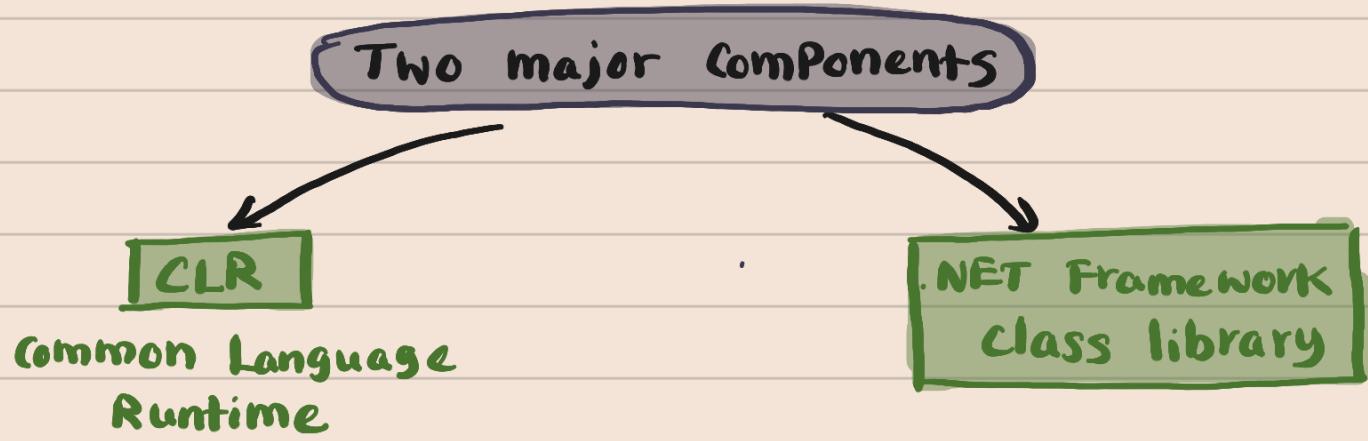


①

a. i. What is .NET Framework

- developed by Microsoft
- virtual machine for compiling and executing programs written in different languages
- platform for building web, windows and mobile applications
- supports many languages



- Compiles .NET applications to Machine Code
- Provides a range of functionalities
- Heart of .NET
- Provides a library of
 - Tested
 - ReusableCode that developers can call

ii. use of CTS

- Enables softwares written in different languages to work together
- With CTS all .NET languages use strings, integers in same way, so no conversion is needed.

iii. Windows apps

Web apps

- | | |
|--|---|
| → Installed on windows base OS | → Installed on a web server |
| → Can be access from a system where it installed | → Can access from any system through internet |
| → Execute directly on a windows OS | → Need IIS server to execute |
| → only runs on a windows platform | → Can run on variety of platforms |

b.

i. Advantages of C#

- Modern, general purpose programming language
- Object oriented
- Easy to learn
- Produce Efficient Programs

ii. **Namespace**

- A namespace is a declarative region that provides a scope to the identifiers in it.
- It organizes code into logical groups and prevent name collisions that can occur especially when code includes multiple librarys

iii.

C# data types



value data types

Pointer data types

Reference data types

Pre defined

User defined

Pre defined

User defined

Value data type

- Known as primitive data type
- A variable that holds an actual value
- Consists a single value

Pointer data type

- Points to a address of a value

Reference data type

- Holds a reference to the value
- Contain memory address of a variable value

iv.

Local Variable

- A variable declared by local variable declaration
- Can be used only within declared scope

Global Variable

- Can be access from any function, class within the namespace

V.

Implicit

Explicit

→ Automatic Conversion

→ Programmatical conversion

→ No data loss in data conversion

→ may or may not lose data

→ No Possibility of throwing Exceptions

→ Might throw error if tried without type cast

→ do not require any special syntax

→ do require cast operator

C.

class



A blueprint or prototype that defines the variables and methods common to all objects of certain kind

object



An element or an instance of a class which have the behaviours of their class

Properties



used to display properties for objects selected in visual studio IDE

Methods



A separate codeblock that will contain a series of statements to perform particular task

Event



A signal that informs an application that something important has occurred

d.

i. Use of internet explorer object in C# ?

→ Controls an instance of windows Internet explorer through automation

ii. Events in internet explorer objects

download Complete

→ Fires when a navigation operation
finishes, hault or fails

navigate Complete

→ Fires after a navigation to a link
is completed.
on either a
→ windows element
→ Frameset element

NewWindow

→ Fires when a new window
is to be created

BeforeNavigate

→ Fires before navigation occurs
in a given object

②

a. i. Advantages of arrays in C#

- organize data in such a way that it can be
 - Easily manipulated
 - Easily Sorted

ii.

namespace CreateArray

{

class Program

{

static void main(string[] Args)

{

char[2,6] myArray = new char[2,6]

{

{V, T, S, U, A, L},

{S, T, U, D, E, O};

}

}

}

}

iii. Jagged Array

Jagged arrays are arrays of arrays in which the length of each array can differ.

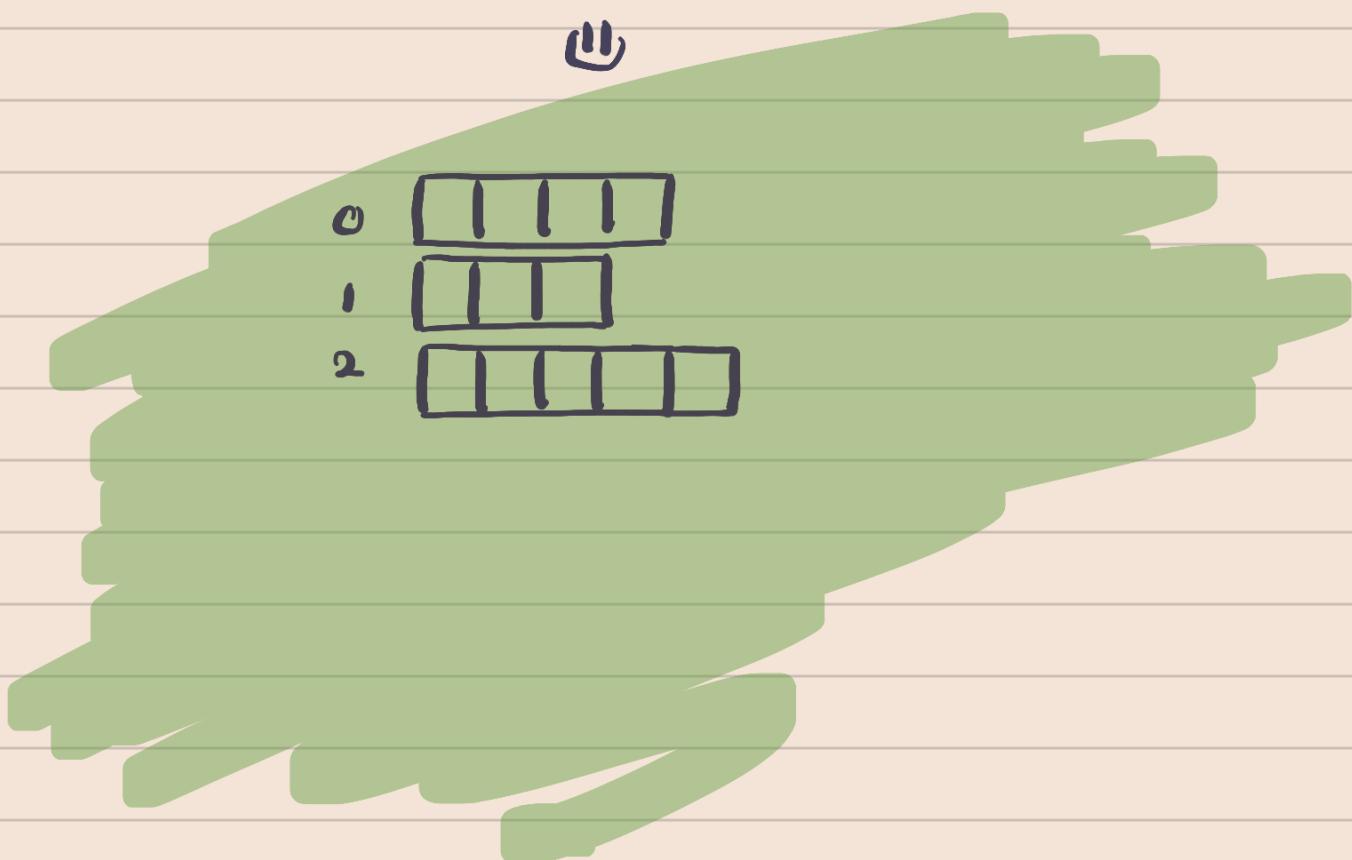
A Jagged array can be used to create a table in which the lengths of the rows are not same

`int[][] jagged = new int[3][]`

`jagged[0] = new int[4];`

`jagged[1] = new int[3];`

`jagged[2] = new int[5];`



b.ii.

namespace decision

{

class Program

{

static void Main(string[] Args)

{

double MI, IT;

if (MI <= 30000)

{

IT = 200;

}

else if (MI > 30000 && MI <= 60000)

{

IT = (MI - 30000) * 0.01;

switch(MI)

case <= 30000 :

IT = 200;

Break;

case > 30000 and < 60000 :

IT = (MI - 30000) * 0.01;

Break;

c.

i. Advantages of loop structures

- Provides code reusability
- No need to write same code again and again
- Can traverse over the elements of data structures

ii.

namespace GreetSum
{

 class Program
 {

 static void Main (string[] args)
 {

 int n;
 int sum = 0;

 Console.WriteLine ("Enter an integer");
 n = Convert.ToInt32 (Console.ReadLine());

 for (int i=0 ; i <= n ; i++)
 {

 sum = sum + i;

}

 Console.WriteLine ("Sum is = " + sum);

} } }

iii. For... Next loop

A for... next loop executes a set of statements for successive values of a variable until a limiting value is encountered

③ i. Syntax of defining a method.

- Every C# Program has at least 1 class with a method name Main.
- To use a method you need to,
 - define the method
 - call the method

defining the method

Access Specifier

- determines the visibility of a variable or method from another class

return type

- A method may return a value.
- the return type is the data type of method returns
- if a method not returning a value it is void.

Method name

- unique identifier of method
- Case Sensitive



```
Public void sayMyName (string name)  
{  
    Console.WriteLine ("Saman");  
}
```

ii. Ways of calling methods

- Call by Value
- Call by reference
- Recursion

iii.