VIVEKANAND COLLEGE, KOLHAPUR (Empowered Autonomous)

Department of BCA

NOTICE

Date: 14/10/2024.

All the students of **B.C.A. III** Divison(A,B,C) are here by informed that, there is Open Book Test of the subject **ASP.NET** on **16-10-2024** at **09:00 am to 10:00 am.**

The test is of 20 marks based on UNIT-II.

Shri. V. B. Pujari
(HOD)

HEAD
DEPARTMENT OF B. C. A.
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)

VIVEKANAND COLLEGE KOLHAPUR (Empowered Autonomous) ESTD JUNE 1964

Shri Swami Vivekanand Shikshan Sanstha's
Vivekanand College, Kolhapur (Empowered Autonomous)

SUBJECT: Open Book Test (ASP.NET)

DATE:16/10/2024

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26	Aniket Mane	Amane
27	Satyajeet Mane	Satyajeetmane
28	Kelan Mane	Kmane
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30	Laxmi Pillai	Lpillai

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Name :- Amruta Anil Jogam
Sub :- .Net.
Roll No. 1347

UNIT TEST 1.

18/20

DATE 21/8/25

Q.1] Attempt any two.

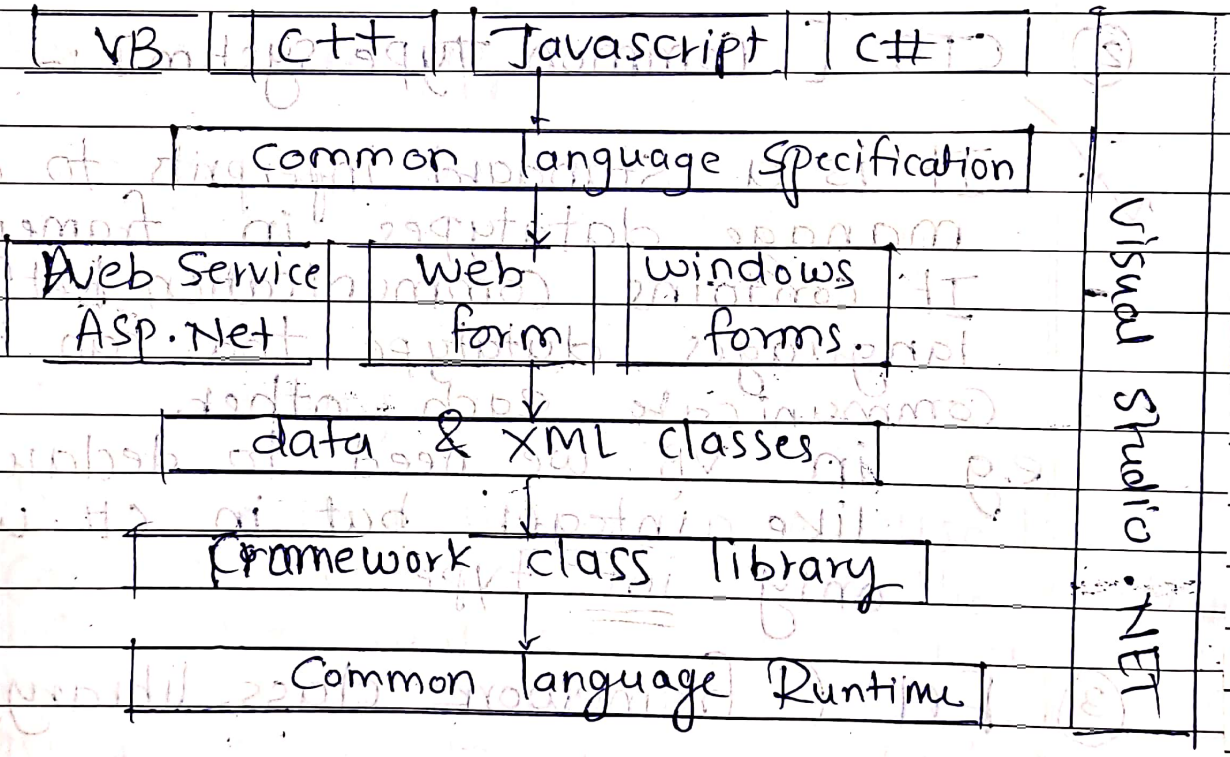
1] Explain .NET framework Architecture in brief.
2] Explain C# loops with def^n syntax, flowchaits.
3] Explain type-casting & their types in brief.

Q.2] Short Notes (Any two) 6 marks.

1. DLL & .EXE file.
2. Boxing & Unboxing
3. JIT compiler.

1]

→ .NET framework Architecture :-



- .NET framework Architecture is basically made for create & Running web app^n, windows app^n by Microsoft in 2005.

① CLR :- (Common language Runtime)

- It is is important base component.
- It Contains various languages like C#, cpp, to programming & run.
- Working :-
- In CLR source code methods Compile into machine code.
- bite code that is CIL (common intermediate language / MSIL (microsoft intermediate language. Compiles & Run to machine language.

② CTS [Common Type system] :-

- It is a standard inperprits to define & manage datatypes in framework.
- It contains communication betⁿ diffrent languages datatype that can be communicate each other.

e.g. in VB we need to declare datatype like integer but in C# we need only int type

③ FCL (framework class library) :-

- It Contains functionalities of the .NET framework.
- It contains classes, function, interfaces.
- defining object its beneficial to write code clearly & easily.

④ CLS :- (common language specification)

- It is a subset of CLR (common language Runtime.
- It contains Rules & Regulation to the data types, functions, & classes.
- It is made when .Net 2.0 released.
- It is a sub part of CLR.

Applications :-

1) web app.
2) windows app.
- above is form app.

3) languges we used :-
C#, cpp, f#, VB, Javascript.

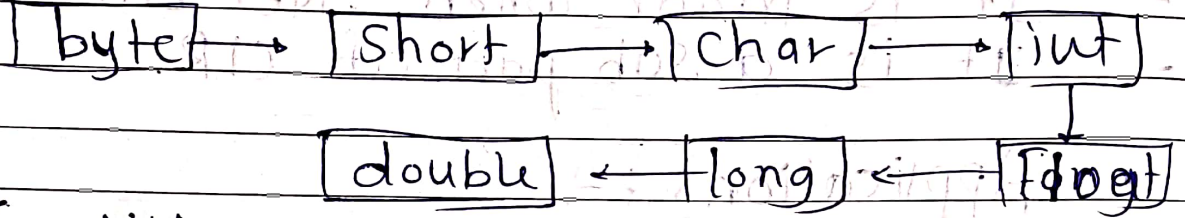
Q. 3.

→ type Casting :-

- type Casting Conversion we used to convert one data type to the another data type. that is implicit Conversion.
- type conversion can be used again to assign value to one data type to the another data type that is explicit type conversion.
- It can be manually or Automatic.

① Implicit ~~dtype~~ Casting :-

- It is conversion Automatic Conversion of one data type to another datatype
- It is taking conversion at Runtime.
- 2 datatypes must be Compatible.



- Conditions :-
  1. 2 datatypes must be Compatible.
  2. we cant reverse - doubl to byte conversion
  3. boolean data type not Convertable.

example :-

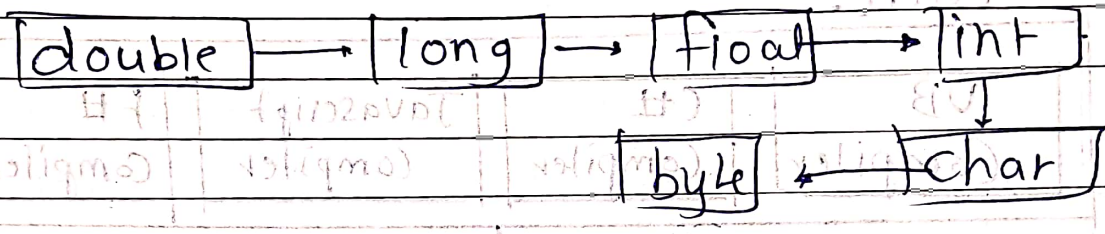
```
Using system;
namespace Casting
{ class Imp
{
  public void main ( string[] args)
{   doub
do int i = 20;
   double
      int num = 20;
      double i = num;
   Console.WriteLine (" value of i :" +i );
  }
 }
}
```

value of

O/P → i = 20.

(2) explicit type Casting :-

- It's contain manual conversion betn one data type to another datatype.
- When we Cant convert one datatype to another datatype implicitly then we need explicit type casting.
- In explicit type casting 2 datypes must be Compatible.



Example.

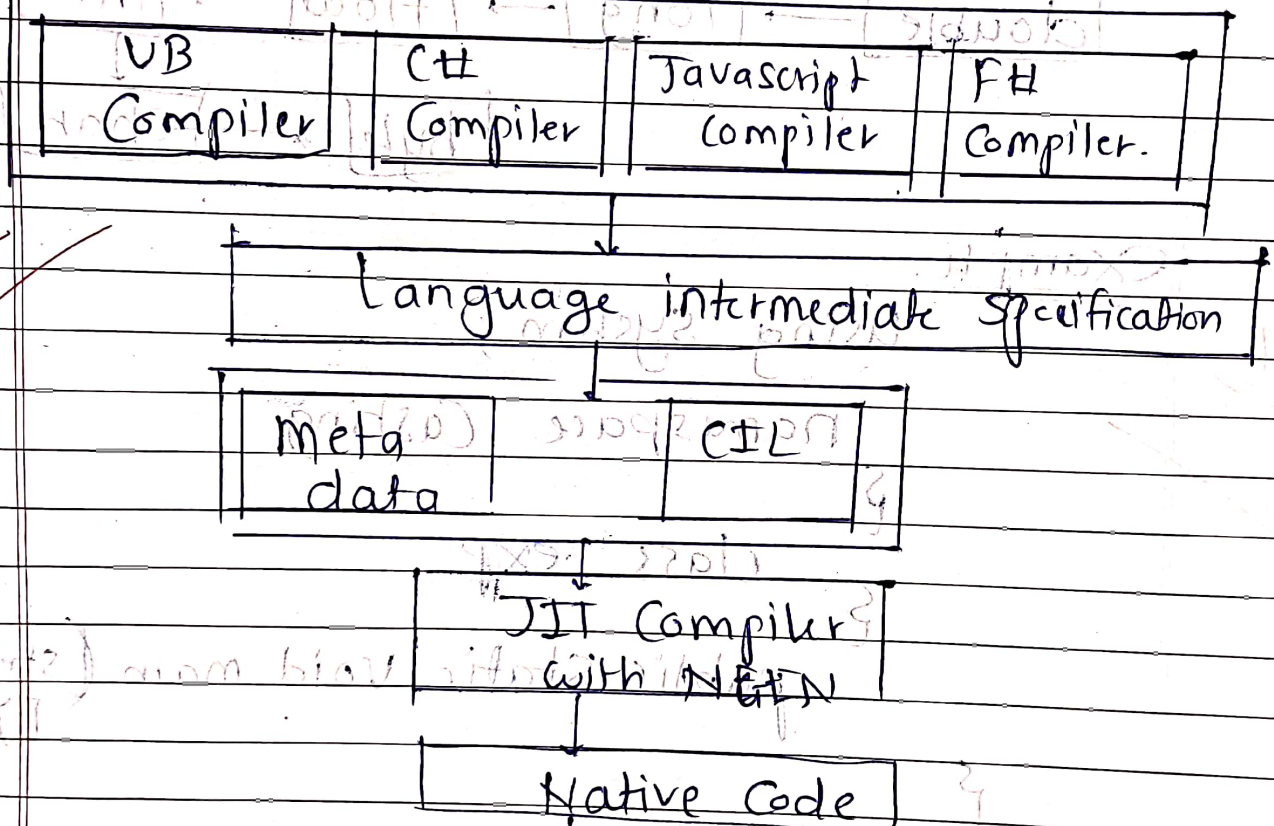
```
using system;
namespace Casting
{
  class exp
  {
    public static void main (string [] args)
    {
      double B = 20;
      int i = (int) B;
      Console.WriteLine ("Value of i : " +i);
    }
  }
}
```

o/p → Value of i = 20.

Q. 2]

3. JIT Compiler :-

→ - JIT Compiler Convert Code of Source Code to the machine Code.
- It contains bite Code that is contain by CIL & MSIL before the Compilation It Compile them into machine Code.



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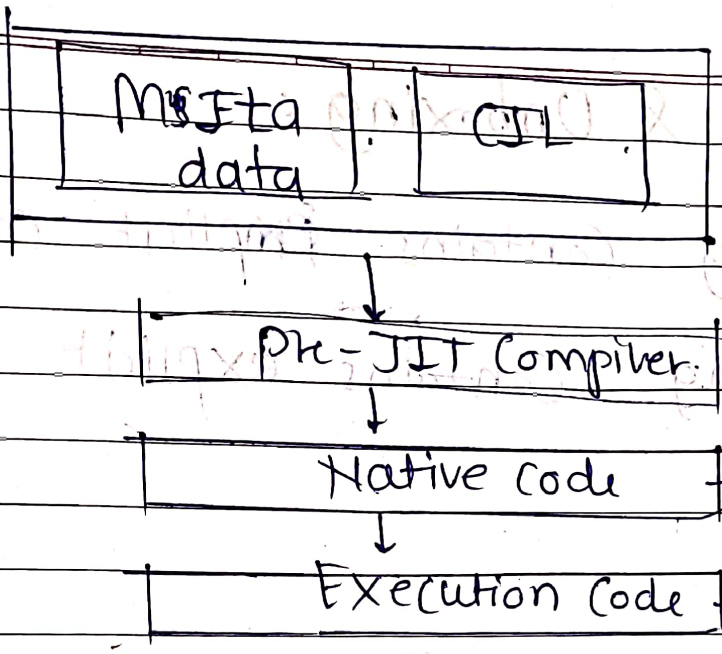
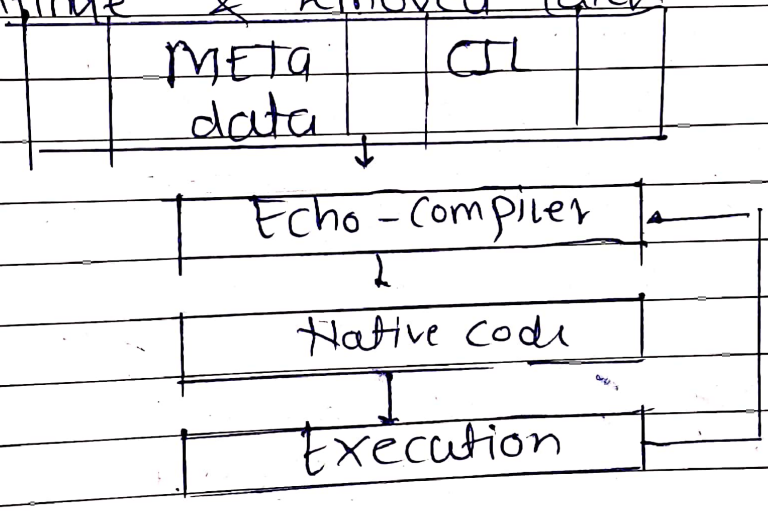
Types :-

(1) pre-JIT Compiler :-
- It Compiles all source Code methods at a runtime.
- all source Code Compile at a runtime.



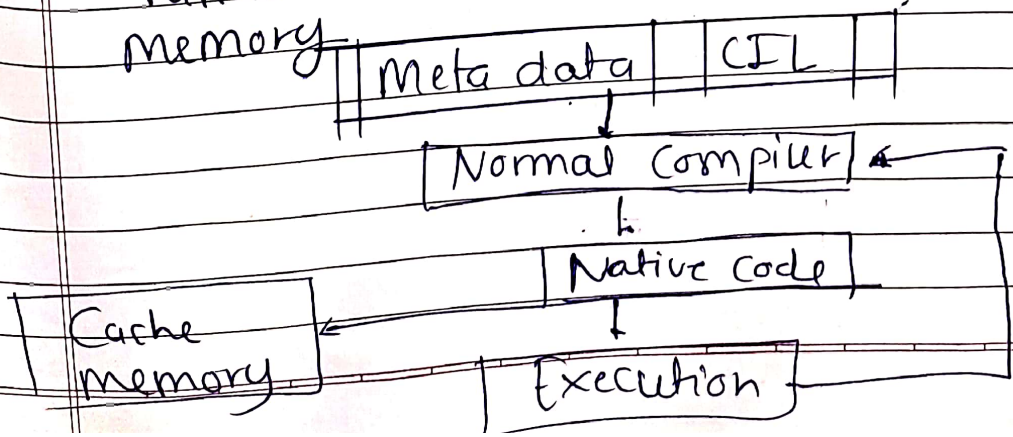
② Echono Compiler :-

- Required part of source code Compile at runtime & removed later.



③ Normal Compiler :-

- Required part of source code Compile at runtime & later Stored in cache memory



3. Boxing & Unboxing :-

→ Boxing Contains Implicit Conversion.

Unboxing Contains explicit Conversion.

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Name - Siddhi Rajesh Jadhav Div - B

Roll. No. 1340

Q1) Attempt Any Two.

3) → Type conversion happens when you assign a data type to another. If the data type are compatible then the C# does automatic type conversion and if they are not compatible then they are need to be converted into explicit which is known as explicit type casting.

- Types of Type Casting:

1) Implicit Type Casting:

Implicit type casting are also known as automatic type conversion refers to built in mechanism that controls the flow of execution without the explicit using time.

byte	→	short	→	char	→	int	→	long	→	float	→	double

ex: using System;

namespace Casting {

class type {

public static void main (string [] args) {

int i = 23;

long l = i;

float f = l;

Console.WriteLine ("int i = ", +i);

Console.WriteLine ("long l = ", +l);

Console.WriteLine ("float f = ", +f);

}

}

}

O/P → int i = 23 long l = 23 float f = 23.

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2) Explicit Type Casting:

double → float → long → int → char → short → byte

It is a process of converting a value of data types to another which are not implicit compatible. This is necessary where there is a potential of data loss. When we try assign a double value to int data types they will be a complication error when they are not compatiable with each other.

ex:

```
Using System;
namespace Casting
{
    class Type
    {
        public static void Main(string[] args)
        {
            double d = 765.12;
            int i = (int) d;
            Console.WriteLine("value of i is= ", +i);
        }
    }
}
```

O/P → value of i is : 765.12.

~~int i = 50~~
~~double d = 50.~~

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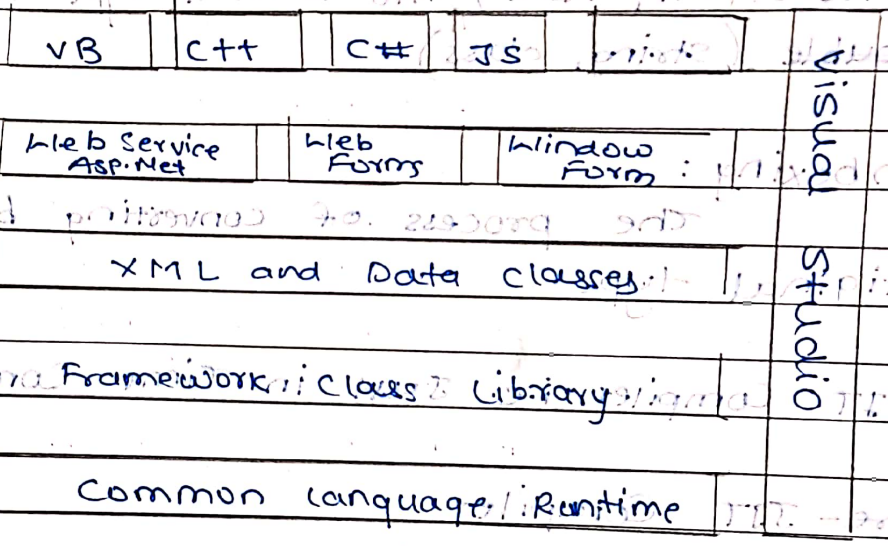
→ .Net framework i.e software development platform provided by Microsoft that provides a common programming platform for running .Net framework code on diff^n OS. .Net is specially used for C# and java. The first version of .Net was 1.0 and now it's running 5.0 version.



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- FCL : Framework Class Library it includes :
  1) Web Programming.
  2) Intermediate language.
  3) Interoperability.
  4) Windows Application.

- CLS - stands for Common Language Specification. This is a common of CLR.

DATE : / /

- CTS : Common Type System . This system provide intermediate common language.

(Q.2). Short Notes

2)

→ Boxing

It is the process of converting value type variables (int, float) into reference type variable ~~double~~ (string, class)

01

Unboxing :

The process of converting boxing into its original type

3) JIT Compiler i.e. Just in Time Compiler

1) Pre- JIT Compiler

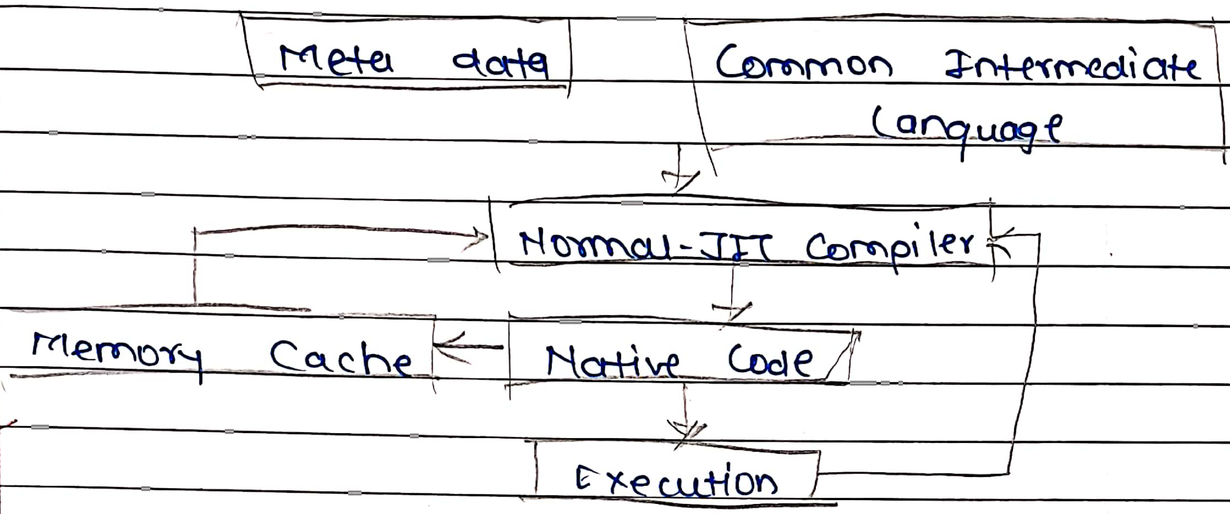
Meta data	Common : Intermediate Language

Pre- JIT Compiler implemented in .NGENIX

Native Code

Execution

2) Normal JIT Compiler



3) Econo JIT compiler

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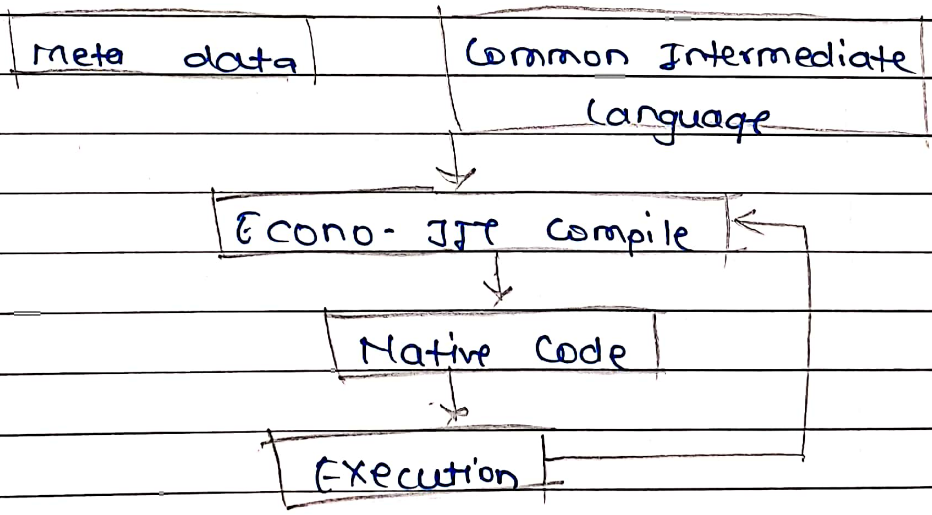

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