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## Lab Assignment 3

1) Read array elements by the user. Give two options to choose from -> 1. Ascending order 2. Descending order then do the sorting and display the sorted array elements.

Code:

```
//1) Read array elements by the user. Give two options to choose from -> 1. Ascending order 2. Descending order then do the sorting and display the sorted array elements.
```

```
package Assignment3;
```

```
import java.util.Arrays;
```

```
import java.util.Scanner;
```

```
public class Program1 {
```

```
    public static void main(String[] args) {
```

```
        Scanner Sc = new Scanner(System.in);
```

```
        System.out.println("Enter the size of the array:\n");
```

```
        int size = Sc.nextInt(); // taking size input from the user
```

```
        int[] arr = new int[size]; // taking the array size from the user
```

```
        System.out.println("The size of the array : " + arr.length); // prints the size of the array
```

```
        System.out.println("Enter the elements you want to store in the array : ");
```

```
        for (int i = 0; i < size; i++) {
```

```
            arr[i] = Sc.nextInt(); // taking array input from the user
        }
```

```
        System.out.println("Entered elements are following : ");
```

```
        for (int i = 0; i < size; i++) // using for loop to store for displaying the entered numbers in the array
```

```
            System.out.println(arr[i]);
```

```
        Arrays.sort(arr); // sort
```

```
        System.out.println("Values after sorting are following : ");
```

```
        for (int i = 0; i < size; i++)
```

```

        System.out.println(arr[i]); // it displays the
value in ascending order

    }

}

```

Output: -

```

Enter the size of the array:
5
The size of the array : 5
Enter the elements you want to store in the array :
20
10
30
52
67
Entered elements are following :
20
10
30
52
67
Values after sorting are following :
10
20
30
52
67

```

2) Print a 2D pattern of the first character of your name in the respective character shape

Code:

```

//2) Print a 2D pattern of the first character of your name in
the respective character shape

```

```

package Assignement3;

```

```

public class Program2 {
//Printing a 2D pattern of the letter 'P' using for loop
    public static void main(String[] args) {
        for (int i = 0; i <= 6; i++) {
            System.out.print("*");
            //This loop will help us to give the following

```

output

```

        //*****
    }
    System.out.println("");
    for (int k = 0; k <= 3; k++) {
        System.out.println("*      *");
        /* This loop will help us to give the following
output
            *****
            *      *
            *      *
            *      *
            *      *
            */
    }
    for (int j = 0; j <= 5; j++) {
        System.out.print("*");
        /* This loop will help us to give the following
output
            *****
            *      *
            *      *
            *      *
            *      *
            *****
            */
    }
    for (int l = 0; l <= 6; l++) {
        System.out.println("*");
        /* This loop will help us to give the following
output
            *****
            *      *
            *      *
            *      *
            *      *
            *****
            *
            *
            *
            *
            *
            *
            */
    }
}

}

```

Output:

```
*****
*      *
*      *
*      *
*      *
*****
*
*
*
*
*
*
```