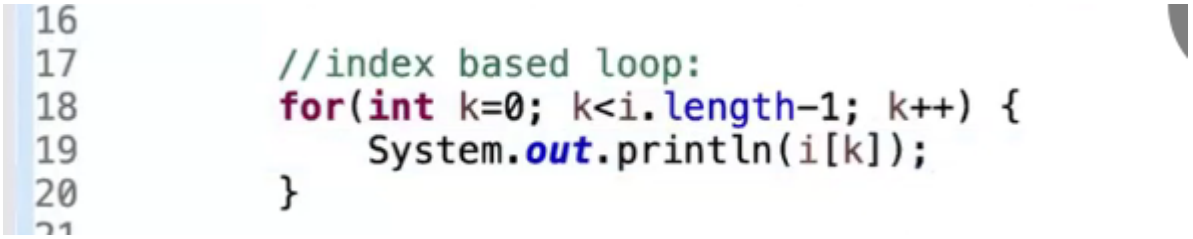

10

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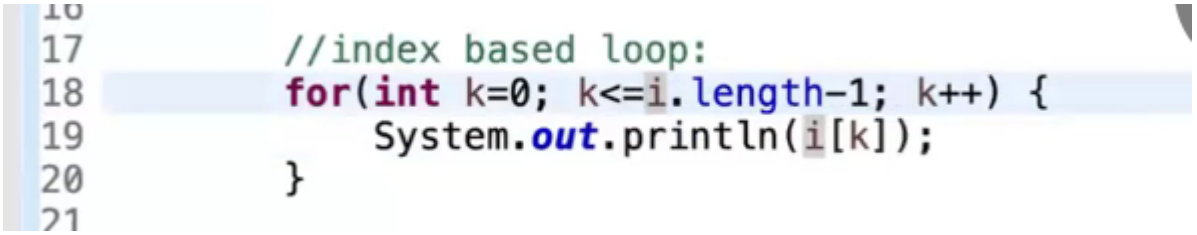
30



10

20

30

40

For each loop-

```
21
22          System.out.println("-------");
23          //for each loop:
24          for(int e : i) {
25              System.out.println(e);
26          }
```

10

20

30

40

Data type should match else error-

//Type mismatch: cannot convert from element type int to String

```
22          System.out.println("-------");
23          //for each loop:
24          for(String e : i) {
25              System.out.println(e);
26          }
```

With break-

```
22          System.out.println("-------");
23          //for each loop:
24          for(int e : i) {
25              System.out.println(e);
26              break;
27          }
```

10

Normal for loop better performer.

Double array-

Note-

Lower values can be stored in higher values.

```
31
32          //2. double array:
33          double d[] = new double[3];//0-2
34          d[0] = 12.33;
35          d[1] = 23.44;
36          d[2] = 100.11;
37
38          for(double e : d) {
39              System.out.println(e);
40          }
41
42
43
```

Prints all array values.

Char array-

Size is mandatory to give else error.

//Variable must provide either dimension expressions or an array initializer

```
41
42          //char array:
43          char ch[] = new char[];
44
```

```
44          //char array:
45          char ch[] = new char[4];
46          ch[0] = 'a';
47          ch[1] = 'A';
48          ch[2] = '0';
49          ch[3] = '$';
50
51          for(char e : ch) {
52              System.out.println(e);
53          }
```

Prints all char values.

Short cut to print arrays-

```
53          }
54          System.out.println(Arrays.toString(ch));
55
```

[a, A, 0, $]

Print array name-

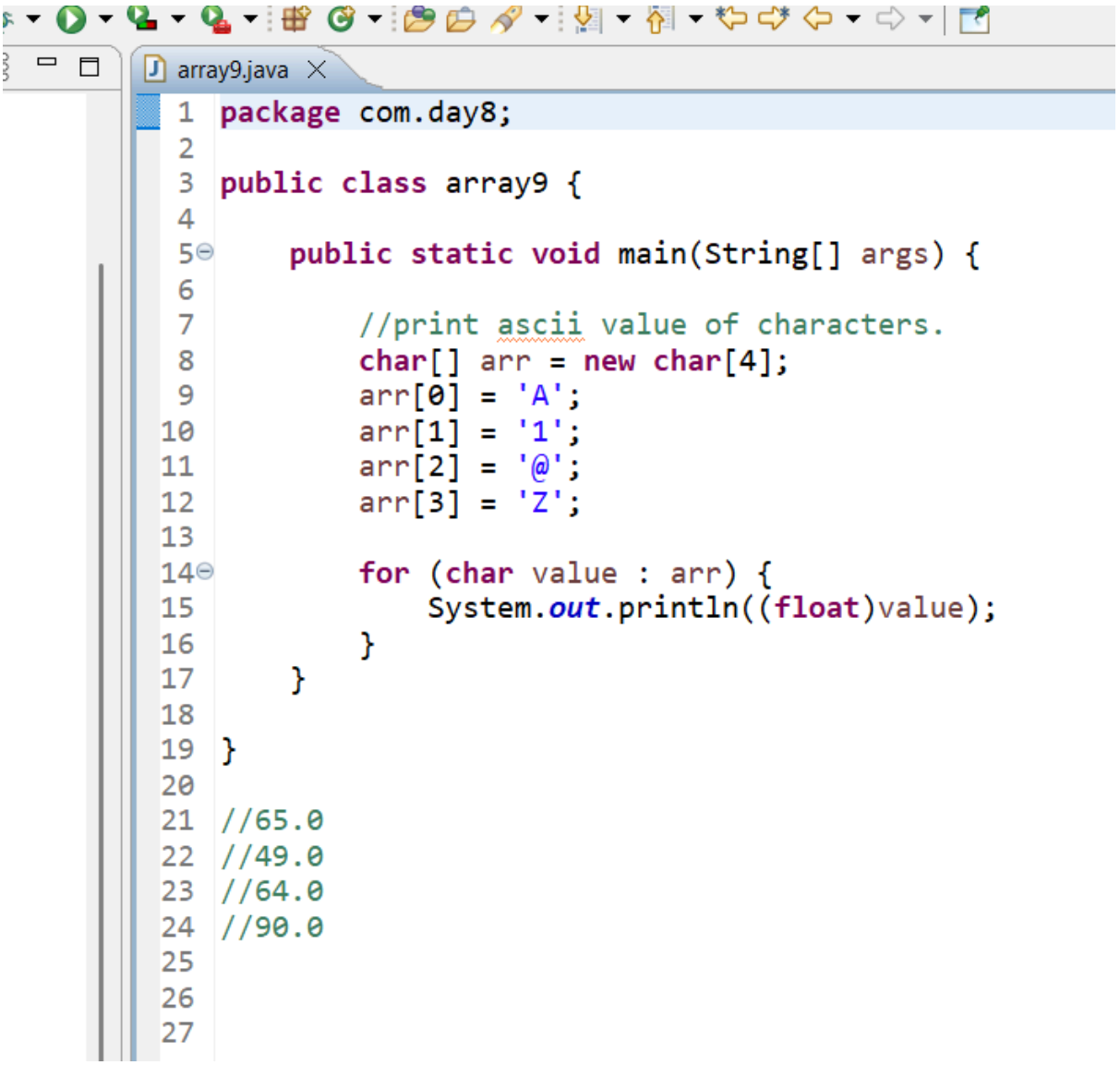
```
15
16          System.out.println(i);
17
```

Hash code of memory printed.

To print ascii value-

```
45
46          //char array:
47          char ch[] = new char[4];
48          ch[0] = 'a';
49          ch[1] = 'A';
50          ch[2] = '0';
51          ch[3] = '$';
52
53          for(char e : ch) {
54              System.out.println((byte)e);
55          }
56
```

paste array9-



Note-

Print char array, we get same memory address as char. Print any other data type, we get memory address.

```
46          System.out.println("-------");
47
48          //char array:
49          char ch[] = new char[4];
50          ch[0] = 'a';
51          ch[1] = 'A';
52          ch[2] = '0';
53          ch[3] = '$';
54
55          for(char e : ch) {
56              System.out.println(e);
57          }
58
59          System.out.println(Arrays.toString(ch));
60          System.out.println(ch);
61
```

```
aA0$
```

simply printing char array gives memory address.

```
ArraysConcept.java   StaticArrayConcept.java
34          //2. double array:
35          double d[] = new double[3];//0-2
36          d[0] = 12.33;
37          d[1] = 23.44;
38          d[2] = 100.11;
39          System.out.println(d);
```

```
-------
[D@dcf3e99
```

String array-

```
63
64          //String array:
65          String emp[] = new String[3];//0-2
66          emp[0] = "Tom";
67          emp[1] = "Amit";
68          emp[2] = "Lisa";
69
70          for(String e: emp) {
71              System.out.println(e);
72          }
73
```

Tom amit lisa

With conditions-

```
69
70          for(String e: emp) {
71              System.out.println(e);
72                  if(e.equals("Amit")) {
73                      System.out.println("emp is admin");
74                      break;
75                  }
76          }
77
78          |
79      }
```

Object array-

Existing class.

Any datatype can be stored.

```
79
80          //Object array:
81
82          Object data[] = new Object[5];//0-4
83          data[0] = "Tom";
84          data[1] = 30;
85          data[2] = 'm';
86          data[3] = 35.55;
87          data[4] = true;
88
89
90          System.out.println(Arrays.toString(data));
91
```

For each with object-

```
92          for(Object e : data) {
93              System.out.println(e);
94          }
```

With normal for loop-

```
95
96          for(int k=0; k<=data.length-1; k++) {
97              System.out.println(data[k]);
98          }
```

Print in reverse-

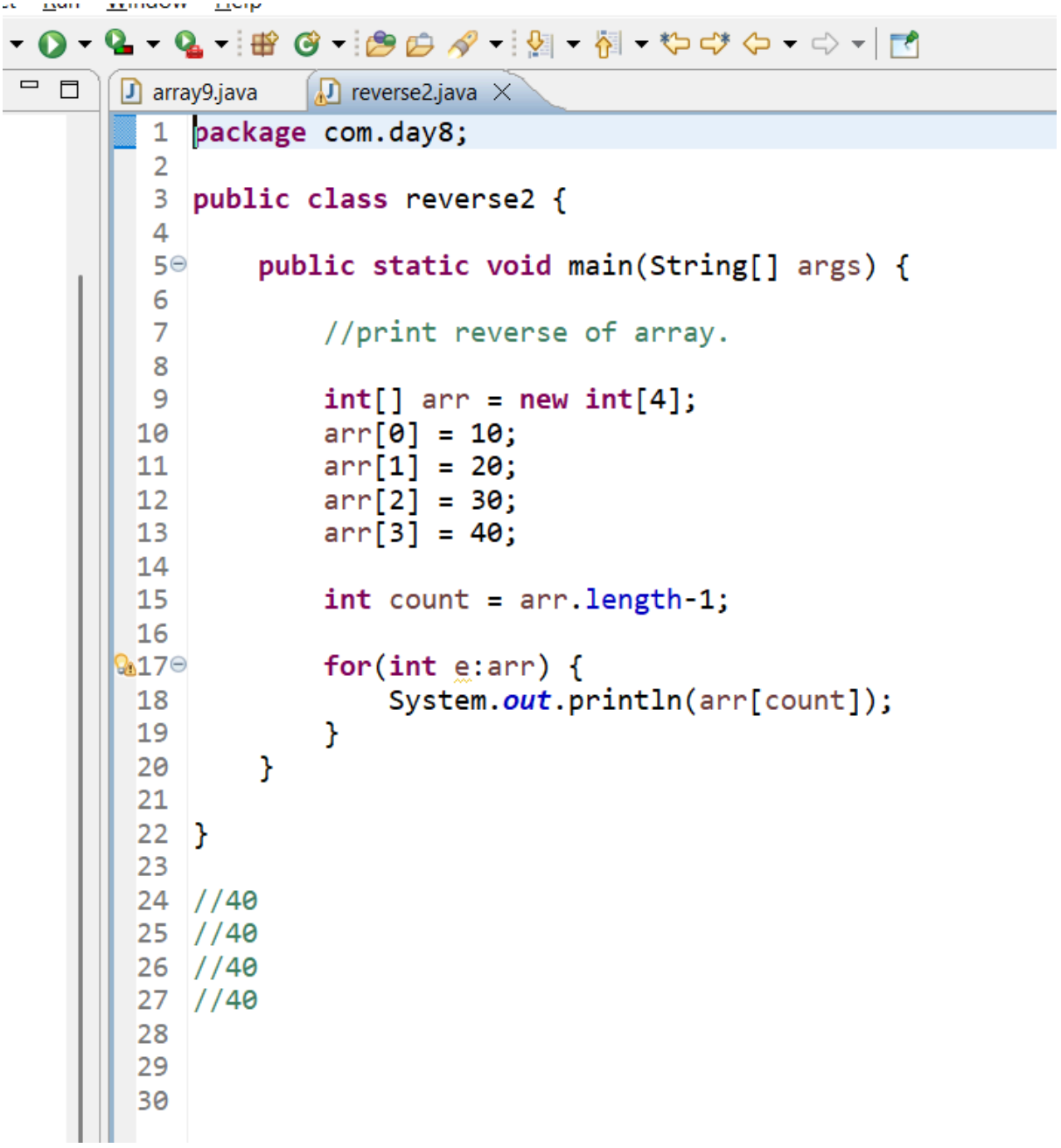
```
102
103         int p[] = new int[4];
104         p[0] = 10;
105         p[1] = 20;
106         p[2] = 30;
107         p[3] = 40;
108
109         for(int k=p.length-1; k>=0; k--) {
110             System.out.println(p[k]);
111         }
```

Print in reverse using for each-

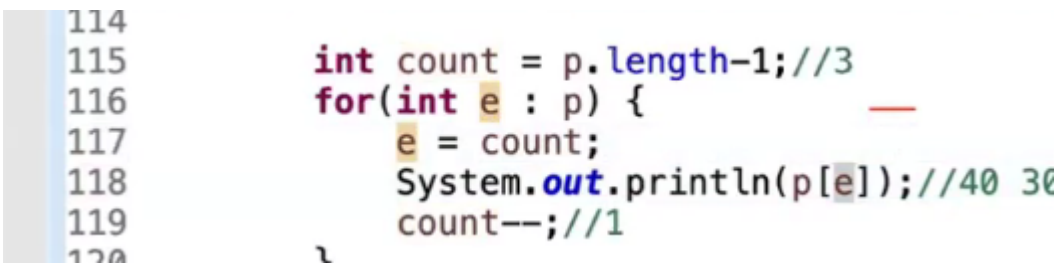
```
114
115         int count = p.length-1;//3
116         for(int e : p) {
117             System.out.println(p[count]);//40
118             count--;
119         }
```

40 30 20 10

paste reverse2-



How to use all variables inside for each and print in reverse-



40 30 20 10

```
115         int count = p.length-1;//3
116         for(int e : p) {
117             e = count;
118             System.out.println(p[e]);//40 30
119             //count--;//1
120         }
```

40 40 40 40

```
76
77          //Array Literals: static array:
78          int num[] = {10,20,30,50,12,34};
79
```

```
76
77          //Array Literals: static array:
78          int num[] = {10,20,30,50,12,34};//6-->0 to 5
79          //if we have the data already with us
80          System.out.println(num.length);
81          System.out.println(num[0]);
82          //System.out.println(num[6]);
83          num[0] = 400;
84          System.out.println(num[0]);
85
86
87
88          int pop[] = new int[10];//if we are not sure about the full data
89
90
91      }
```

6 10 400.

paste literal1-

literal1.java

```java
package com.day8;

public class literal1 {

    public static void main(String[] args) {

        int[] arr = {1, 2, 3, 4, 5}; //array literals, static array.

        System.out.println(arr.length);//5
        System.out.println(arr[0]); //1

//      System.out.println(arr[10]);
//      Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException: Index 10 out of bounds for length 5
//      at com.day8.literal1.main(literal1.java:12)
        arr[0]=7878;
        System.out.println(arr[0]); //7878
    }

}
```

```java
        //Array Literals: static array:
        int num[] = {10,20,30,50,12,34};//6-->0 to 5
        //if we have the data already with us
        System.out.println(num.length);
        System.out.println(num[0]);
        //System.out.println(num[6]);
        System.out.println(Arrays.toString(num));
        num[0] = 400;
        System.out.println(Arrays.toString(num));
```

```
[10, 20, 30, 50, 12, 34]
[400, 20, 30, 50, 12, 34]
```

String array-

paste literal 3 and literal 4 -

literal3.java

```java
package com.day8;

public class literal3 {

    public static void main(String[] args) {

        //[] can be before array name or after array name.
        String[] arr = {"Apple", "Banana", "Cherry", "Date"};

        System.out.println("Length: " + arr.length);

        for (String value : arr) {
            System.out.println(value);
        }
    }

}

//Length: 4
//Apple
//Banana
//Cherry
//Date
```

literal3.java literal4.java

```java
package com.day8;

public class literal4 {

    public static void main(String[] args) {

        //[] can be before array name or after array name.
        String arr[] = {"Apple", "Banana", "Cherry", "Date"};

        System.out.println("Length: " + arr.length);

        for (String value : arr) {
            System.out.println(value);
        }
    }

}

//Length: 4
//Apple
//Banana
//Cherry
//Date
```

How to know if static array-

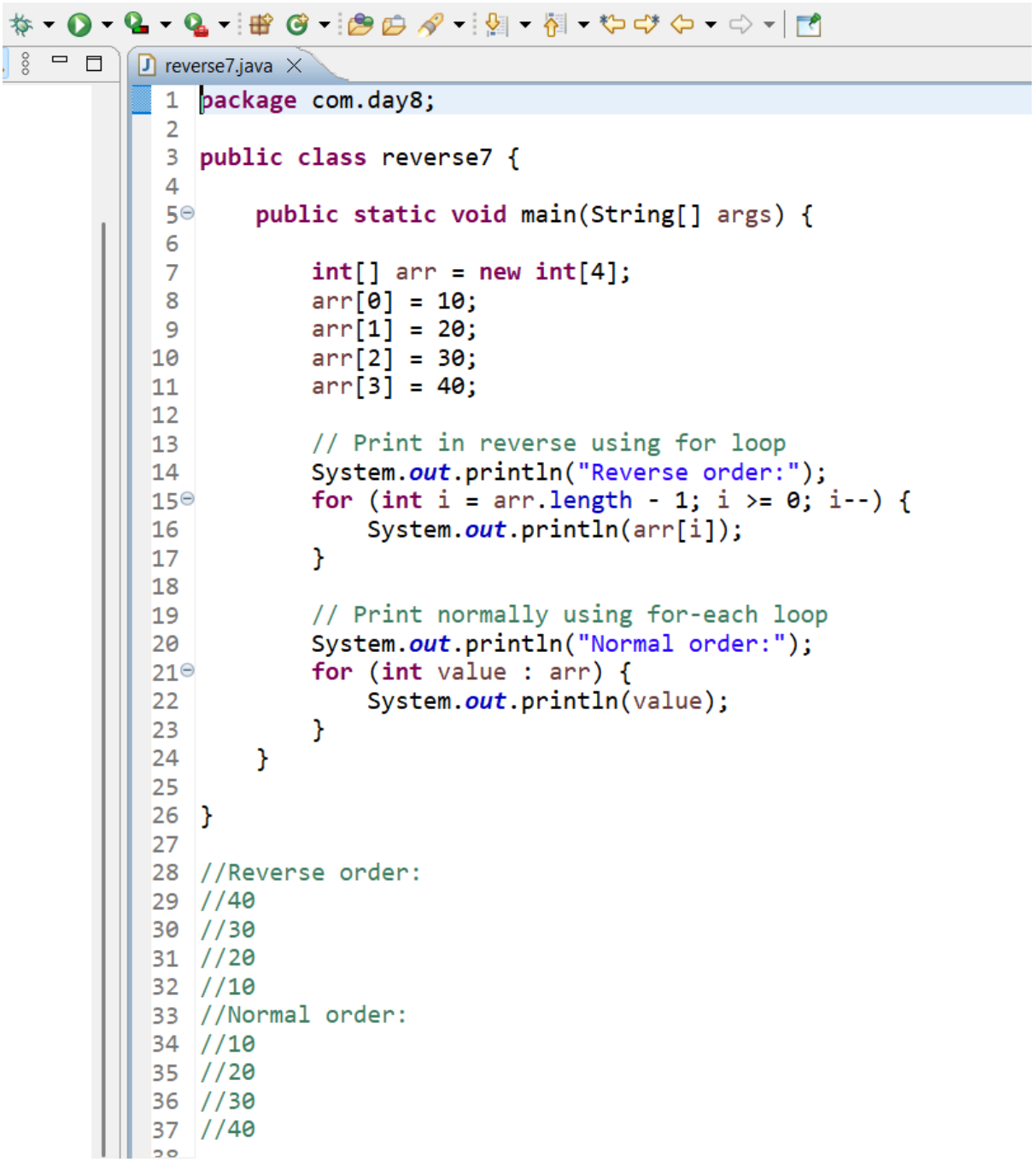
Add more values, we get array index out of bounds after running the code.

```
91
92          String browser[] = {"chrome", "firefox", "edge"};//0-2
93          System.out.println(browser.length);
94
95          browser[3] = "ie";
96
97
98
99          for(String e : browser) {
100             System.out.println(e);
101         }
102
```

```
114
115         int count = p.length-1;//3
116         for(int e : p) {
117             e = count;
118             System.out.println(e + " = "+ p[e]);//40 30
119             count--;//1
120         }
121     }
```

```
-------
3 = 40
2 = 30
1 = 20
0 = 10
```

paste reverse7-



reverse7.java

```java
package com.day8;

public class reverse7 {

    public static void main(String[] args) {

        int[] arr = new int[4];
        arr[0] = 10;
        arr[1] = 20;
        arr[2] = 30;
        arr[3] = 40;

        // Print in reverse using for loop
        System.out.println("Reverse order:");
        for (int i = arr.length - 1; i >= 0; i--) {
            System.out.println(arr[i]);
        }

        // Print normally using for-each loop
        System.out.println("Normal order:");
        for (int value : arr) {
            System.out.println(value);
        }
    }

}

//Reverse order:
//40
//30
//20
//10
//Normal order:
//10
//20
//30
//40
```

Print in reverse order-

```
102
103         int p[] = new int[4];
104         p[0] = 10;
105         p[1] = 20;
106         p[2] = 30;
107         p[3] = 40;
108
109         for(int k=p.length-1; k>=0; k--) {
110             System.out.println(p[k]);
111         }
112
113         System.out.println("-------");
114
115         int count = p.length-1;//3
116         for(int e : p) {
117             e = count;//3
118             System.out.println(p[e]);//40 30 20 10
119             count--;//2
120         }
121
122
```

```
122
123           //byte/short/long/int: 0
124           //double/float: 0.0
125           //char: space
126           //String: null
127
128           String naveen[] = new String[3];//0-2
129           System.out.println(Arrays.toString(naveen));
130
```

[null, null, null]