

Programming

Lab Sessions

Exercise 1

- Write a program where the user can input a date (dd/mm/yyyy) The program then prints out the date with the month in text:

Input: 08/12/1986

Result: 8 of December of 1986

```
def writeDate(data):
    day = int(data[:2])
    month = int(data[3:5])
    year = int(data[6:])

    monthName = ('January', 'February', 'March', 'April', 'May', 'June',
                 'July', 'August', 'September', 'October', 'November',
                 'December')

    return '%d of %s of %d' % (day, monthName[month - 1], year)

data = input('Please enter a date in the format dd/mm/yyyy: ')
print(writeDate(data))
```

Exercise II

- Write a program where the user can input a string, the program then counts and outputs:
 1. The number of spaces on the string
 2. The number of vowels (a, e, i, o, u) on the string

```
string = input('Type in a string: ')

spaces = 0
vowels = 0
for i in string:
    if ('AEIOU'.find(i.upper()) >= 0):
        vowels += 1
    elif (i == ' '):
        spaces += 1

print('%d spaces e %d vowels' % (spaces, vowels))
```

Exercise III

- Write a game where the user has to guess a word displayed with the letter out of order. The program will have a list of words read from a text file and will pick one at random. The user has 6 tries to guess the word. If the user loses, the program must inform him what the word was.

```
import random

source = open('words.txt', 'r')

words = source.readlines()

source.close()

chosenWord = words[
    random.randint(0, len(words) - 1)].upper().strip()

guesseWord = random.sample(chosenWord, len(chosenWord))
for i in guesseWord:
    print('%s' % i,)
print('')

word = input('Type your guess: ').upper()

if (word == chosenWord):
    print('You got it right!')
else:
    print('You lost!')
    print('The word was %s' % chosenWord)
```

Exercise IV

- Write a program that counts the number of words in a text.
- Tip: words can be separated by ".", ",", ":", ";", "!", "?"


```
text = input("type text: ")
punctuation = [".", ",", ":", ";", "!", "?"]

for p in punctuation:
    text = text.replace(p, " ")

number = len(text.split())
print("Number of words:", number)
```

Exercise V

Write a program that counts how many times the letter a appears in a text, it also informs the position where the letter first appears and last appears on the text.

```
frase = str(input("Type a text: \n")).lower().strip()

print("Size of text: {}".format(len(frase)))

print("The letter A appears: {}".format(frase.count("a")))

print("The letter A first apperas at {}".format(frase.find("a")))

print("The letter A last apperas at {}".format(frase.rfind("a")))
```

Fin