Class

fields + Methods

Encapsul

Public void setName (String name)
{
this.name = name;
}
}

A

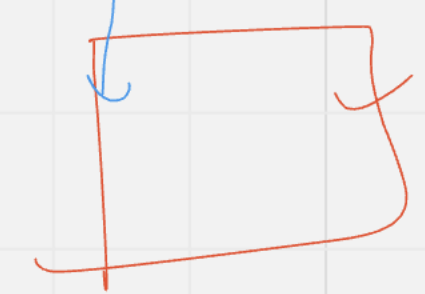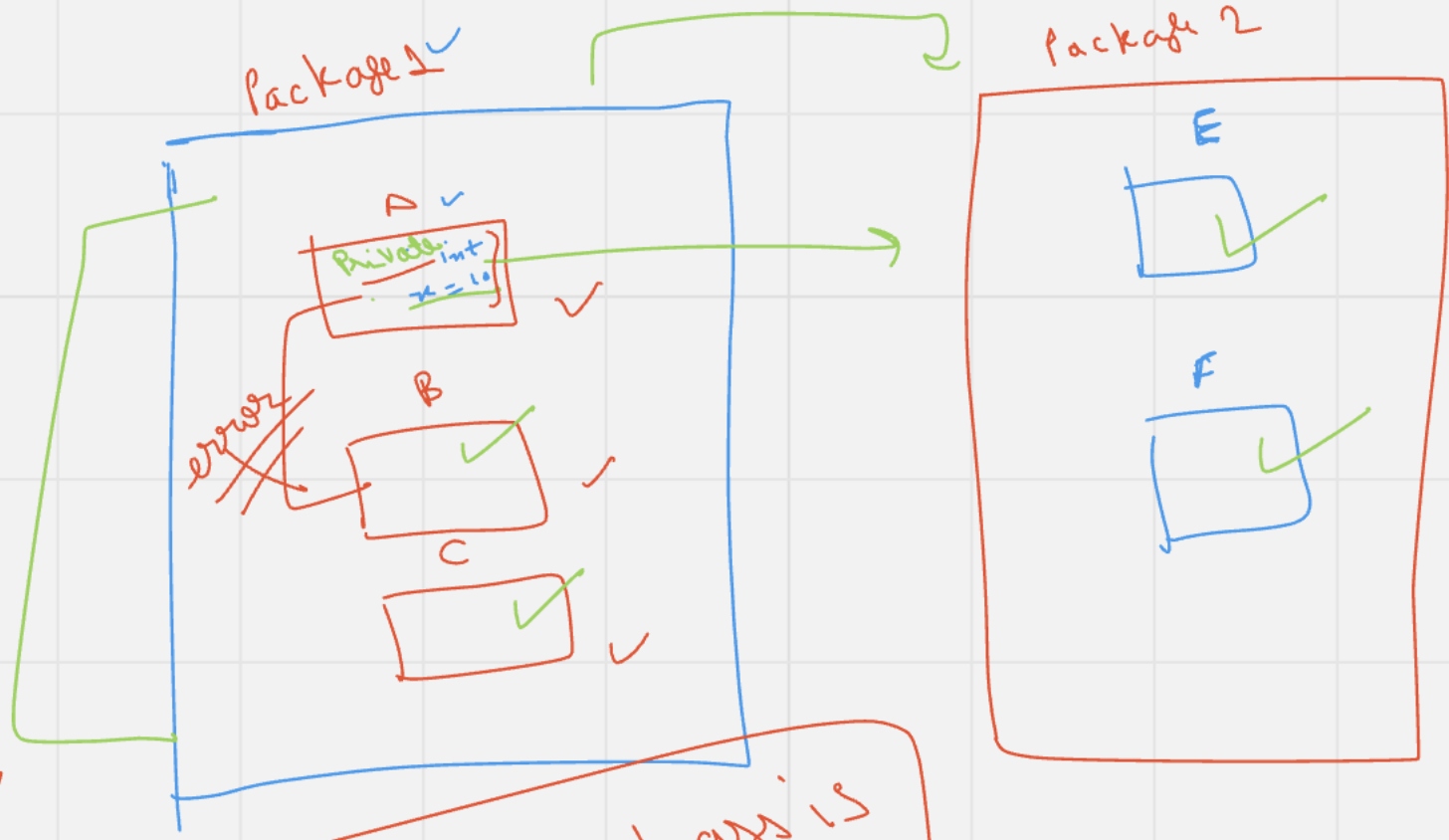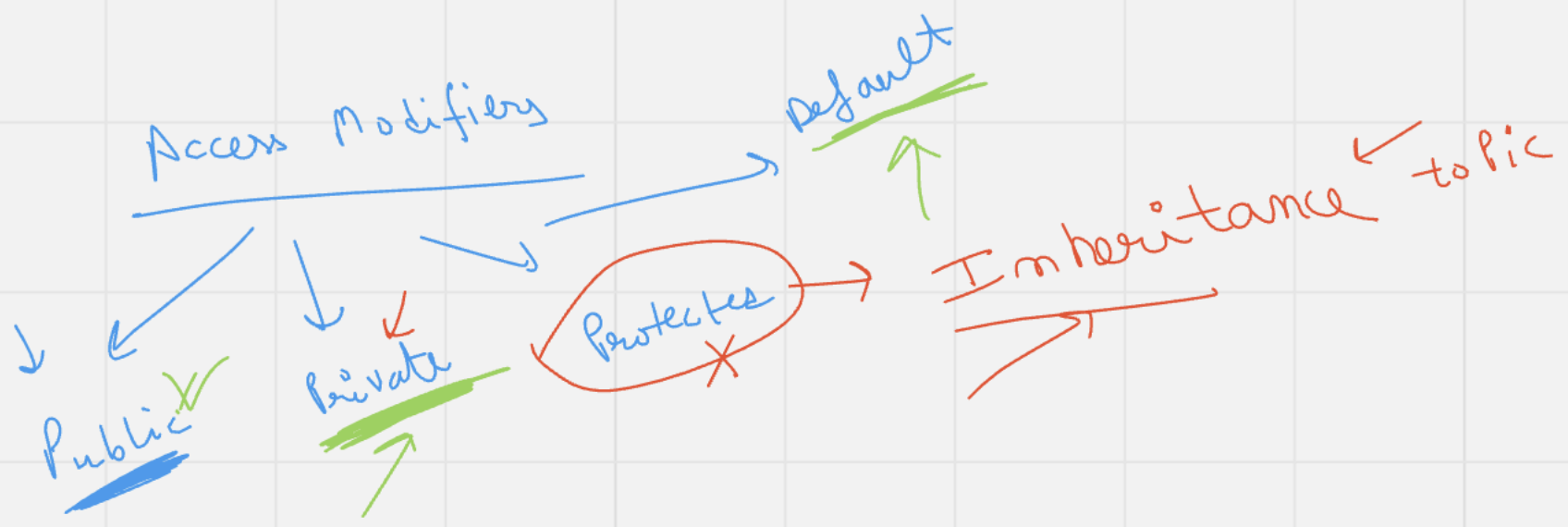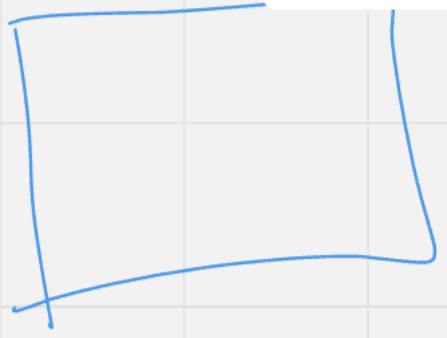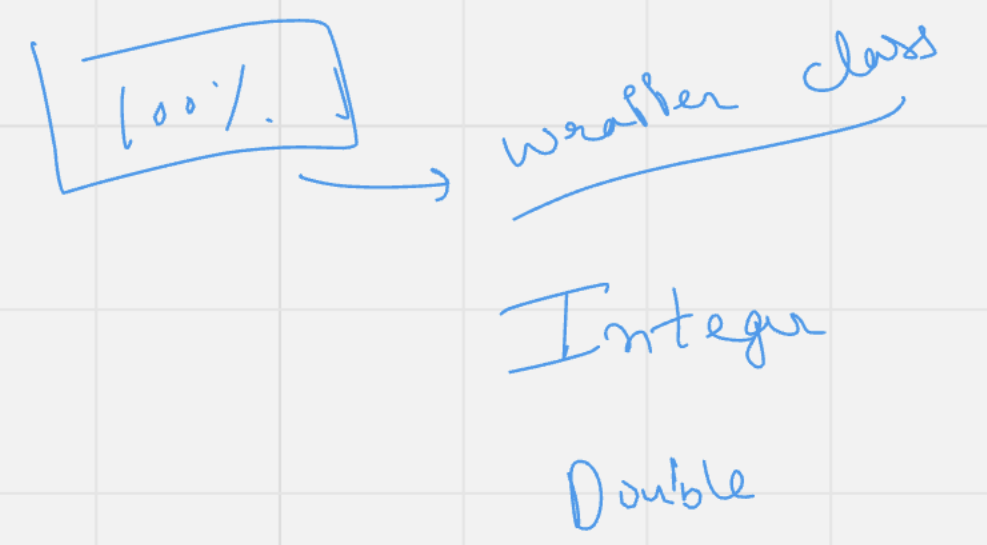Private String name;
getter
setter
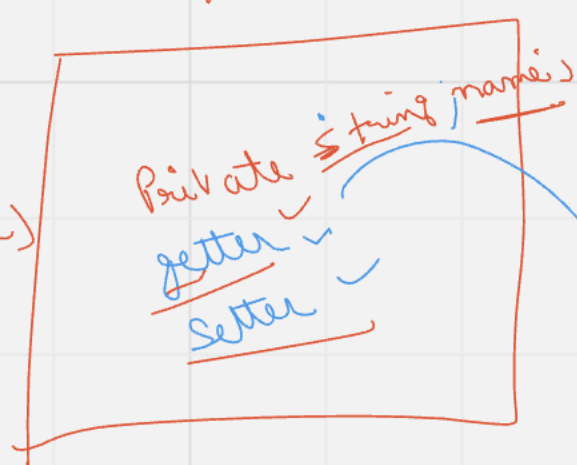
Public String getName()
{
return this.name;
}
B
}

Studen

Access Modifiers → Default

Inheritance ← topic

↓ ↙   ↓ ↙   ↘   (Protected ✗) →

Public ✓   Private

Package 1

Package 2

A ✓
Private int
x = 10 ✓

error

B ✓
✓

C ✓
✓

E
✓

F
✓
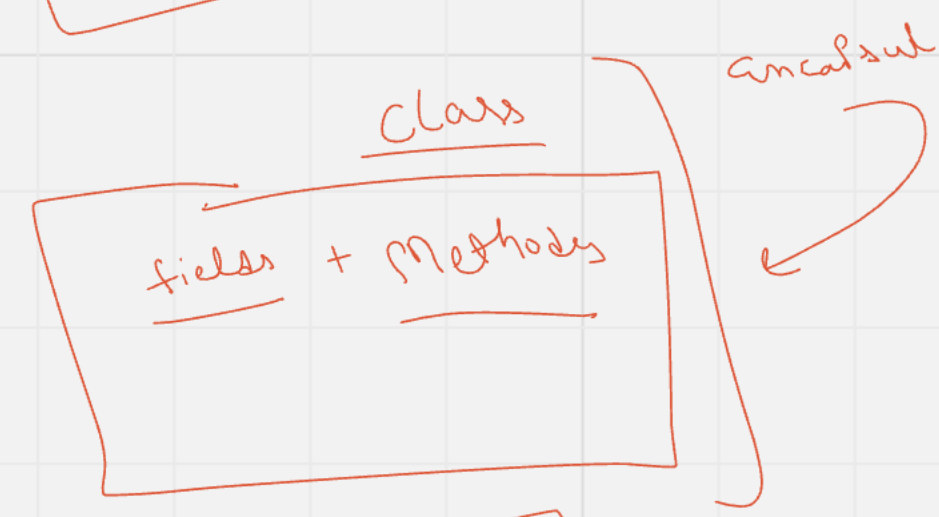
why Only 1 class is Public ? ?,

a

b ✓

s1

a

s1

100%. → wrapper class

Integer

Double

Dog

name
Price

int x = u
(i) u → i,
(i) u both

Primitive (data types)

print

→ Integer

class Integer

float

double

char

→ Float

Double

d1

"bruno"
500

String → class

X (class int f

class Integer f

3

3

s1

object

s2   s3
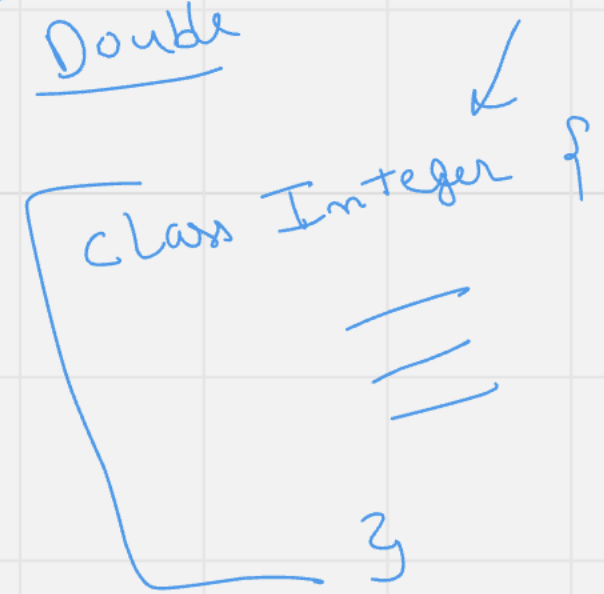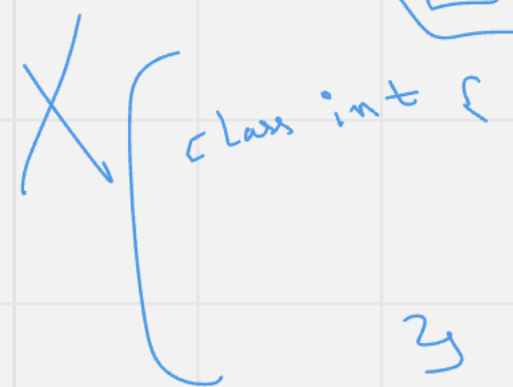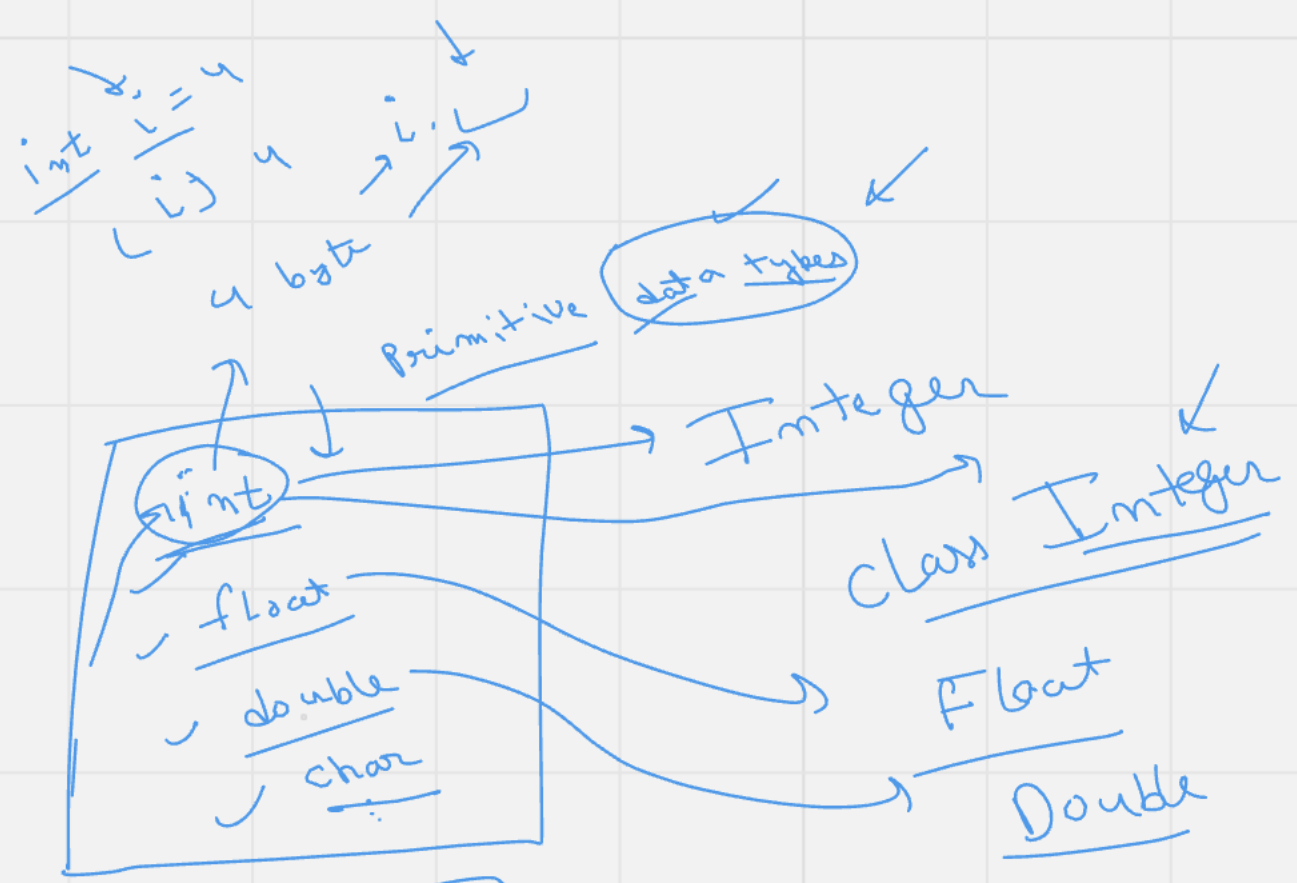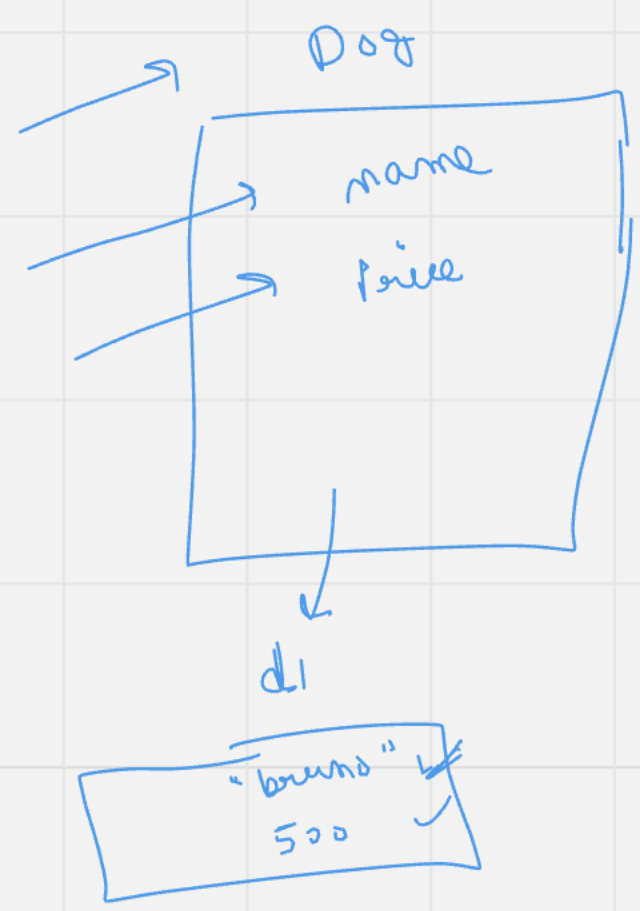
class Student {

    int rollNum;
    String name;
    int age;

}

Student

rollNum
name
age

S1
rollNum
name
age

S2
rollNum
name
age

S3

· (dot)

S1 . rollNum

S1 . age
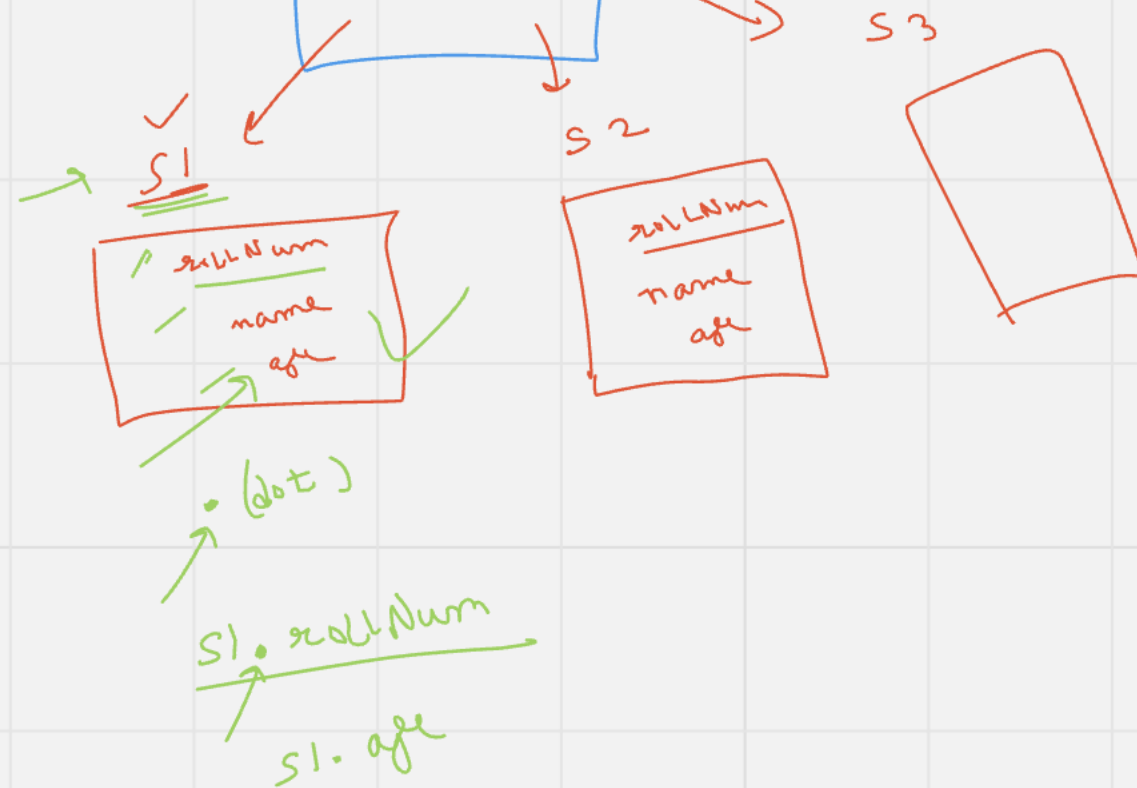
int a[] = new int [10];

Student s1 = new Student();

Student

OOPS

Roll_Num
Name
Email
Age

first

Roll_Num = 1
Name = "abc"
Email = "xyz"
Age = 20

S1

10

S2

S3

copy-Past
107

100

Class (Blue print)

ROLL NO.
Name
Age
Email

object

S1

S2   S3

| 3 | 4 | 2 | 6 | 8 | 9 |

| 3 | 4 | 2 |

| 8 | 9 |

| 2 | 3 | 4 |

| 3 | 4 |
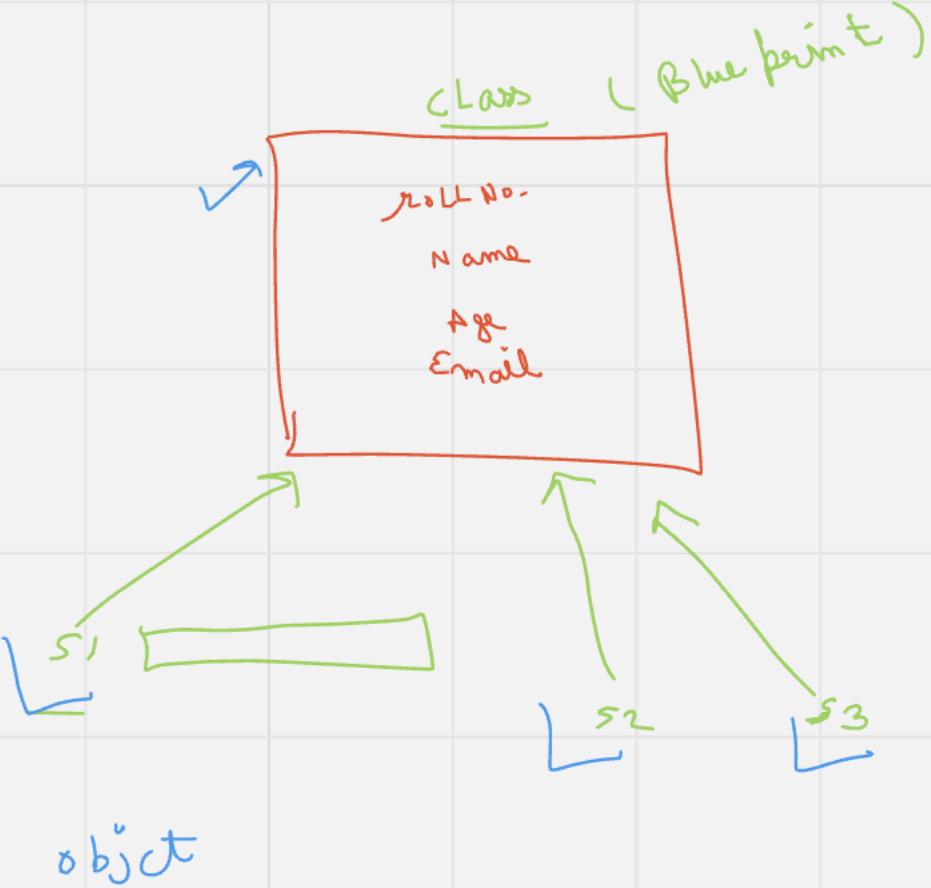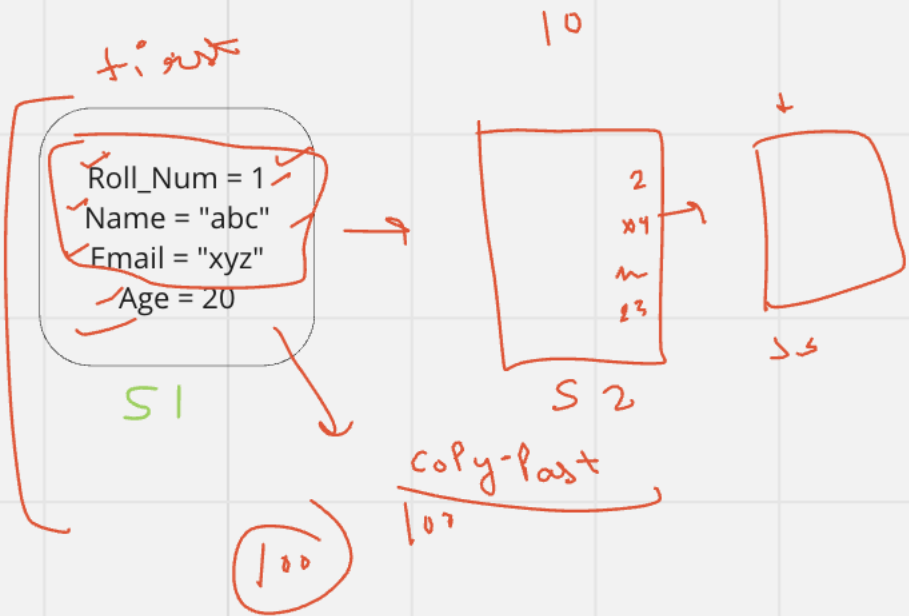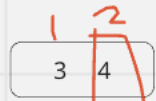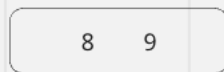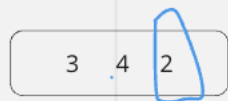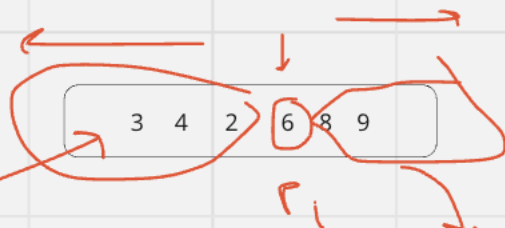
TC: Nlog(N) --> Merge Sort

QuickSort:

TC: Nlog(N)

worstcase: (N^2) {when array is already sorted}

$i \rightarrow -1$ $d + \frac{z}{2}$ Pivot

1	8	6	3	5

if the currEle is smaller than lastEle:

i++
swap i, j

i++
swap i, lastEle

1	8	6	3	5

1	3	6	8	5

5

1	3	5	8	6

1	3	5	6	8

Pivot

1	8	6	3	5

L   R

5

$i \rightarrow$ 7 3

7

3	8	4	9	2	6

3	4	8	9	2	6

3	4	2	9	8	6

if the currEle is smaller than Pivot:

i++
swap i, j

i++
swap i, Pivot

8	3	4	9	2	6

2 6 9

8

6	3	4	2		8		9