

## Exercise 2

1. Develop a program that asks the user for a number and then prints out a list of all the divisors of that number.

```
Please choose a positive number to divide: 30
Divisor for 30 are: [1, 2, 3, 5, 6, 10, 15, 30]
```

2. Develop a program that accepts a sentence and calculate the number of letters and digits (exclude space). If user input “*Hong Kong PolyU 2018*”, the program able to find out 13 letters, and 4 digits inside the string.

```
Input String:Hong Kong PolyU 2018
Number of Letter: 13
Number of Digit: 4
```

3. Develop a program that remove all duplicate element in a list.

```
Original List: [1, 2, 3, 5, 3, 2, 1, 4]
After remove duplicate: [1, 2, 3, 5, 4]
```

4. Develop a program to count the number of word 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, 'is': 1, 'test': 1, 'for': 1}
```

5. Develop a program for storing a stock dictionary with company name and stock code, and able to query by the key word.

Company Name	Stock Code
CK Hutchison Holdings Limited	0001
CLP Holdings Limited	0002
The Hong Kong and China Gas Company Limited	0003
The Wharf (Holdings) Limited	0004
HSBC Holdings plc	0005

When you execute your program, it should ask the user to enter the key word, then it return the matched stock code, company name and URL. The interaction should look something like this:

```
Input the key word you want to query: Holdings

Matched Result: 4
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0001    CK Hutchison Holdings Limited    https://hk.finance.yahoo.com/quote/0001.HK
0002    CLP Holdings Limited                https://hk.finance.yahoo.com/quote/0002.HK
0004    The Wharf (Holdings) Limited       https://hk.finance.yahoo.com/quote/0004.HK
0005    HSBC Holdings plc                  https://hk.finance.yahoo.com/quote/0005.HK
```

```
Input the key word you want to query: Test
```

```
Matched Result: 0
No records found
```