$\Rightarrow$ **Arrays** (M. Imp)

5	2	3	1	-3	9	14	0

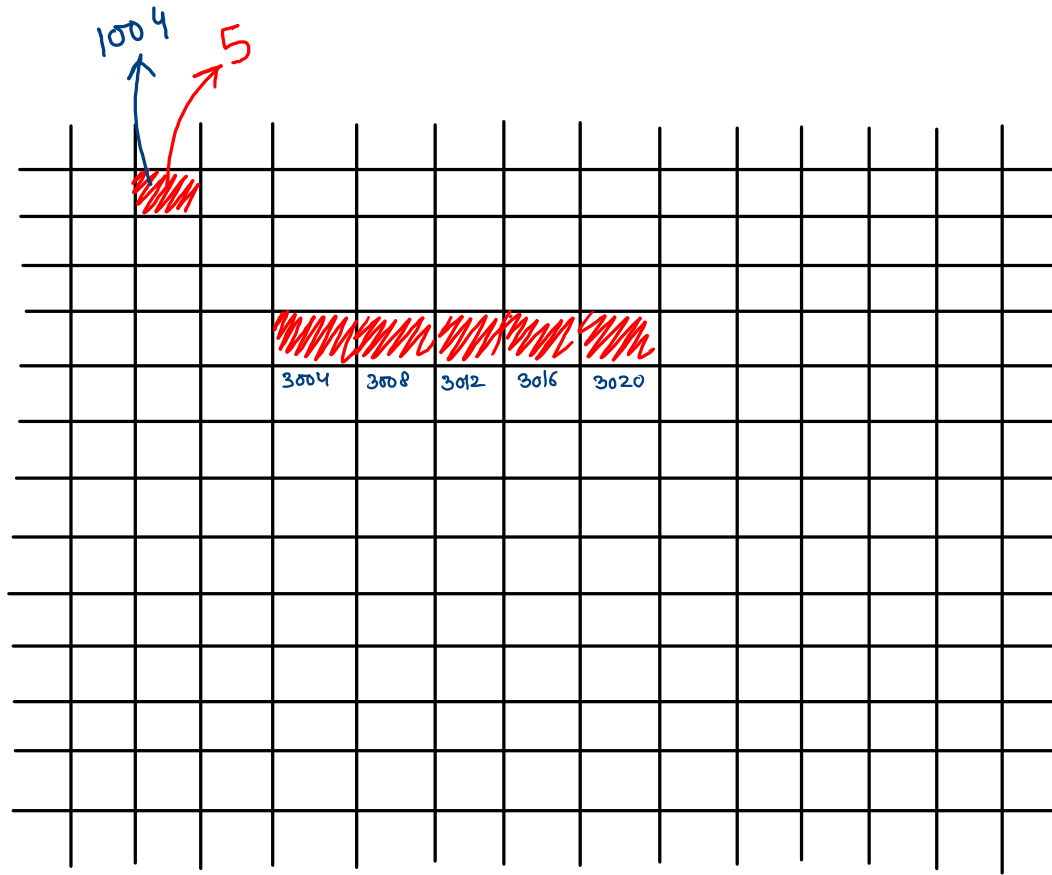(int)   0   1   2   3   4   5   6   7   size = 8

def:- Collection of similar type of data type

Syntex :-

data-type [ ] arr_name = new data_type [size];

(Java)

int [ ] arr = new int [5]; } same

int arr [ ] = new int [5];

1004 5

3004 3008 3012 3016 3020

Note :- array has continuous
memory allocation

int a = 5;

int a; // declaration
a = 5; // initialization

---

int[] arr = new int[5];

size = 5
m/m = 5 × 4 byte
     = 20 byte

arr

3	2	5	7	1
0	1	2	3	4

Size = 4

access any index

syntex arr [2] = 5;

arr [0] = 3;

arr [4] = 1;

arr [1] = 2;

arr [3] = 7;

Print the array elements linewise

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int[] arr = new int[n];
    for (int i = 0; i < n; i++) {
        arr[i] = scn.nextInt();
    }

    for (int i = 0; i < n; i++) {
        System.out.println( arr[i] );
    }
}
```

Print Alternate Array Elements Linewise

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int size = scn.nextInt();
    int[] arr = new int[size];
    for (int i = 0; i < size; i++) {
        arr[i] = scn.nextInt();
    }

    for (int i = 0; i < size; i += 2) {
        System.out.println( arr[i] );
    }
}
```

Print Array Elements Reverse linewise

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int[] arr = new int[n];
    for (int i = 0; i < n; i++) {
        arr[i] = scn.nextInt();
    }

    for (int i = n - 1; i >= 0; i--) {
        System.out.print( arr[i] + " " );
    }
}
}
```
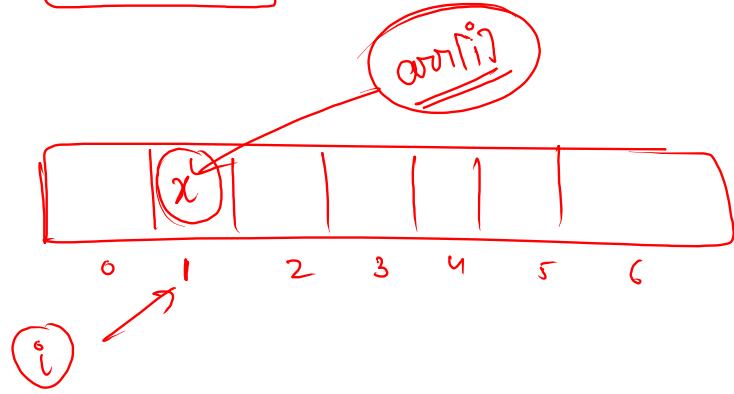
for(int i=0; i<n; i++) {

i=

arr[i]

}

arr[i]

x

0 1 2 3 4 5 6

i

Print Array element if index divisible by 3

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int[] arr = new int[n];
    for (int i = 0; i < n; i++) {
        arr[i] = scn.nextInt();
    }

    for (int i = 0; i < n; i++) {
        if ( i % 3 == 0 ) {
            System.out.print( arr[i] + " " );
        }
    }
}
```