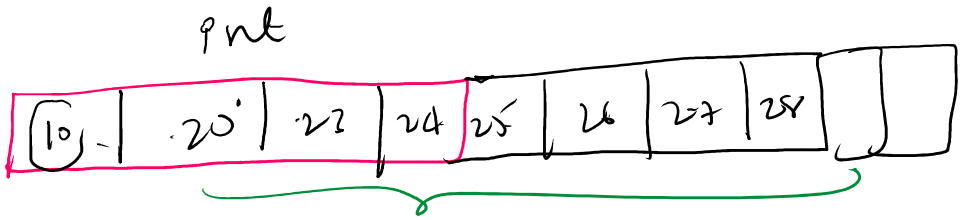
Class 5 - Arrays

Saturday, April 19, 2025 10:56 AM

```
int s1 = 87;
int s2 = 88;
int s3 = 66;
```

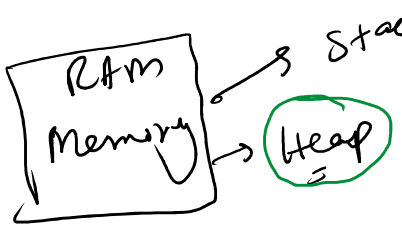
→ It is a data structure which is used to store multiple values of same data type.



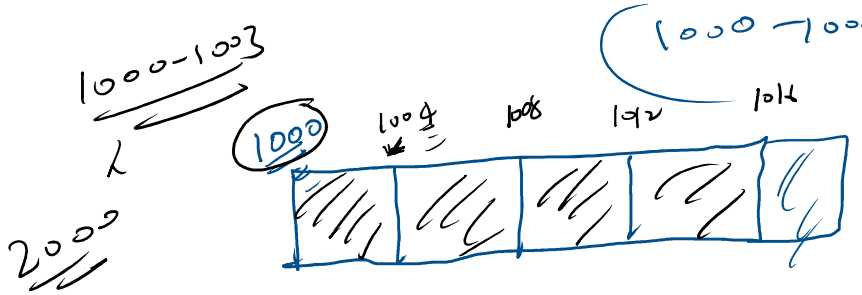
OOPS

```
int arr[] = new int[10];
```

reference variable




```
double ar[] = new double[10];
```




```
int a[] = new int[5];
```

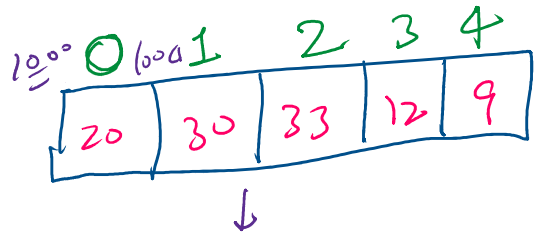
→ Arrays are given contiguous memory locations

4 x 4 = 20

$5 \times 4 = 20$

⇒ How to use Arrays

index → position



int arr [] = new int [5]

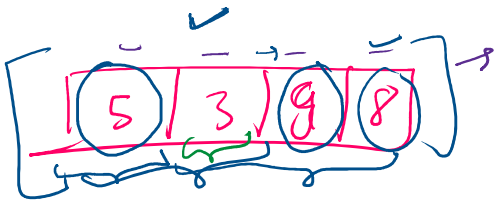
Ref. → Starts address of the array

object

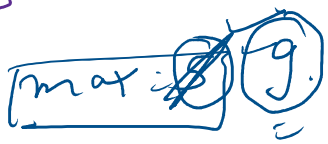
$1000 + 0 \times 4 \Rightarrow 1000$

$1000 + 1 \times 4 \Rightarrow 1004$

Q)



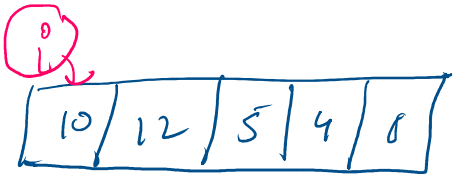
9




```
if (arr[i] > max) {
```

```
max = arr[0]
for (i = 1; i < n; i++) {
    if (arr[i] > max)
        max = arr[i]
}
```

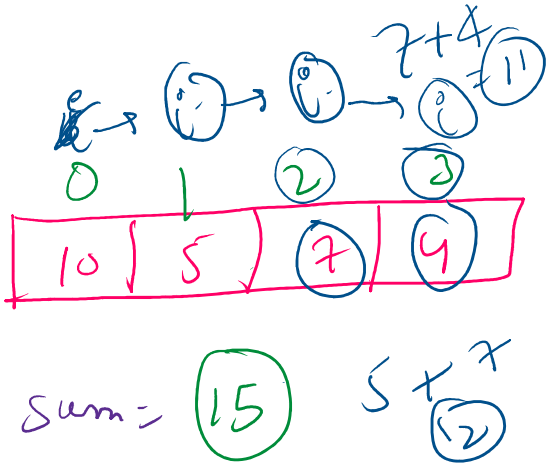
Consecutive Pairs



(i, i+1)

i = n-1

arr[n-1+1]



sum = 15 5+7 12

```
for(i=0; i<n; i++){ arr[i+1]
    int sum = arr[i] + arr[i+1];
    if(i==4)
}
for(i=0; i<3; i++){ arr
{sum = arr[i] + arr[i+1]
}   4+
```

n

length of array

arr.length ; attribute]

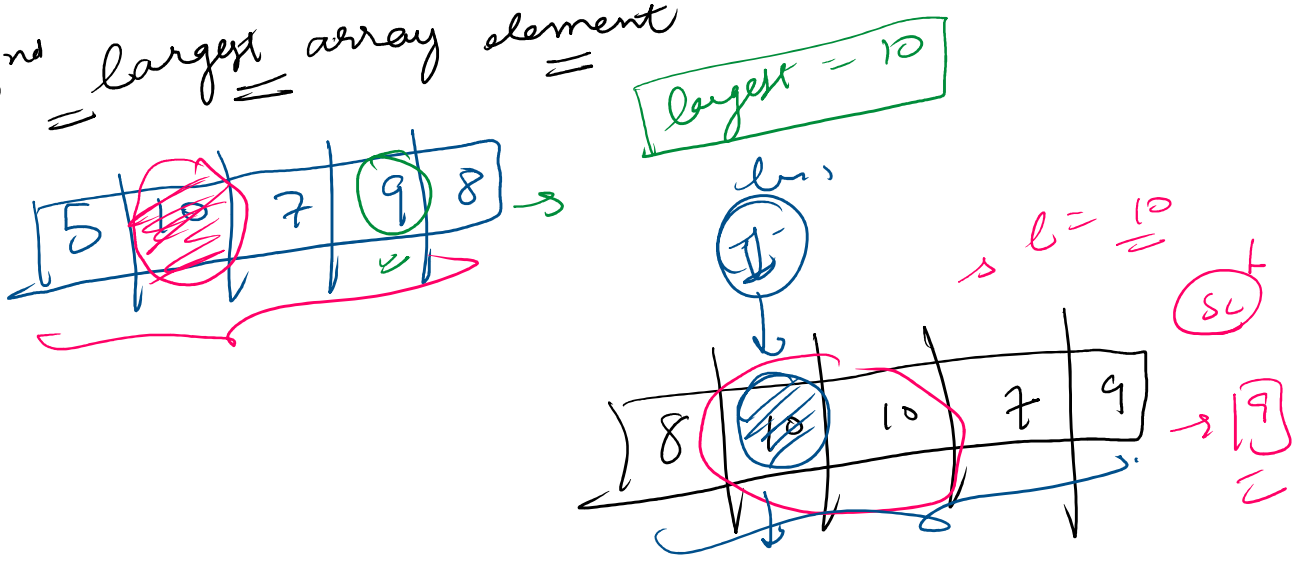
#

```
sum = sum+=10;
    ↳ sum+=10;
```

a+=5; → a = a+5

b -= 7 ⇒ b = b-7

2nd largest array element



Pass by value and Pass by ref

primitives

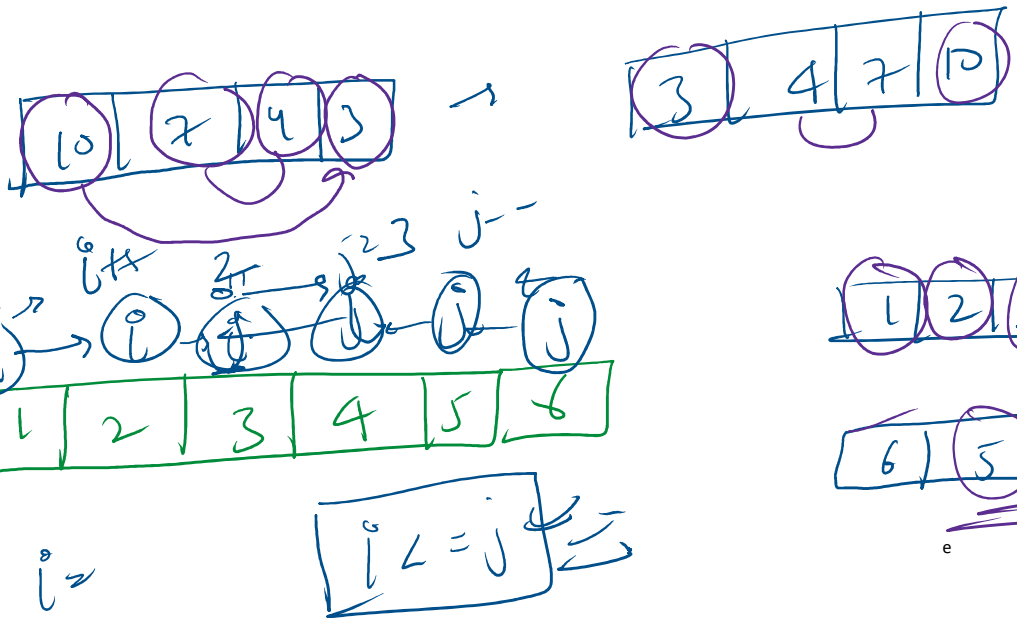
Objects

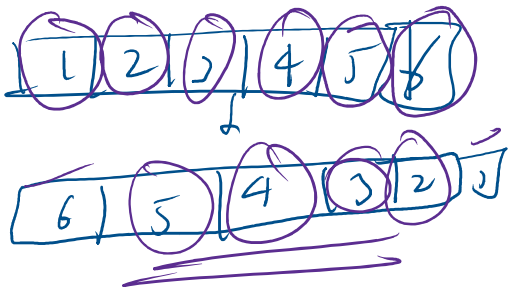
```
main()
{
int (a)=10
f(a)
}
```

```
fun( int (x) )
{
x=x+5
}
```

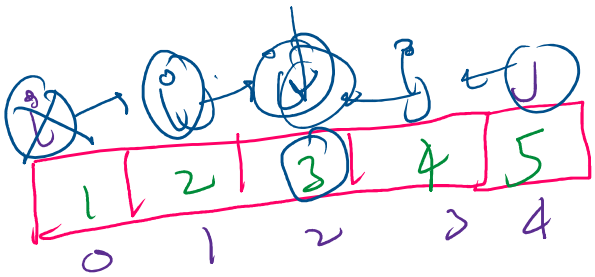
```
main()
{
arr[]
f(arr)
}
```

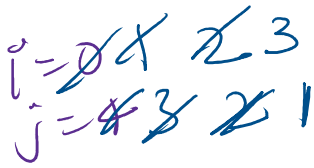
```
fun( int arr[] )
{
}
```



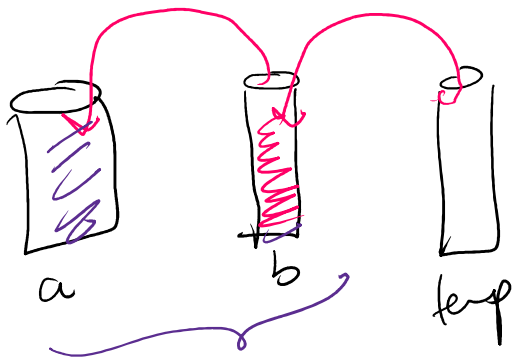


e





swap(arr(i),j)

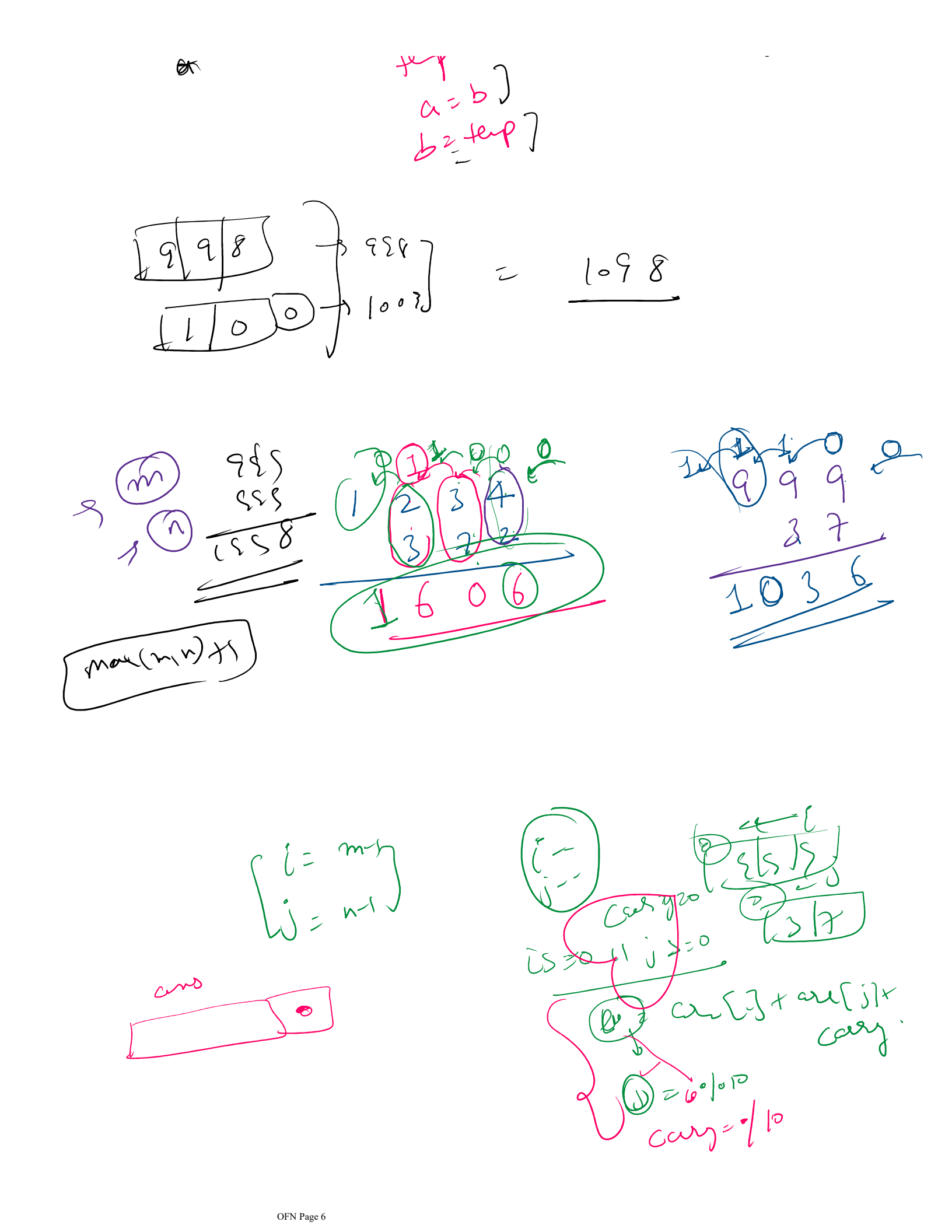


temp = a

a = b

temp = a

a = b


temp
a = b
b = temp
= 1098
m
n
max(m,n)+1
1606
1036