Q2. Write a bash script to implement bubble sort.

The required script is as follows.

bubble.sh file:

```
#!/bin/bash

arr=($(cat $1))
N="${#arr[@]}"

echo "The original order of array is as follows."
echo ${arr[*]}

# Performing Bubble sort
for (( i=0; i<N-1; i++ ))
do
    for (( j=0; j<N-i-1; j++ ))
    do
        if [ ${arr[$j]} -gt ${arr[$(( j+1 ))]} ]; then
            temp=${arr[j]}
            arr[$j]=${arr[$(( j+1 ))]}
            arr[$(( j+1 ))]=$temp
        fi
    done
done

echo "After sorting, array is as follows."
echo ${arr[*]}

# write the sorted array back to file
echo ${arr[*]} > $1
```

Following command is used to run the program.

```
./bubble.sh input.txt
```

The output of the above script is as follows.

```
@2 👀 ./bubble.sh input.txt
The original order of array is as follows.
898 787 79 798 2 4 3 332 24 1 0 89 32 3
After sorting, array is as follows.
0 1 2 3 3 4 24 32 79 89 332 787 798 898
@2 👀
```