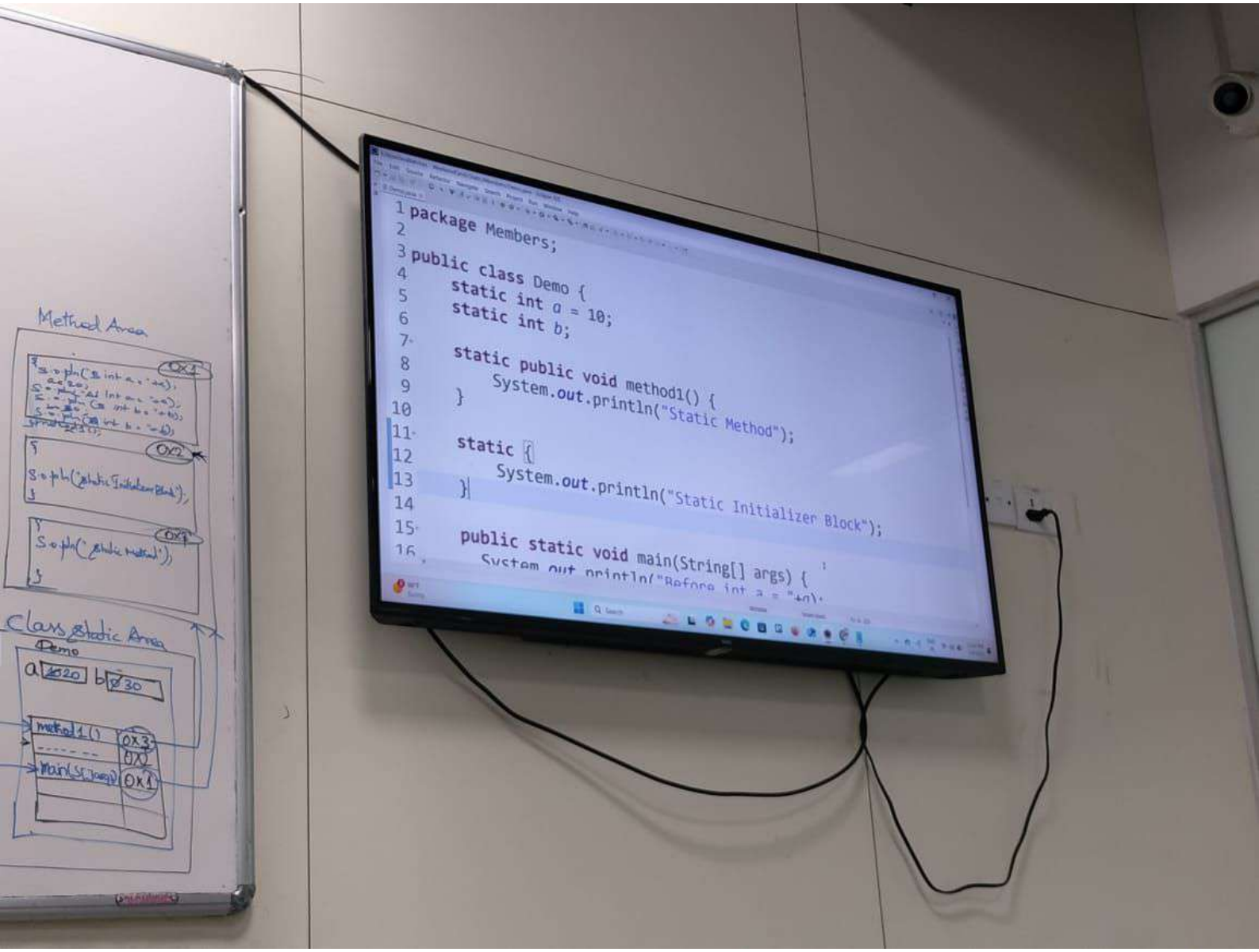
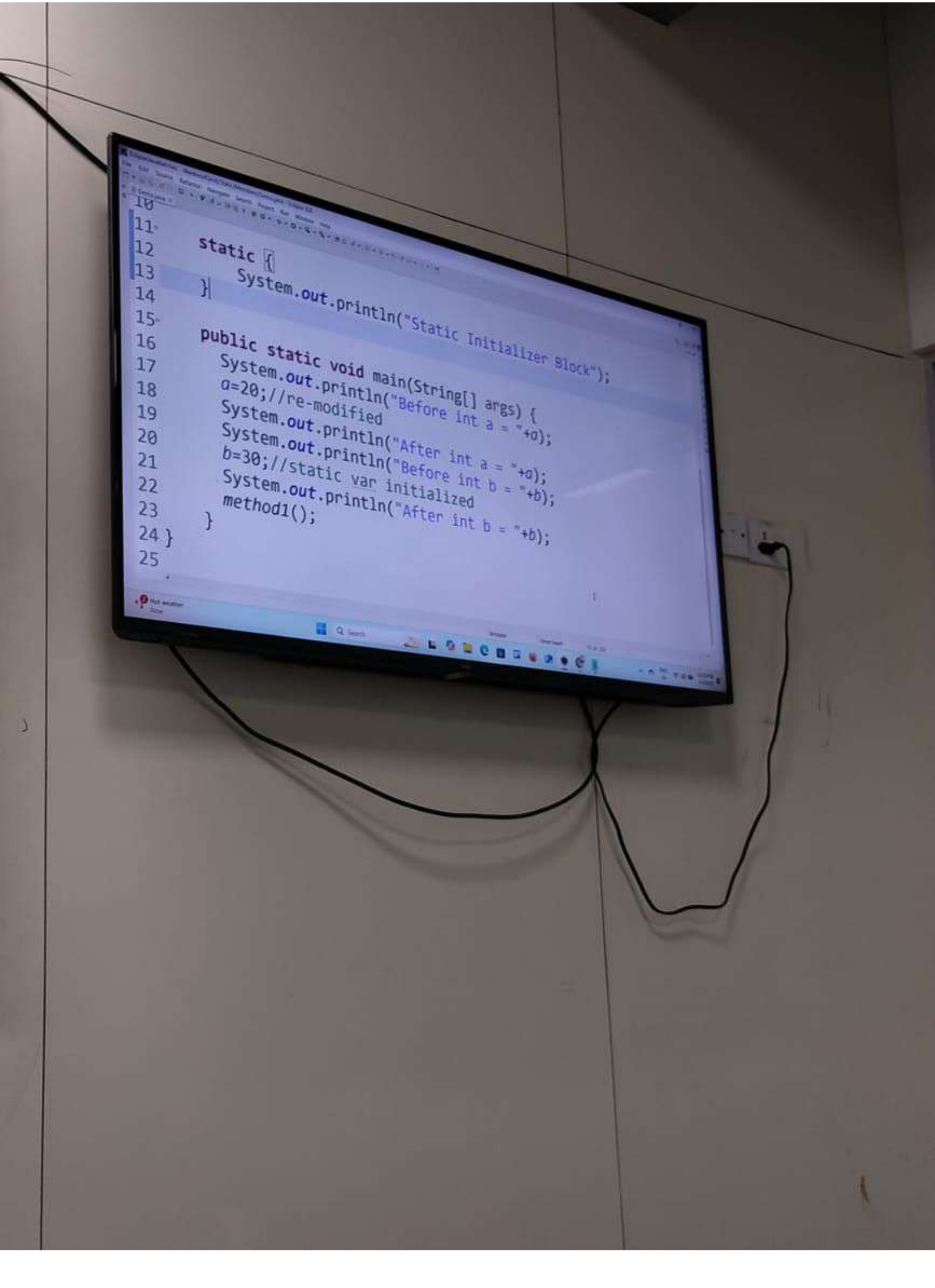
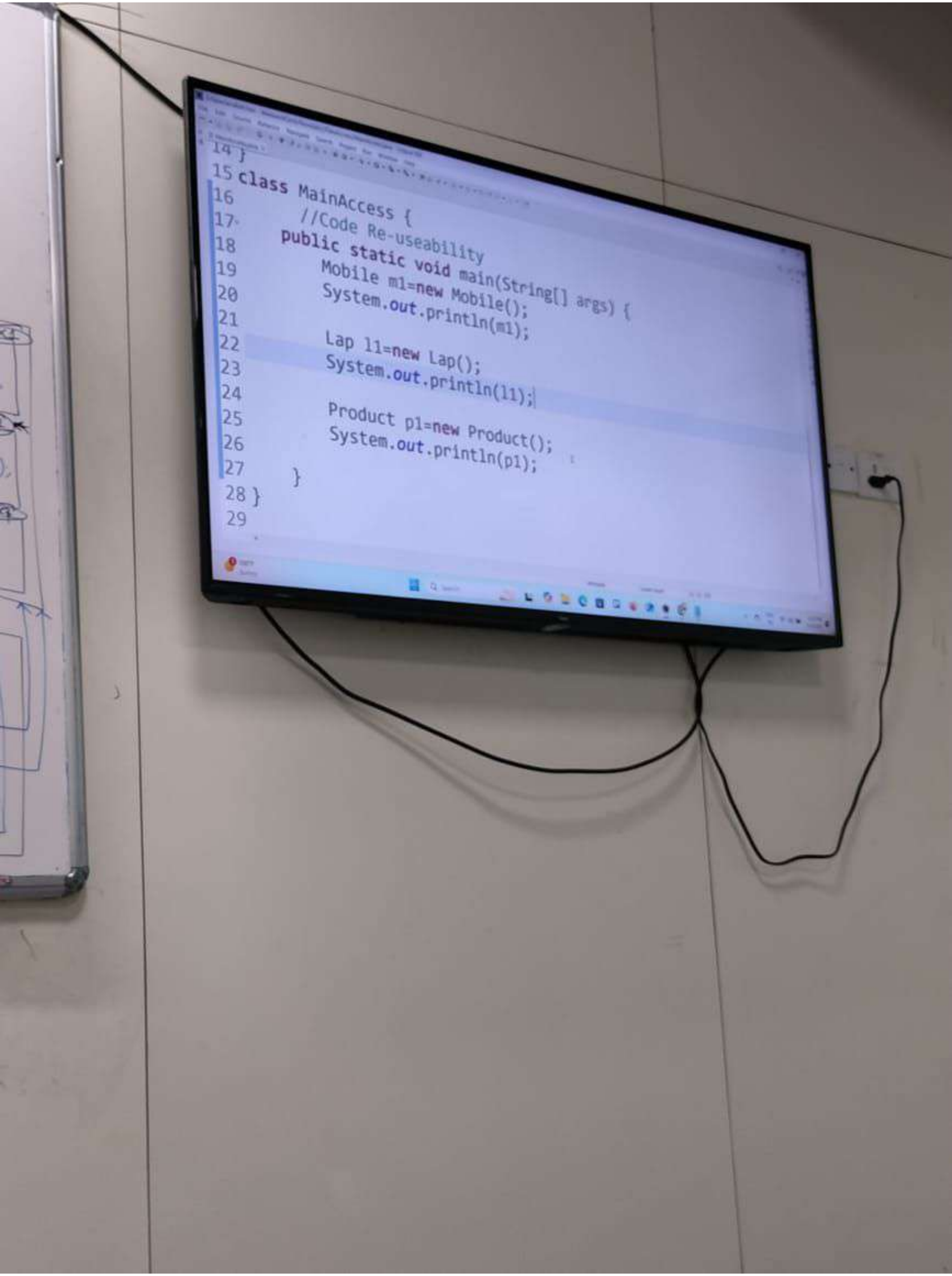
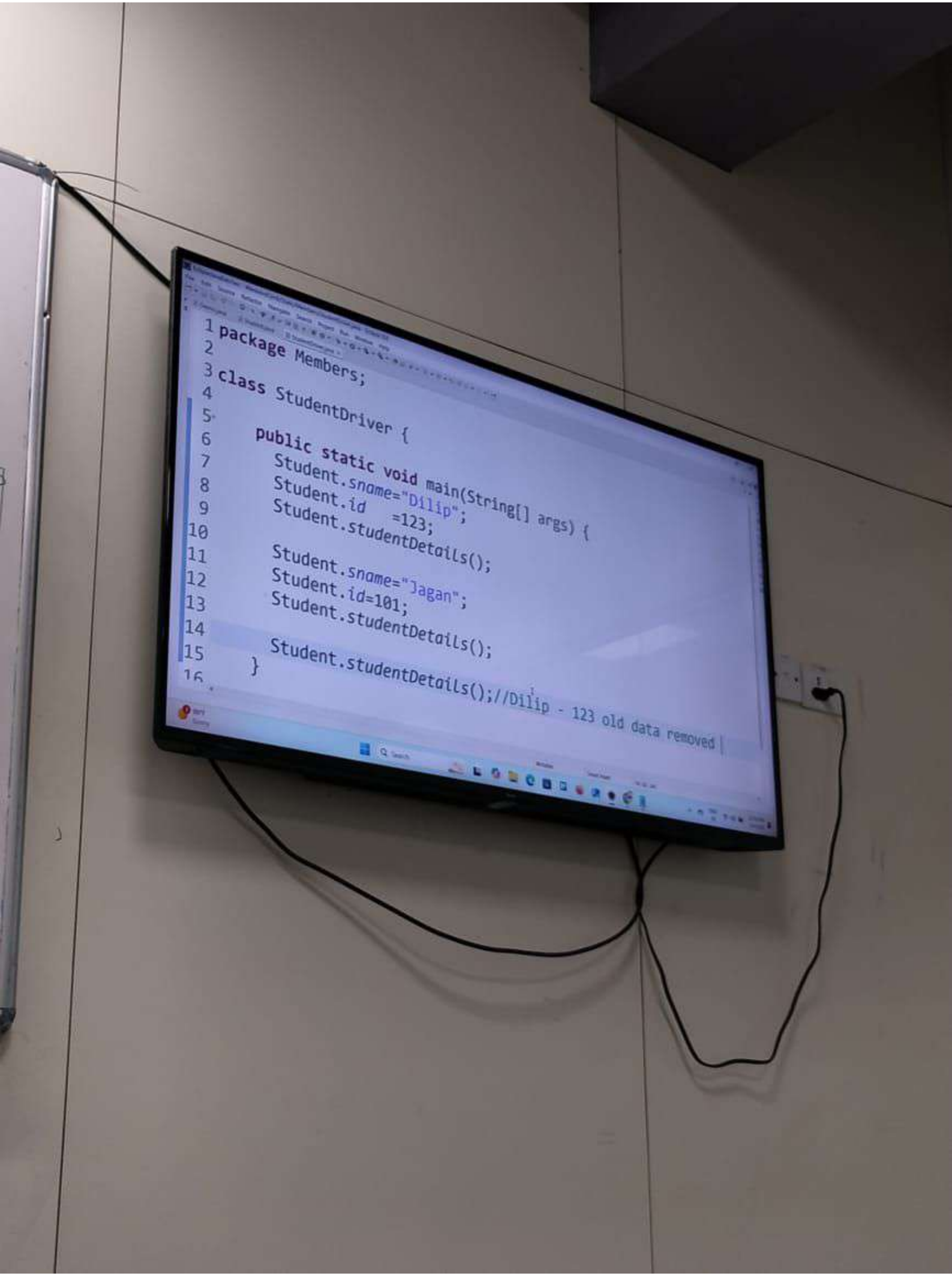
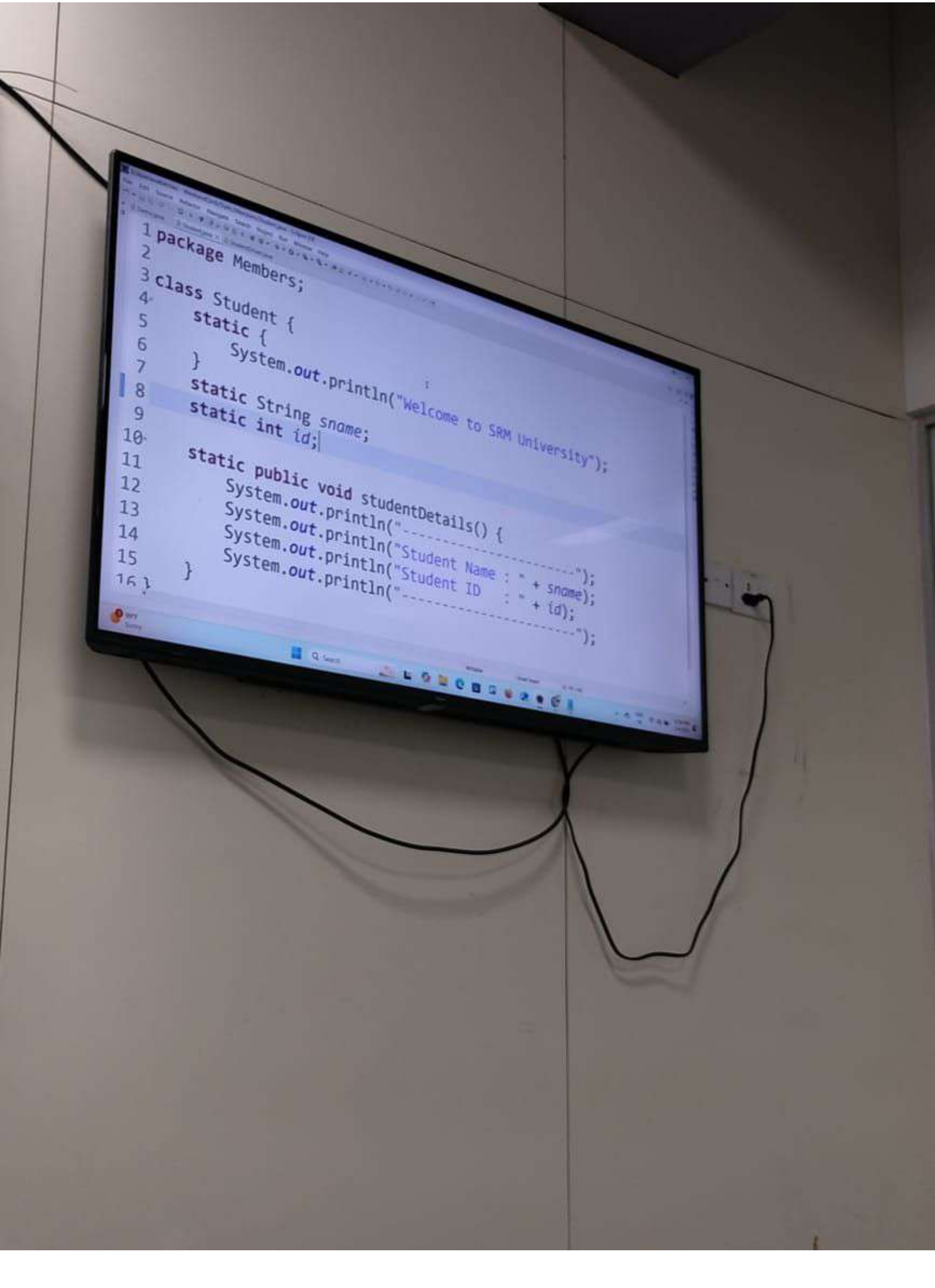



```
1  package Members;
2
3  public class Demo {
4      static int a = 10;
5      static int b;
6
7
8      static public void method1() {
9          System.out.println("Static Method");
10     }
11
12     static {
13         System.out.println("Static Initializer Block");
14     }
15
16     public static void main(String[] args) {
17         System.out.println("Before int a = "+a);
```


10
11
12 static {
13 System.out.println("Static Initializer Block");
14 }
15
16 public static void main(String[] args) {
17 System.out.println("Before int a = "+a);
18 a=20;//re-modified
19 System.out.println("After int a = "+a);
20 System.out.println("Before int b = "+b);
21 b=30;//static var initialized
22 System.out.println("After int b = "+b);
23 method1();
24 }
25


14 }
15 class MainAccess {
16 //Code Re-useability
17 public static void main(String[] args) {
18 Mobile m1=new Mobile();
19 System.out.println(m1);
20
21 Lap l1=new Lap();
22 System.out.println(l1);
23
24 Product p1=new Product();
25 System.out.println(p1);
26 }
27 }
28
29


1 package Members;
2
3 class StudentDriver {
4
5
6 public static void main(String[] args) {
7 Student.sname="Dilip";
8 Student.id =123;
9 Student.studentDetails();
10
11 Student.sname="Jagan";
12 Student.id=101;
13 Student.studentDetails();
14
15 Student.studentDetails();//Dilip - 123 old data removed
16 }


1 package Members;
2
3 class Student {
4 static {
5 System.out.println("Welcome to SRM University");
6 }
7 static String sname;
8 static int id;
9
10 static public void studentDetails() {
11 System.out.println("----------");
12 System.out.println("Student Name : " + sname);
13 System.out.println("Student ID : " + id);
14 System.out.println("----------");
15 }
16 }

Members

→ Static members
→ Non Static members.

Static members.

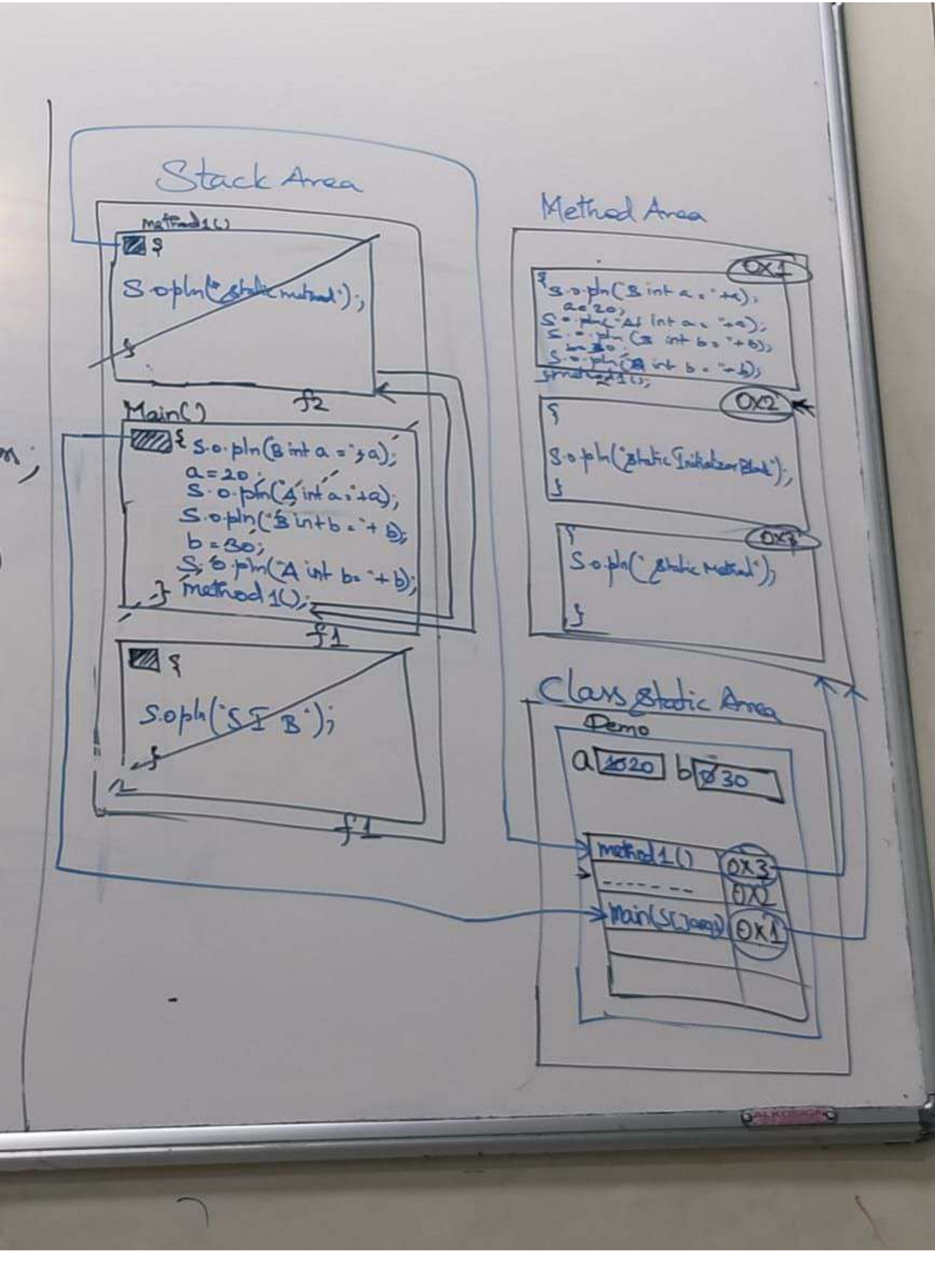
→ Static is also called as
Keyword (or) Modifier.

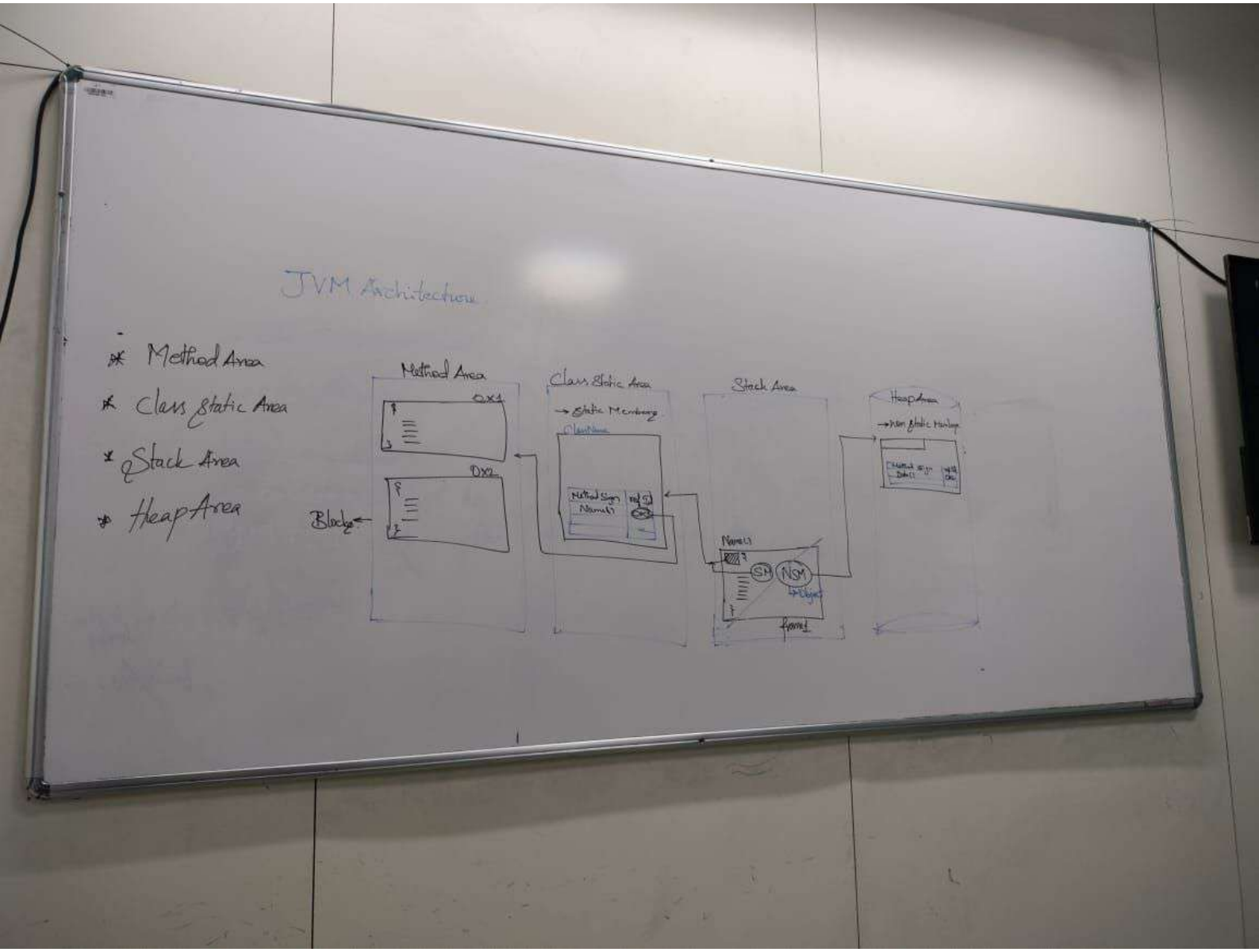
Syntax.

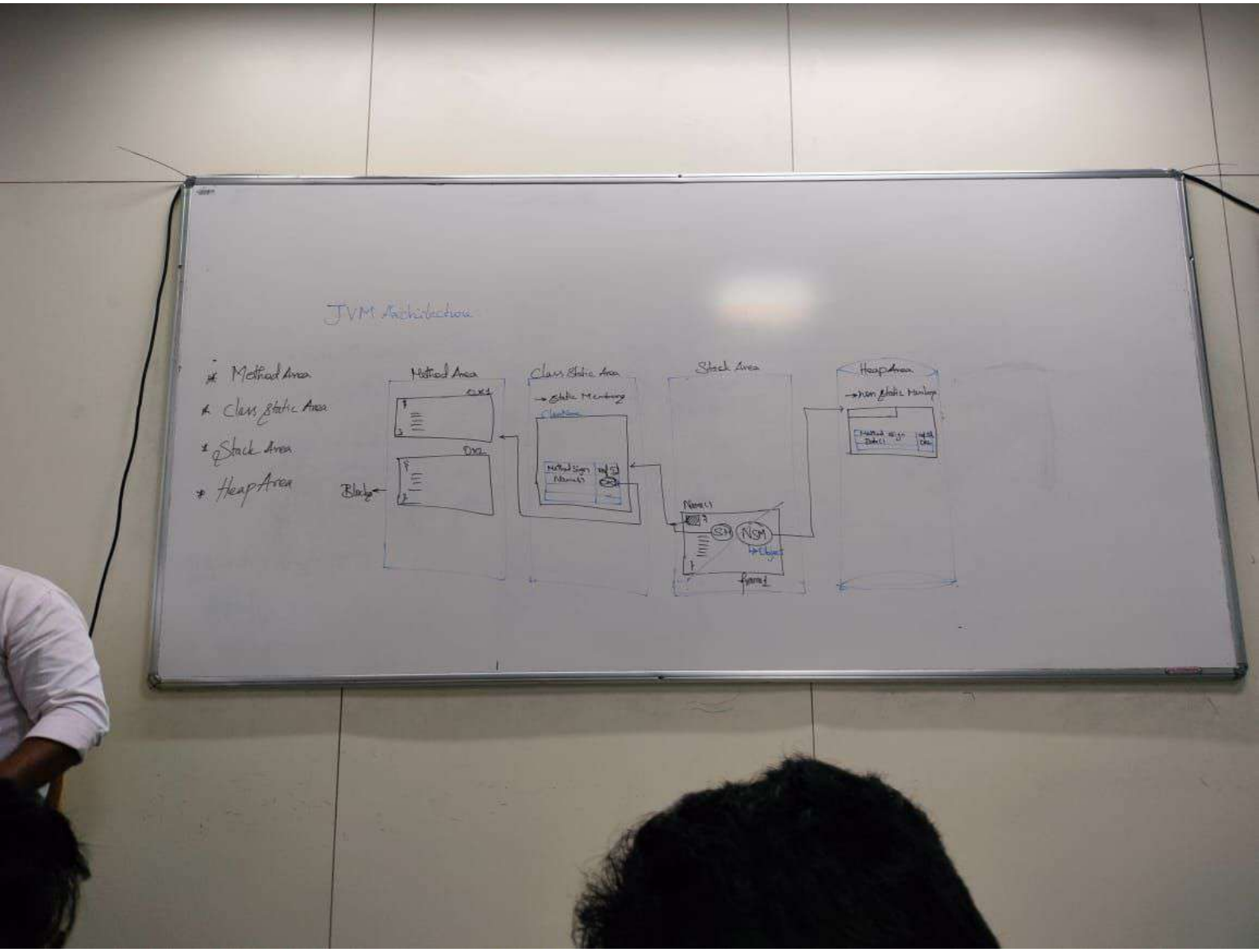
* Static variable → Static datatype var_Name = Value/Address;
* Static Method → Static [AM] returntype methodName([Formal])
{ }
* Static Anonymous Block
Static Initializer Block. → Static
{

}

SIB
B int a = 10
A int a = 20
B int b = 0
A int b = 30
Static Method


Stack Area
method1()
{
S.o.pln("static method");
}
f2
Main()
{ S.o.pln("B int a = "+a);
a=20;
S.o.pln("A int a = "+a);
S.o.pln("B int b = "+b);
b=30;
S.o.pln("A int b = "+b);
} method1();
f1
{
S.o.pln("S I B");
}
f1
Method Area
0x1
{ S.o.pln("B int a = "+a);
a=20;
S.o.pln("A int a = "+a);
S.o.pln("B int b = "+b);
b=30;
S.o.pln("A int b = "+b);
} method1();
0x2
{
S.o.pln("static Initializer Block");
}
0x3
{
S.o.pln("static Method");
}
Class Static Area
Demo
a 20
b 30
method1()
0x3
0x2
main(S[]Jargs)
0x1


JVM Architecture
* Method Area
* Class Static Area
* Stack Area
* HeapArea
Method Area
Class Static Area
Stack Area
Heap Area
Block2
SM
NSM


JVM Architecture
* Method Area
* Class Static Area
* Stack Area
* Heap Area
Method Area
Class Static Area
Stack Area
Heap Area
Block
SM
NSM

Class:

→ Blue Print (Create an Object)

→ n no of Objects

→ In ~~same~~ classroom

We can Create n no of Object → [Identical Object (or) Similar Object]

Class classroom

{

→ Object

→ Class Block

→ Method Block

}

Object

Physical Appearance

How to create Object for class?

Step 1: Use Existing class (or) Create a class

Step 2: Instantiation

Step 3: ClassName Object_reference = new ClassName();

Keyword Constructor

Anonymous Object

Behaviour

Use

→ read

→ Write

→ Knowledge

→ Search

→ connect

Info

Features

→ BookName

→ Author

→ Price

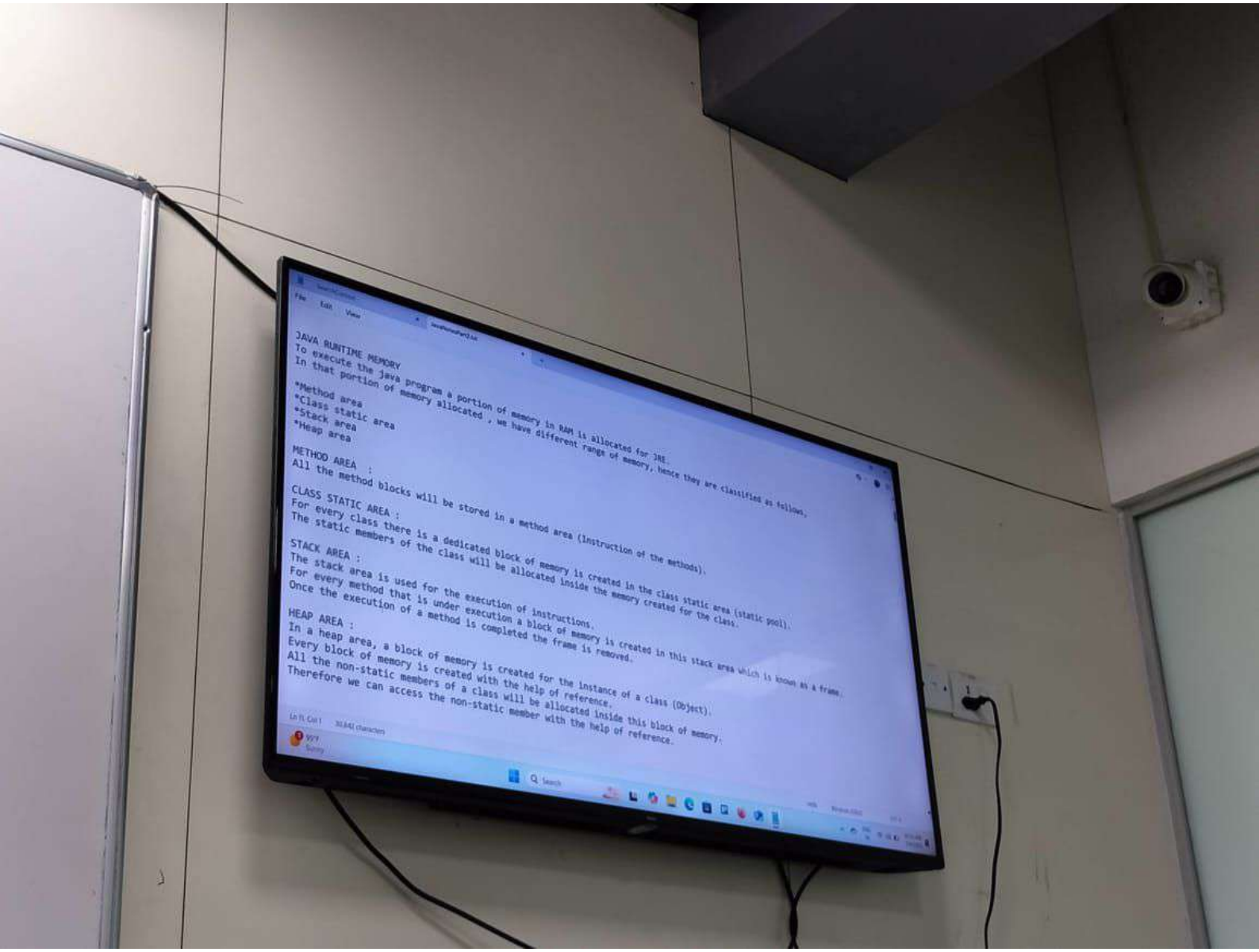
→ Style

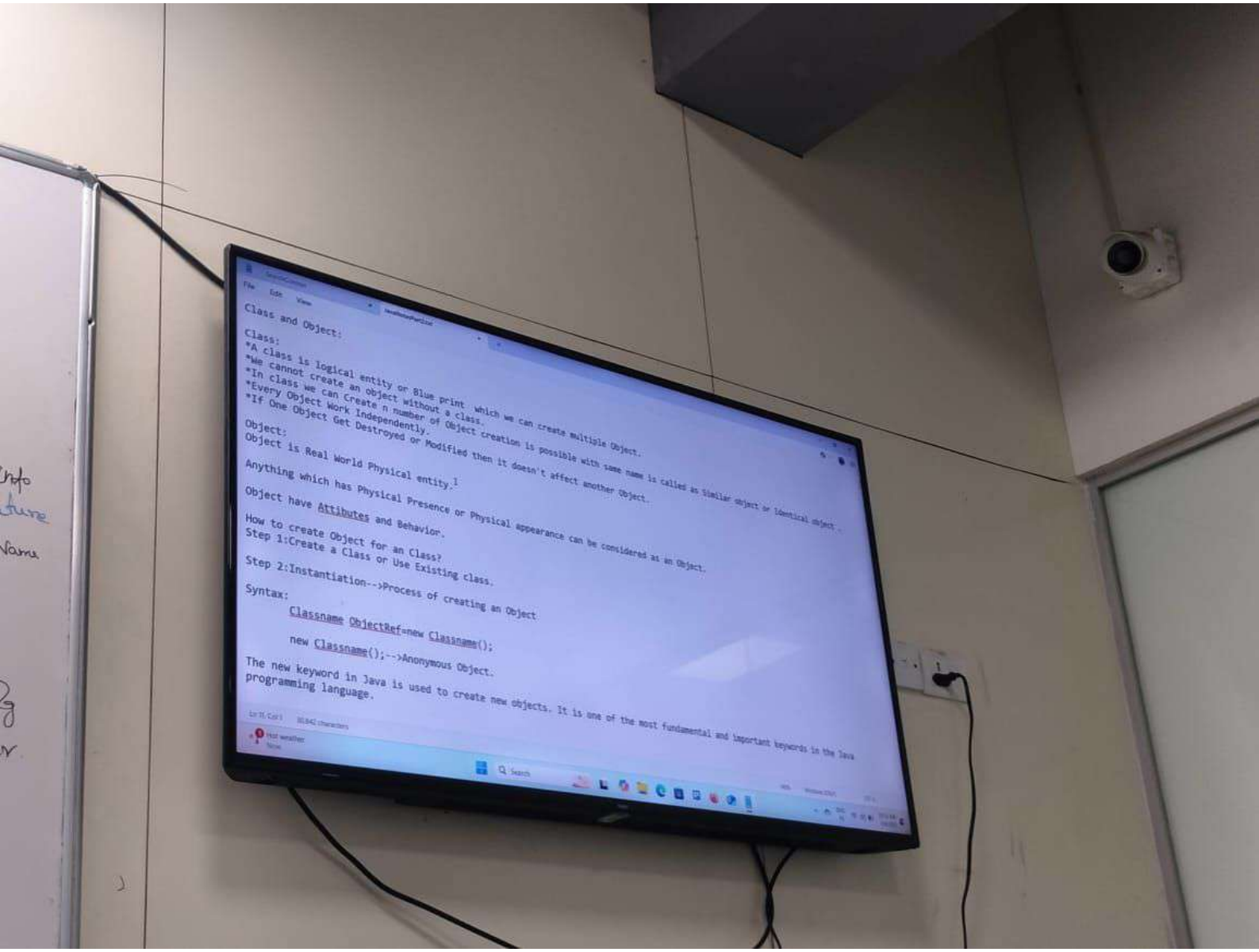
→ Index Pg

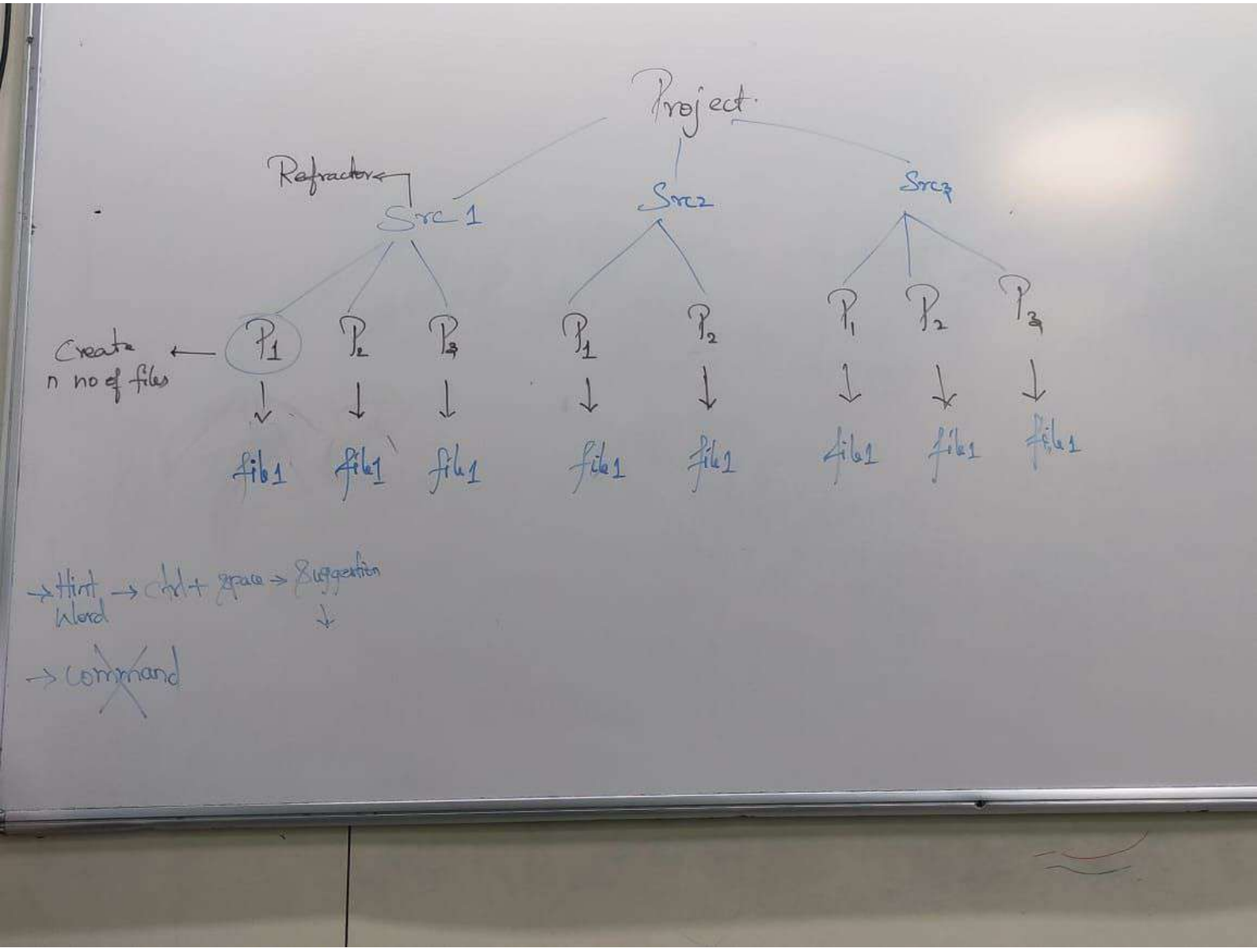
→ Publisher

↓

Attributes


JAVA RUNTIME MEMORY
To execute the java program a portion of memory in RAM is allocated for JRE.
In that portion of memory allocated , we have different range of memory, hence they are classified as follows.
*Method area
*Class static area
*Stack area
*Heap area
METHOD AREA :
All the method blocks will be stored in a method area (Instruction of the methods).
CLASS STATIC AREA :
For every class there is a dedicated block of memory is created in the class static area (static pool).
The static members of the class will be allocated inside the memory created for the class.
STACK AREA :
The stack area is used for the execution of instructions.
For every method that is under execution a block of memory is created in this stack area which is known as a frame.
Once the execution of a method is completed the frame is removed.
HEAP AREA :
In a heap area, a block of memory is created for the instance of a class (Object).
Every block of memory is created with the help of reference.
All the non-static members of a class will be allocated inside this block of memory.
Therefore we can access the non-static member with the help of reference.


Class and Object:
Class:
*A class is logical entity or Blue print which we can create multiple Object.
*We cannot create an object without a class.
*In class we can Create n number of Object creation is possible with same name is called as Similar object or Identical object.
*Every Object Work Independently.
*If One Object Get Destroyed or Modified then it doesn't affect another Object.
Object:
Object is Real World Physical entity.
Anything which has Physical Presence or Physical appearance can be considered as an Object.
Object have Attibutes and Behavior.
How to create Object for an Class?
Step 1:Create a Class or Use Existing class.
Step 2:Instantiation-->Process of creating an Object
Syntax:
Classname ObjectRef=new Classname();
new Classname();-->Anonymous Object.
The new keyword in Java is used to create new objects. It is one of the most fundamental and important keywords in the Java programming language.



→ Hint word → ctrl + space → Suggestion

→ ~~command~~