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ArrayList with if-else

https://www.hackerrank.com/contests/fs-27-m2-java-dsa-class-challenges/challenges/arraylist-q1/copy-from/1386835591

```
    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class shou
        ArrayList<Integer> arr = new ArrayList<>();
        Scanner sc = new Scanner(System.in);
        int t = sc.nextInt();
        for(int i=0;i<t;i++){
            int n = sc.nextInt();
            int x=0;
            if(n==3||n==5){
                x = sc.nextInt();
            }
            switch(n){
                case 1 : System.out.println(arr.size());
                            break;
                case 2: if(arr.size()<=0){
                    System.out.println("invalid-move");
                    }else{
                        System.out.println(arr.get(arr.size()-1));
                        arr.remove(arr.size()-1);
                    }
                    break;
            case 3 : System.out.println(x);
                    arr.add(x);
                    break;
            case 4 : if(arr.size()<=0){
                    System.out.println("invalid-move");
                    }else{
                        System.out.println(arr.get(0));
                        arr.remove(0);
                    }
                    break;
            case 5 : System.out.println(x);
                    arr.add(0,x);
                    break;
```

```
            case 6 :if(arr.size()<=0){
                System.out.println("invalid-move");
                    }else{
                        for(int j=0;j<arr.size();j++){
                               System.out.print(arr.get(j)+" ");
                                }
                System.out.println();
                        }

                break;
            }
        }

    }
}
```

Printing elements in ArrayList using for-each loop.

```
ArrayList<Integer> al = new ArrayList<>();
    al.add(6);
    al.add(10);
    al.add(15);
    al.add(4);
```

for-each loop :- This is being used for collection

Syntax

```
for (Type variable_name : name_of_collection){
```

[6, 10, 15, 4]

Example:-

```
for(int num: al) {
    S.O.Pln(num);
    }
```

Output:-

```
6
10
15
4
```

Merge Two Sorted Arrays

n = 4
arr1 = [1, 3, 6, 7]

m = 4
arr2 = [2, 4, 4, 8]

Output :-

1, 2, 3, 4, 7, 8

```
ArrayList<Integer> res = new ArrayList<>();
int i=0, j=0;
while(i<n && j<m){
 if(arr1[i] < arr2[j]){
   if(al.get(al.size()-1) != arr1[i]){
      al.add(arr1[i]);
   }
  i++;
 } else if(arr2[j] < arr1[i]){
   if(al.get(al.size()-1) != arr2[j]){
      al.add(arr2[j]);
   }
   j++;
 }else{
   if(al.get(al.size()-1) != arr1[i]){
     al.add(arr1[i]);
   }
    i++;
```

-1) == arr1[i]){

```
        }
        i++;
        j++;
    }
}
```

arr1 = [10, 15, 16] n = 3

arr2 = [11, 18, 20, 25] m = 4

while(i<3 && j<4)

1. 10 < 11 i = 1, j = 0
   [10]
2. 11 < 15
   [10, 11] i = 1, j = 1
3. 15 < 18
   [10, 11, 15] i = 2, j = 1
4. 16 < 18

al = [10, 11, 15, 16] i = 3, j = 1

Using current code, my final arraylist will be [10, 11, 15, 16] because loop will stop now (i = 3 which not < 3)

Now, we have to add all remaining values present in array.

This will only happen when one array traversal is over but another array is remaining.

i & j will tell us, which array has remaining values.

```
while(i<n){
if(al.get(al.size()-1)!=arr1[i]){
```

```
if (al.get(al.size()-1) != arr1[i]){
    al.add(arr1[i]);
  }
 i++;
 }
while(j<m){
if(al.get(al.size()-1) != arr2[j]) {
   al.add (arr2[j]);
 }
 j++;
 }
```