Exercise 6

1. By using NumPy, re-develop the program in Exercise 2-3 to remove all duplicate element

```
Please input the element separated by space: 1 2 3 4 5 1 2 3 45 1
After remove duplicate:  ['1', '2', '3', '4', '5', '45']
```

2. By using NumPy, re-develop the program in Exercise 2-4 to count the number of words occurred in the input list. If user input "*a is a test for a*", the program should be able to find out the occurrence for "a" = 3, "is" = 1, "test" = 1, and "for" = 1.

```
Please input the sentence: a is a test for a
a        3
for      1
is       1
test     1
```

3. Develop a Python program to create a dynamic 2D array with 1 on the border and 0 inside. The array size is depended on the user input.

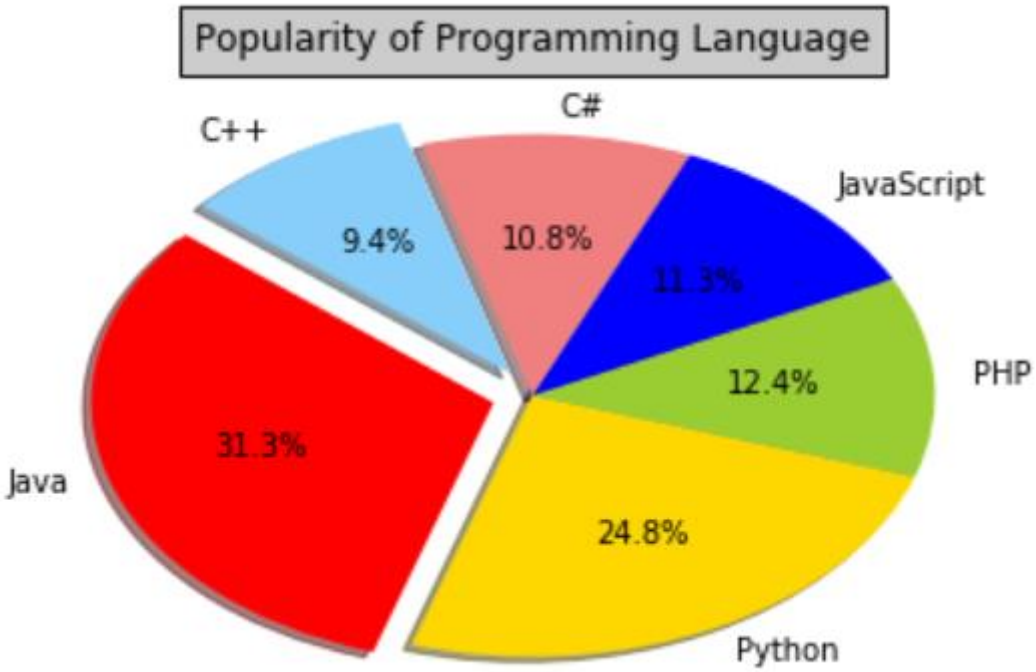
```
Please input the array size: 3
[[1. 1. 1.]
 [1. 0. 1.]
 [1. 1. 1.]]
```

```
Please input the array size:5
[[1. 1. 1. 1. 1.]
 [1. 0. 0. 0. 1.]
 [1. 0. 0. 0. 1.]
 [1. 0. 0. 0. 1.]
 [1. 1. 1. 1. 1.]]
```

4. The popularity of programming language in 2017 is as follow:

Programming Language	Popularity
Java	31.3%
Python	24.8%
PHP	12.4%
JavaScript	11.3%
C#	10.8%
C++	9.4%

Develop a Python program to create a pie chart with a title of the popularity of programming Languages, and highlight the most popular and less popular one.



5. The stock data for the Tencent Holdings Ltd during 3-7 September 2018 is as follow:

Date	Close
3-Sep-2018	332.799988
4-Sep-2018	338.600006
5-Sep-2018	324.799988
6-Sep-2018	314.600006
7-Sep-2018	316.799988

You are required to create a chart as follow: