//1. Find the sum of all given elements from an int array?

class A

{ public static void main(String[] args)

{

int[] x = {10, 4, 8, 20, 6, 11, 15};

//INDEX 0, 1 , 2, 3 , 4, 5, 6

int sum = 0;

/\*

sum += x[0];

sum += x[1];

sum += x[2];

sum += x[3];

sum += x[4];

sum += x[5];

sum += x[6];

\*/

for(int i = 0; i < x.length; i++)

{

sum = sum + x[i]; // sum += x[i];

}

System.out.println("sum:" + sum);

}

}

//2. Find the min element from the given int array?

class B

{ public static void main(String[] args)

{

//int[] x = {10, 4, 8, 20, 6, 11, 15};

//int[] x = {10, 4, 8, 20, 6, 11, 2, 15};

int[] x = {10, 4, 8, 1, 20, 6, 11, 2, 0, 15};

int min = x[0];

for(int i = 1; i < x.length; i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min:" + min);

}

}

//3. Find the max element from the given int array?

class C

{

public static void main(String[] args)

{

//int[] x = {10, 4, 8, 20, 6, 11, 15};

int[] x = {10, 4, 8, 20, 6, 11, 28, 15};

int max = x[0];

for(int i = 1; i < x.length; i++)

{

if(x[i] > max)

{

max = x[i];

}

}

System.out.println("max:" + max);

}

}

//4. Find the 2nd min element from the given int array?

class D

{

public static void main(String[] args)

{

//int[] x = {10, 4, 8, 20, 6, 11, 15};

int[] x = {1, 4, 8, 20, 6, 3, 11, 15};

//int[] x = {10, 4, 8, 20, 6, 11, 2, 15};

int min1 = x[0], min2 = x[0];

for(int i = 1; i < x.length; i++)

{

if(x[i] < min1)

{

min2 = min1;

min1 = x[i];

}

else if(x[i] < min2)

{

min2 = x[i];

}

else if(min1 == min2 && x[i] > min2)

{

min2 = x[i];

}

}

System.out.println("min2:" + min2);

}

}

//5. Find the 2nd max element from the given int array?

class E

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

//int[] x = {1, 4, 18, 20, 6, 3, 11, 15};

//int[] x = {10, 4, 8, 20, 6, 11, 2, 15};

int max1 = x[0], max2 = x[0];

for(int i = 1; i < x.length; i++)

{

if(x[i] > max1)

{

max2 = max1;

max1 = x[i];

}

else if(x[i] > max2)

{

max2 = x[i];

}

else if(max1 == max2 && x[i] < max2)

{

max2 = x[i];

}

}

System.out.println("max2:" + max2);

}

}

//6. Find the average value of an int array?

class F

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

int sum = 0;

for(int i = 0; i < x.length; i++)

{

sum += x[i];

}

double avg = (double) sum / x.length;

System.out.println("avg:" + avg);

}

}

//7. Find out the sum of all even indexed elements from a given int array?

class G

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

// 0 1 2 3 4 5 6

int sum = 0;

for(int i = 0; i < x.length; i = i + 2)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

//8. Find out the sum of all odd indexed elements from a given int array?

class H

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

int sum = 0;

for(int i = 1; i < x.length; i = i + 2)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

9. Find out the min value from all even indexed elements from a given int array?

class I

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

int min = x[0];

for(int i = 2; i < x.length; i = i + 2)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min:" + min);

}

}

//10. Find out the max value from all odd indexed elements from a given int array?

class J

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

// 0 1, 2, 3 4 5 6

int max = x[1];

for(int i = 3; i < x.length; i = i + 2)

{

if(x[i] > max)

{

max = x[i];

}

}

System.out.println("max:" + max);

}

}

11. Find out the avg value from all even indexed elements from a given int array?

class K

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

//int[] x = {100, 4, 8, 20, 6, 11, 15, 45};

int sum = 0;

for(int i = 0; i < x.length; i = i + 2)

{

sum += x[i];

}

int count =

(x.length % 2 == 0 ? x.length / 2 : ((x.length / 2) + 1));

double avg = (double) sum / count;

System.out.println("avg:" + avg);

}

}

//12. Find out the avg value from all odd indexed elements from a given int array?

class L

{

public static void main(String[] args)

{

int[] x = {100, 4, 8, 20, 6, 11, 15};

//int[] x = {100, 4, 8, 20, 6, 11, 15, 45};

int sum = 0;

for(int i = 1; i < x.length; i += 2)

{

sum += x[i];

}

double avg = (double) sum / (x.length / 2);

System.out.println("avg:" + avg);

}

}

13. Find out the sum of all elements from a first half of given int array?

class M

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 2, 4, 6, 9};

// middle element is in the first half

int sum = 0;

for(int i = 0; i <= (x.length / 2); i++)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

//13. Find out the sum of all elements from a first half of given int array?

class M1

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 2, 4, 6, 9};

// middle element is in the 2nd half

int sum = 0;

for(int i = 0; i < (x.length / 2); i++)

{

sum += x[i];

}

System.out.println("sum:" + sum); } }

//13. Find out the sum of all elements from a first half of given int array?

class M2

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 2, 4, 6, 9, 2};

int sum = 0;

for(int i = 0; i < (x.length / 2); i++)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

14. Find out the sum of all elements from a second half of given int array?

class N

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 2, 4, 6, 9};

// middle element is in the first half

int sum = 0;

for(int i = (x.length / 2) + 1 ; i < x.length; i++)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

//14. Find out the sum of all elements from a second half of given int array?

class N1

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 2, 4, 6, 9};

// middle element is in the 2nd half

int sum = 0;

for(int i = (x.length / 2); i < x.length; i++)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

14. Find out the sum of all elements from a second half of given int array?

class N2

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 2, 4, 6, 9, 2};

int sum = 0;

for(int i = (x.length / 2); i < x.length; i++)

{

sum += x[i];

}

System.out.println("sum:" + sum);

}

}

15. Find out the min value from a first half of given int array?

class O

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9};

//middle element in the first half

int min = x[0];

for(int i = 1; i <= (x.length / 2); i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min in the first half:" + min);

}

}

//15. Find out the min value from a first half of given int array?

class O1

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9};

//middle element in the 2nd half

int min = x[0];

for(int i = 1; i < (x.length / 2); i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min in the first half:" + min);

}

}

//15. Find out the min value from a first half of given int array?

class O2

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9, 4};

int min = x[0];

for(int i = 1; i < (x.length / 2); i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min in the first half:" + min);

}

}

//16. Find out the min value from a second half of given int array?

class P

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9};

//middle in the first half.

int min = x[(x.length/2) + 1];

for(int i = (x.length/2) + 2; i < x.length; i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min in the 2nd half:" + min); } }

//16. Find out the min value from a second half of given int array?

class P1

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9};

//middle in the 2nd half.

int min = x[(x.length/2)];

for(int i = (x.length/2) + 1; i < x.length; i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min in the 2nd half:" + min);

}

}

//16. Find out the min value from a second half of given int array?

class P2

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9, 1};

int min = x[(x.length/2)];

for(int i = (x.length/2) + 1; i < x.length; i++)

{

if(x[i] < min)

{

min = x[i];

}

}

System.out.println("min in the 2nd half:" + min);

}

}

//17. Find out the max value from a first half of given int array?

class Q

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 0, 4, 6, 9};

//middle in the first half.

int max = x[0];

for(int i = 1; i <= x.length / 2; i++)

{

if(x[i] > max)

{

max = x[i];

}

}

System.out.println("max in the first half:" + max);

}

}

//17. Find out the max value from a first half of given int array?

class Q1

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9};

//middle in the 2nd half.

int max = x[0];

for(int i = 1; i < x.length / 2; i++)

{

if(x[i] > max)

{

max = x[i];

}

}

System.out.println("max in the first half:" + max);

}

}

//17. Find out the max value from a first half of given int array?

class Q2

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

int max = x[0];

for(int i = 1; i < x.length / 2; i++)

{

if(x[i] > max)

{

max = x[i];

}

}

System.out.println("max in the first half:" + max);

}

}

//21. Read all elements from an array in the reverse order?

class U

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

for(int i = x.length - 1; i >= 0; i--)

{

System.out.print(x[i] + ", ");

}

}

}

//22. Read first half of the elements in the reverse direction from an array?

class V

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

for(int i = (x.length / 2) - 1; i >= 0 ; i--)

{

System.out.print(x[i] + ", ");

}

}

}

//23. Read second half of the elements in the reverse direction from an array?

class W

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

for(int i = x.length - 1; i >= x.length/2 ; i--)

{

System.out.print(x[i] + ", ");

}

}

}

//24. Read only even indexed elements from an array?

class X

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

for(int i = 0; i < x.length; i += 2)

{

System.out.print(x[i] + ", ");

}

}

}

//25. Read only even indexed elements from an array in the reverse order?

class Y

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

int end = x.length % 2 == 0 ? (x.length - 2) : (x.length - 1);

for(int i = end; i >= 0; i -= 2)

{

System.out.print(x[i] + ", ");

}

}

}

//26. Read only odd indexed elements from an array?

class Z

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

for(int i = 1; i < x.length; i += 2)

{

System.out.print(x[i] + ", ");

}

}

}

28. Find out an index of a specified element from a given array?

class Z2

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

int element = 10;

int index = -1;

for(int i = 0; i < x.length; i ++)

{

if(x[i] == element)

{

index = i;

break;

}

}

if(index != -1)

{

System.out.println(element + " is available @ " + index);

}

else

{

System.out.println(element + " is not available");

}

}

}

//29. Swap two given indexed elements from the array?

class Z3

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

// 0 1 2 3 4 5 6 7

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

int temp = x[3];

x[3] = x[6];

x[6] = temp;

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

29. Swap two given indexed elements from the array?

class Z3A

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

// 0 1 2 3 4 5 6 7

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

x[3] = x[3] + x[6]; //x[3] = 10 + 9 = 19

x[6] = x[3] - x[6]; //x[6] = 19 - 9 = 10

x[3] = x[3] - x[6]; //x[3] = 19 - 10 = 9

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//30. Reverse the elements of given array?

class Z4

{

public static void main(String[] args)

{

//int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

// 0 1 2 3 4 5 6 7

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 40};

// 0 1 2 3 4 5 6 7 8

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = 0; i < x.length / 2; i++)

{

int temp = x[i];

x[i] = x[x.length - i - 1];

x[x.length - i - 1] = temp;

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//30. Reverse the elements of given array?

class Z4A

{

public static void main(String[] args)

{

//int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

// 0 1 2 3 4 5 6 7

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 40};

// 0 1 2 3 4 5 6 7 8

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = 0; i < x.length / 2; i++)

{

x[i] = x[i] + x[x.length - i - 1];

x[x.length - i - 1] = x[i] - x[x.length - i - 1];

x[i] = x[i] - x[x.length - i - 1];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//30. Reverse only first half of the elements of given array?

class Z5

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12};

// 0 1 2 3 4 5 6 7

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

int end = (x.length / 2);

for(int i = 0; i < end / 2; i++)

{

x[i] = x[i] + x[end - i - 1];

x[end - i - 1] = x[i] - x[end - i - 1];

x[i] = x[i] - x[end - i - 1];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//32. Reverse only last half of the elements of given array?

class Z6

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7};

// 0 1 2 3 4 5 6 7

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = (x.length / 2), j = 0;

i < (x.length / 2 + (x.length - x.length/2)/2);

i++, j++)

{

x[i] = x[i] + x[x.length - j - 1];

x[x.length - j - 1] = x[i] - x[x.length - j - 1];

x[i] = x[i] - x[x.length - j - 1];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//33. Reverse only even indexed of the elements of given array?

class Z7

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7};

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

int lastEvenIndex =

x.length % 2 == 0 ? x.length - 2 : x.length - 1;

for(int i = 0;

i < (x.length / 2);

i += 2, lastEvenIndex -= 2)

{

if(i == lastEvenIndex)

{

continue;

}

x[i] = x[i] + x[lastEvenIndex];

x[lastEvenIndex] = x[i] - x[lastEvenIndex];

x[i] = x[i] - x[lastEvenIndex];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//34. Reverse only odd indexed of the elements of given array?

class Z8

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

int lastOddIndex =

x.length % 2 == 0 ? x.length - 1 : x.length - 2;

for(int i = 1;

i < (x.length / 2);

i += 2, lastOddIndex -= 2)

{

if(i == lastOddIndex)

{

continue;

}

x[i] = x[i] + x[lastOddIndex];

x[lastOddIndex] = x[i] - x[lastOddIndex];

x[i] = x[i] - x[lastOddIndex];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

35. Swap odd indexed elements with its immediate next even indexed elements of given array?

class Z9

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = 1; i < x.length - 1; i += 2)

{

x[i] = x[i] + x[i + 1];

x[i + 1] = x[i] - x[i + 1];

x[i] = x[i] - x[i + 1];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//36. Do right shift by one for elements of given array?

class Z10

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = x.length - 1; i > 0; i --)

{

x[i] = x[i - 1];

}

/\*

for(int i = 0; i < x.length - 1; i ++)

{

x[i + 1] = x[i];

}

\*/

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//37. Do right shift by two for elements of given array?

class Z11

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

// 3, 6, 3, 6, 1, 10, 4, 6, 9, 12, 8

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = x.length - 1; i > 1; i --)

{

x[i] = x[i - 2];

}

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//39. Do left shift by one for elements of given array?

class Z13

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

// 6, 1, 10, 4, 6, 9, 12, 8, 7, 30, 30

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = 0; i < x.length - 1; i ++)

{

x[i] = x[i + 1];

}

/\*

for(int i = 1; i < x.length; i ++)

{

x[i - 1] = x[i];

}

\*/

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//40. Do left shift by two for elements of given array?

class Z14

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

// 1, 10, 4, 6, 9, 12, 8, 7, 30, 7, 30

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

for(int i = 0; i < x.length - 2; i ++)

{

x[i] = x[i + 2];

}

/\*

for(int i = 1; i < x.length; i ++)

{

x[i - 1] = x[i];

}

\*/

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//42. Do right rotate by one for elements of given array?

class Z16

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

// 30, 3, 6, 1, 10, 4, 6, 9, 12, 8, 7

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

int temp = x[x.length - 1];

for(int i = x.length - 1; i > 0; i --)

{

x[i] = x[i - 1];

}

x[0] = temp;

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}

//43. Do right rotate by two for elements of given array?

class Z17

{

public static void main(String[] args)

{

int[] x = {3, 6, 1, 10, 4, 6, 9, 12, 8, 7, 30};

// 0 1 2 3 4 5 6 7 8 9, 10

// 30, 3, 6, 1, 10, 4, 6, 9, 12, 8, 7

System.out.println("initial array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

int temp1 = x[x.length - 1];

int temp2 = x[x.length - 2];

for(int i = x.length - 1; i > 1; i --)

{

x[i] = x[i - 2];

}

x[0] = temp2;

x[1] = temp1;

System.out.println("final array content");

for(int i = 0; i < x.length; i++)

{

System.out.print(x[i] + ", ");

}

System.out.println();

}

}