class Array {

public static void main(String[] arg) {

**//Natural Numbers**

int[] res1 = MethodsForArr.naturalNo(5);

System.out.println("print natural no's");

MethodsForArr.printArr(res1);

**//Sum**

int[] arr = {23,1,17,20};

int res2 = MethodsForArr.sum(arr);

System.out.println("summation of array elements = "+res2);

**//even**

int[] res3 = MethodsForArr.even(20,40);

System.out.println("even between range of no's");

MethodsForArr.printArr(res3);

**//odd**

int [] res4 = MethodsForArr.odd(30,50);

System.out.println("odd between range of no's");

MethodsForArr.printArr(res4);

**//Prime**

int[] res5 = MethodsForArr.prime(10,50);

System.out.println("prime no between range of no's");

MethodsForArr.printArr(res5);

**//Fibonacci**

int[] res6 = MethodsForArr.fibonacci(10);

System.out.println("Fibonacci series ");

MethodsForArr.printArr(res6);

**//Random Numbers**

int[] res7 = MethodsForArr.randomNumbers(5);

System.out.println("printing random numbers ");

MethodsForArr.printArr(res7);

**//Random Char**

char[] res8 = MethodsForArr.randomCharacters(5);

System.out.println("printing random characters ");

for(int i=0;i<res8.length;i++)

System.out.println(res8[i]);

**//Reverse Array**

int[] no = {1,2,3,4,5};

int[] res9 = MethodsForArr.reverseArr(no);

System.out.println("reverse Array ");

MethodsForArr.printArr(res9);

**//no of vowels in array**

char[] res10 = {'e','g','i','t','r','u'};

System.out.println("No of vowels in an array ");

System.out.println(MethodsForArr.numOfVowels(res10));

}

}

class MethodsForArr {

public static void printArr(int[] a) {

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

System.out.println(a[i]);

}

public static int[] naturalNo(int size) {

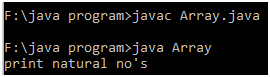
int[] arr = new int[size];

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

arr[i] = i+1;

return arr;

}



public static int sum(int[] s) {

int sum=0;

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

sum += s[i];

return sum;

}



public static int[] even(int from, int to) {

int arr[] = new int[(to-from)/2+1];

byte index =0;

for(int i=from;i<=to;i++) {

if(i%2==0)

arr[index++]=i;

}

return arr;

}



public static int[] odd(int from, int to){

int[] arr = new int[(to-from)/2+1];

for(int index=0,i=from;i<=to;i++){

if(i%2==1)

arr[index++] = i;

}

return arr;

}



public static int[] prime(int from, int to) {

int[] arr = new int[15];

int index=0,i;

for(int n=from;n<=to;n++) {

for(i=2;i<=n/2;i++) {

if(n%i==0)

break;

}

if(i>n/2)

arr[index++] = n;

}

return arr;

}



public static int[] fibonacci(int n) {

int arr[] = new int[n];

int first =0, second =1;

arr[0] =first; arr[1]=second;

for(int index=2,i=2;i<n;i=i+2) {

first = first + second;

second = first + second;

arr[index++] = first;

arr[index++] = second;

}

return arr;

}



public static int[] randomNumbers(int howMany) {

int[] arr = new int[howMany];

for(int i=0;i<howMany;i++) {

arr[i] = (int)(Math.random()\*100);

}

return arr;

}



public static char[] randomCharacters(int howMany) {

char[] arr = new char[howMany];

char ch; int i=0;

while(i<howMany) {

ch = (char)(Math.random()\*1000);

if((ch>='a')&&(ch<='z'))

arr[i++] = ch;

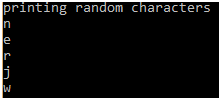
else

continue;

}

return arr;

}



public static int[] reverseArr(int[] a) {

int[] revArr = new int[a.length];

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

revArr[i] = a[(a.length)-1-i];

return revArr;

}



public static int numOfVowels(char[] c) {

int count=0;

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

if((c[i]=='a'|| c[i]=='A’ ) ||(c[i]=='e') ||(c[i]=='i') ||(c[i]=='o') ||(c[i]=='u'))

count++;

}

return count;

}

}

