# Introduction[¶](#Introduction)

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This document addresses the task listed in I.T.6

The task as as described below:

## Problem[¶](#Problem)

Demonstrate the use of a dictionary in a program. Include in your screenshot(s):

-A dictionary in a program -A function (that you’ve created) that uses the dictionary -The result of the function running

Submit a comment explaining your understanding of:

-The use of dictionaries in programs -The code you’ve submitted

## Solution[¶](#Solution)

The following is python code which addresses the problem as described above:

In [ ]:

# The following creates a dictionary:

my\_dictionary = {"A": 5, "B": 3, "C": 1}

# A dictionary is created above by wrapping a series of key-value pairs inside the curly braces { ... }

# The dictionary above comprises three key value pairs.

# a key-value pair is specified in the form {key : value}, with the key appearing before the colon and

# the value appearing after the colon.

# key-value pairs are separated using the comma symbol. Trailing commas are allowed:

{"A": 5, "B": 3, "C":1, }

{'A': 5, 'B': 3, 'C': 1}

In [ ]:

# Keys must be unique within a directory to allow values to be uniquely identified.

# (If two or more identical keys are given then only the last key is stored in the directory)

{"A":1, "A" : 2, "B": 3}

Out[ ]:

{'A': 2, 'B': 3}

In [ ]:

# The contents of the saved dictionary can be shown by printing:

print(my\_dictionary)

{'A': 5, 'B': 3, 'C': 1}

In [ ]:

# The keys and values of the dictionary can be accessed and printed separately as follows:

print(my\_dictionary.keys())

dict\_keys(['A', 'B', 'C'])

In [ ]:

print(my\_dictionary.values())

dict\_values([5, 3, 1])

In [ ]:

# .keys() and .values() are both methods of dictionary objects

# The following is a user-defined function which returns the keys in a single dictionary object

def get\_dictionary\_keys(dct):

return dct.keys()

# The function takes as input a dictionary object called dct and returns its keys.

# The following shows the result of my\_dictionary being passed to the above function:

get\_dictionary\_keys(my\_dictionary)

Out[ ]:

dict\_keys(['A', 'B', 'C'])

In [ ]:

# The output of the function can also be saved to a new object which can then be printed explicitly

the\_keys\_of\_my\_dictionary = get\_dictionary\_keys(my\_dictionary)

print(the\_keys\_of\_my\_dictionary)

dict\_keys(['A', 'B', 'C'])