Dictionary in python

- Dictionary is a built-in data structure
- It stores data in key-value pairs
- It is collection that is ordered, changeable and does not allow duplicate keys.
  - ➢ Keys are immutable, values are mutable
  - ➢ Key is unique in dictionary and no duplicate keys
  - ➢ Eg. my_dict = {“name”:”pavan”, “age”: 22}

i. get():
  - ➢ Syntax: dict_name.get(key)
  - ➢ Used to retrieve value associated with a specified key
  - ➢ It provides a safer way to access dictionary compared to direct key indexing.
  - ➢ Ex: details = {“name’:”pavan”, “age”:22, “gender”:”male”} details.get(“name”) output: pavan.

ii. Values():
  - ➢ To get all values of dict in a list form
  - ➢ Syntax: my_dict.values()
  - ➢ Ex: details.values() output: [“pavan”,22,”male”]

iii. Keys():
  - ➢ To get all keys of dictionary in list form.
  - ➢ Syntax: my_dict.keys()
  - ➢ Ex: details.keys() output: dict_keys[“name”,”age”,”male”]

iv. Update():
  - ➢ To add or update key values in a dictionary.
  - ➢ If the key does not exist, a new key value pair is added.
  - ➢ Multiple key’s values or can also add multiple key value pairs.
  - ➢ Syntax: dict.update({new_dict})
  - ➢ Ex: a = {“city”:”hyd”} details.update(a) output: {“name’:”pavan”, “age”:22, “gender”:”male”, “city”:”hyd”}

v. Items():
  - ➢ It is used to retrive the both key and values from dictionary in tuple form.
  - ➢ To get in other form rather than tuple we can use for loop.
  - ➢ Syntax: dict.items()

- Ex: key =[] val= [] for k,v in details.items(): key.append(k) val.append(v) output: key=[“name”,”age”,”gender”,”city”] val=[“pavan”,22,”male”,”hyd”]

vi. pop():

- It removes the pair by taking the key in pop().
- If not founds gets error.
- Syntax: dict_name.pop(ke)
- Ex: details.pop(“age”) output: age:22

vii. Popitem():

- It removes the last elements key, value pair in dictionary.
- It is sarted from python version 3.7.
- Syntax: my_dict.popitems()
- Ex: details.popitems() output: {“name”:”pavan”,”gender”:”male”}

Q) let’s look a program on dictionary

```
l = [1,2,3,2,4,3,2,5,6,4]

d={}

for I in l:

        d[i] =0

for I in l:

        d[i]+1

for I in d:

        if d[i]>1:

                print(I,end=” “)
```

viii. clear():

- clears he dictionary all key,values in the dictionary.
- Syntax: my_dict.clear()
- Ex: details.clear() output: {}

ix. copy():

- To copy a dictionary data into another variable.
- Syntax: new_dict = my_dict.copy()
- Ex: details = {“name’:”pavan”, “age”:22, “gender”:”male”} new_details = details.copy().

x. formkeys():

- It converts the list data into key’s in the dictionary and assign common value.
- Syntax: d= {} d.fromkeys(list_name,common_values)
- Ex: count_l”a”, ”b”, ”c”] d ={} d.fromkeys(count_list,1) output: {”a”:1, ”b”:1, ”c”:1}

xi. zip():

- It converts the two list data into key value pair dictionary.
- Skips no matching length of lists data.
- Syntax: k=[] v = [] dict = dict(zip(k,v))
- Ex: key = k = ['name','age','gender','city'] v=['pavan', 22, 'male', 'hyd'] d = dict(zip(k,v)) print(d) output: {'name': 'pavan', 'age': 22, 'gender': 'male', 'city': 'hyd'}