**1. Write a Java program that takes 15 values of type integer as inputs from user, store the values in an array.**

**a) Print the values stored in the array on screen.  
b) Ask user to enter a number, check if that number (entered by user) is present in array**

**or not. If it is present print, “the number found at index (index of the number) ” and the text “number not found in this array”**

package Num1;

import java.util.Arrays;

import java.util.Scanner;

public class Array

{

static Scanner input = new Scanner(System.in);

public static void main(String[] args) {

// CREATE ARRAY AND PUT IT TO EMPTY.

int[] X = { 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0 };

// Collect data from the user

System.out.println("\nEnter 15 numbers to our array by spacing.)");

X[0] = input.nextInt();

X[1] = input.nextInt();

X[2] = input.nextInt();

X[3] = input.nextInt();

X[4] = input.nextInt();

X[5] = input.nextInt();

X[6] = input.nextInt();

X[7] = input.nextInt();

X[8] = input.nextInt();

X[9] = input.nextInt();

X[10] = input.nextInt();

X[11] = input.nextInt();

X[12] = input.nextInt();

X[13] = input.nextInt();

X[14] = input.nextInt();

var List = Arrays.toString(X);

// convert the array to a string list

// display the array to the user as a list.

System.out.println("Our array has the following values: " + List);

System.out.println("Enter any number to check if it is in the array: ");

var ArInput = input.nextInt();

check(X, ArInput);

}

private static void check(int[] arr, int Checkvalue) {

boolean test = false;

for (int A: arr) {

// is present in the array or not

if (A == Checkvalue) {

test = true;

break;

}

}

// Print the result

if (test) {

System.out.println(Checkvalue + " is in the array.");

} else {

System.out.println(Checkvalue + " is not in the array.");

}

}

}

1. **A prime number is a number that is evenly divisible only by itself and 1. For example, the number 5 is prime because it can be evenly divided only by 1 and 5. The number 6, however, is not prime because it can be divided evenly by 1, 2, 4, and 6.   
   Write a method named isPrime, which takes an integer as an argument and returns true if the argument is a prime number, or false otherwise. Also write main method that displays prime numbers between 1 to 500.**

package Num2;

import java.util.Scanner;

public class Primenumber

{

// static Scanner object

static Scanner input = new Scanner(System.in);

/\* A prime number

\*/

static void isPrime()

{

System.out.println("Enter a number of your choice to check if it is prime or not: ");

var XY = input.nextInt();

boolean A = false;

for (int i = 2; i <= XY / 2; ++i) {

if (XY % i == 0) {

A = true;

break;

// condition for nonprime number

}

}

if (!A)

System.out.println(XY + " It is a prime number.");

else

System.out.println(XY+ " It is not a prime number.");

}

public static void main(String[] args)

{ // [main] method that displays prime numbers between 1 to 500.

int A1= 0;

int A2 = 0;

// Empty String

String Prime = "";

for (A1 = 1; A1 <= 500; A1++) {

int count = 0;

for (A2 = A1; A2 >= 1; A2--) {

if (A1 % A2 == 0) {

count = count + 1;

}

}

if (count == 2) {List Paragraph

// Appended the Prime number to the String

Prime = Prime + A1 + " ";

}

}

System.out.println("The prime numbers from 1 to 500 are :");

System.out.println(Prime);

// call the isPrime method in the main method

isPrime();

}

}