## Exercise - 3

1. Write a Java program to find the minimum and maximum integer in an array.
2. Write a Java program to reverse the array in place.
3. Write a Java program to find the second largest integer in an array.
4. Write a Java program to sort a given array in ascending order.
5. Write a Java program to print the alternate integers in an array.
6. Write a Java program to add two matrices.
7. Write a Java program to multiply two matrices.
8. Write a Java program to find the transpose of a given matrix.
9. Write a Java program to find the trace of a given matrix.
10. Write a Java program to print the following patterns:

## Pattern 1:

1
$1 \quad 2$
$1 \quad 2 \quad 3$

| 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- |

$\begin{array}{lllll}1 & 2 & 3 & 4\end{array}$
Pattern 2:
1
22
$3 \quad 3 \quad 3$
$\begin{array}{llll}4 & 4 & 4 & 4\end{array}$
$\begin{array}{lllll}5 & 5 & 5 & 5 & 5\end{array}$

