**Q1. Declare and assign**

public class Q1\_ArrayDeclareAssign {

public static void main(String[] args) {

int[] arr = new int[5]; // Size 5

// Assign values manually

arr[0] = 5;

arr[1] = 10;

arr[2] = 15;

arr[3] = 20;

arr[4] = 25;

// Print each value

System.out.println(arr[0]);

System.out.println(arr[1]);

System.out.println(arr[2]);

System.out.println(arr[3]);

System.out.println(arr[4]);

}

}

**Q2. First and last element**

public class Q2\_FirstLast {

public static void main(String[] args) {

int[] arr = {10, 20, 30, 40, 50};

System.out.println("First element: " + arr[0]);

System.out.println("Last element: " + arr[4]);

}

}

**Q3. Square numbers**

public class Q3\_SquareNumbers {

public static void main(String[] args) {

int[] squares = new int[4];

squares[0] = 1 \* 1;

squares[1] = 2 \* 2;

squares[2] = 3 \* 3;

squares[3] = 4 \* 4;

System.out.println(squares[0]);

System.out.println(squares[1]);

System.out.println(squares[2]);

System.out.println(squares[3]);

}

}

**Q4. String array**

public class Q4\_StringArray {

public static void main(String[] args) {

String[] names = {"Alice", "Bob", "Charlie"};

System.out.println("Second name: " + names[1]);

}

}

**Q5. Modify a value**

public class Q5\_ModifyValue {

public static void main(String[] args) {

int[] arr = {2, 4, 6, 8, 10};

arr[2] = 99; // Change value at index 2

// Print updated array

for (int num : arr) {

System.out.print(num + " ");

}

}

}

**Q6. Out-of-bounds**

public class Q6\_OutOfBounds {

public static void main(String[] args) {

int[] arr = {1, 2, 3, 4, 5};

System.out.println(arr[10]); // ERROR at runtime

}

}

💡 **Note:** This will throw:

Exception in thread "main" java.lang.ArrayIndexOutOfBoundsException

**Q7. Store fruits**

public class Q7\_FruitArray {

public static void main(String[] args) {

String[] fruits = {"Apple", "Banana", "Cherry", "Mango", "Orange"};

System.out.println("First fruit: " + fruits[0]);

System.out.println("Third fruit: " + fruits[2]);

}

}

**Q8. Last index using length**

java

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public class Q8\_LastIndexLength {

public static void main(String[] args) {

int[] arr = {1, 2, 3, 4, 5, 6};

System.out.println("Last element: " + arr[arr.length - 1]);

}

}

**Q9. Char array**

public class Q9\_CharArray {

public static void main(String[] args) {

char[] vowels = {'a', 'e', 'i', 'o', 'u'};

vowels[2] = 'z'; // Replace 'i' with 'z'

for (char c : vowels) {

System.out.print(c + " ");

}

}

}

**Q10. Middle element**

public class Q10\_MiddleElement {

public static void main(String[] args) {

int[] arr = {5, 10, 15, 20, 25};

System.out.println("Middle element: " + arr[2]);

}

}