**Lab Exercises – Functions, Dictionary**

**Exercise 1A:** Write a Python program to create a list of contact details – using name and office number.

contacts = { ‘john”:”K22”, “mary”:”K21”, “ann”:”K22”, … }

Write a function that takes a dictionary and an office number, and returns the names of all people in that office.

**Exercise 1B:** Write a Python program to create a list of contact details – using name, phone number and office number.

Write a function that takes a dictionary and an office number, and returns a list of the names of all people in that office.

**Exercise 2**: Using the contact list from Exercise 1 write a python function that prints all people whose name begins with a specific character.

Your function will take two parameters – the character and the dictionary.

**Exercise** **3:** Write a Python program to create a list of items and corresponding quantities, e.g.

**inventory = { ‘apple’:20, ‘banana’:30, ‘orange’:10}**

Write functions in Python to:

1. **returns the total number of items** (in the example above 60)
2. **add stock,** for example stock\_up(inventory, ‘apple’,10) should result in the inventory being updated with 10 extra apples

**inventory** will be **{ ‘apple’:30, ‘banana’:30, ‘orange’:10}**

You have to search through the inventory first to see if item is available

* 1. if available – update the quantity plus the new amount
  2. if not available - add it with the specified quantity