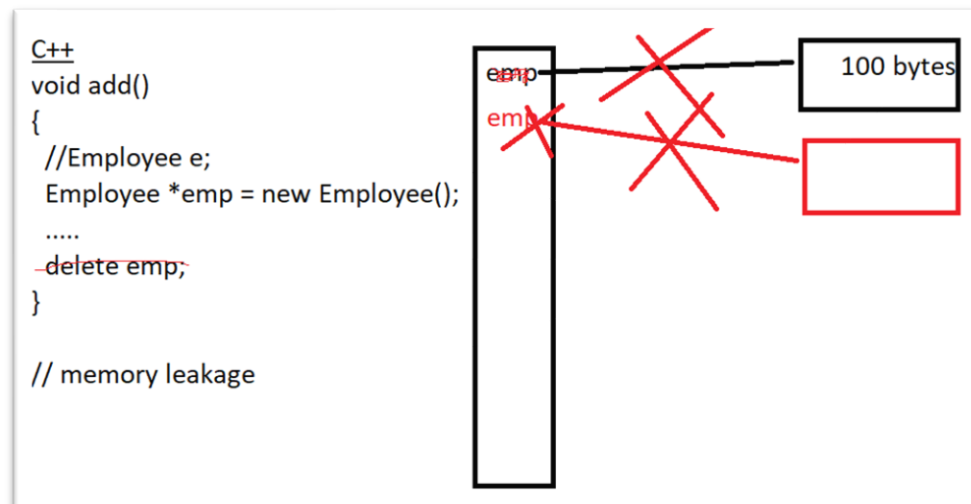


**Date: 27-Dec-2021 | Session 1: 10:30 to 1:15**

1. Benefits of C#/Java

- a. Encapsulation
- b. Garbage Collection
  - i. Garbage collector runs automatically and periodically to clear dangling objects, i.e., objects which are no longer used by the program



2. What Java vs JavaScript?

3. Why C#

- a. To provide a seamless windows experience to Platform independent s/w development
- b. Similar to Java in many aspects
- c. But works better in Windows
- d. Today, it is arguably better than Java

4. Software Development Tools & IDE

5. Install Visual Studio 2022 Community Edition

6. Create Basic C# Console Application

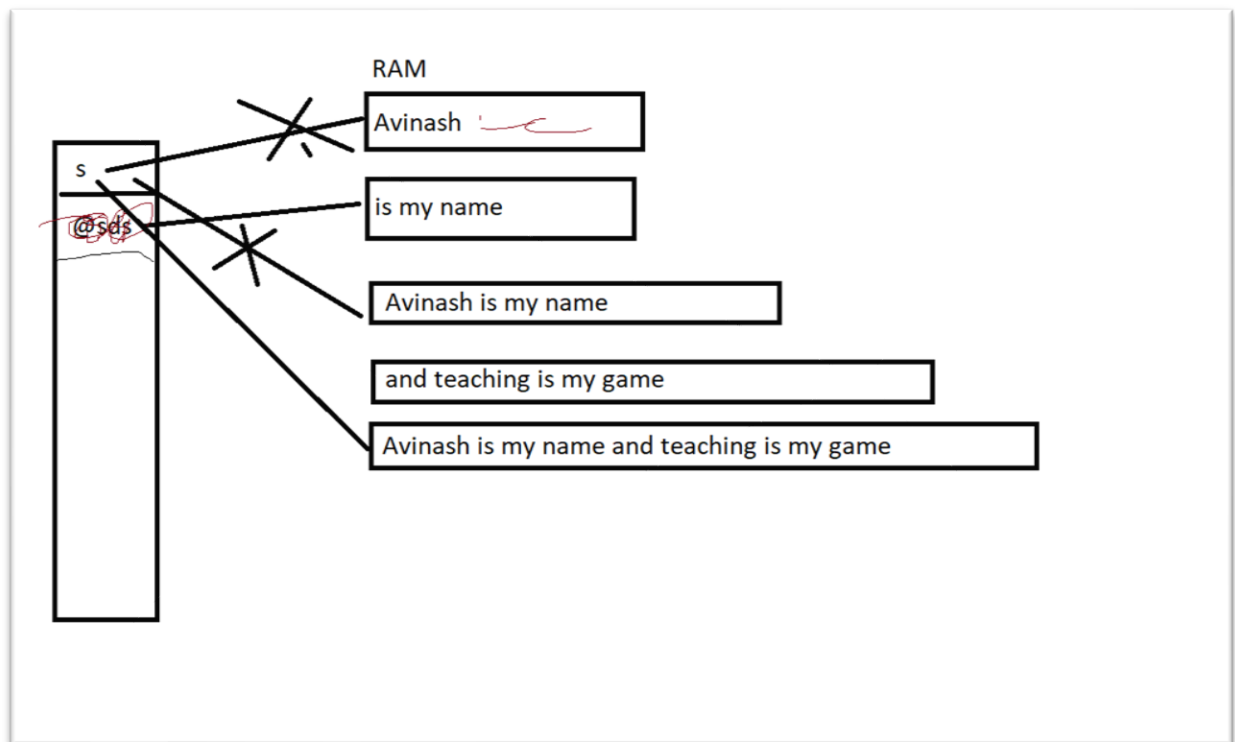
7. Command Line Arguments

8. String and int datatype

9. Strings are immutable

10. Visual Studio Magic

- a. `Ctrl+. =>` Suggestions and error fixes
- b. `Ctrl+KD =>` Code Formatting/Alignment
- c. `Ctrl+KC =>` Auto Comments
- d. `Ctrl+KU =>` Auto Un-Comment



## 11. Sample Program



Program.cs

**Date: 27-Dec-2021 | Session 2: 14:30 to 15:30**

- 1. for**
- 2. foreach**
- 3. If**
- 4. Convert.ToInt32**
- 5. Compile time vs run time errors**
- 6. Int, string, float, double data types**
- 7. Read & Display data on console.**
- 8. Multiple Main functions in Console Project**
  - a. Set Startup Object in Project Properties**
- 9. Arguments to Main function is not mandatory**
- 10. Code Auto Format -> Ctrl-K, Ctrl+D**
- 11. Defining a class**

## DEBUGGING EXERCISES

3.1 Will the given program produce a compile-time or runtime error?  
using System;

```
class MainExample
{
    public static void Main()
    {
        Console.WriteLine("Main Example");
        return 1;
    }
}
```

3.2 Find error(s), if any, in the following program:  
class Reading

```
{
    public static void Main ()
    {
        Console. Write ("Enter Name");
        string name = ReadLine ();
        Console. WriteLine (name);
    }
}
```

3.3 What is wrong with the following program?  
class Maths

```
{
    public static void Main ()
    {
        double, y, x = 10.0;
        y = sqrt (x);
        System.Console.Write (y);
    }
}
```

## PROGRAMMING EXERCISES

- 3.1 Write a program to read two strings from the keyboard using the ReadLine statements and display them on one line using two Write statements.
- 3.2 Write a program that takes the line of text  
John F Kennedy  
as a command line input and displays the following output:  
Kennedy John F
- 3.3 Define two classes, one with a method to display the string "C Sharp" and the other to display the string "Programming". Write a program using these classes to display a single line output as follows:  
C Sharp Programming
- 3.4 Write a program that assigns two double type values to two variables, computes their sum, assigns the result to a third variable, and displays all the three values in one line of output.
- 3.5 Write a program to display the following pattern on the screen:

```
    X
   XXX
  XXXXX
 XXXXX
   XXX
```