**Dictionary**

* **More than one value in the single name**
* **It is changeable i.e mutable**
* **Values are specified within {}**
* **Values are separated by commas**
* **Every value has a key and value**
* **It is specified as follows**

**{key1:val1,key2:val2…..}**

* **Values are accessed by using keys only**
* **Keys are not mutable**
* **Values are mutable**
* **Key may be whole number or char(string)**
* **Values can be of number, float, Boolean etc**

**Syntax**

**Variable={key1:val1,…..,}**

**Accessing the elements in dictionary**

**1. using key elements are accessed**

**2.using for loop  deals with key**

**Note:**

**dictionary can not be accessed using while loop directly**

**Slicing based on position  dictionary is not based on position  not possible of slicing**

**in  deals with key. Returns true if the specified key is present in the dictionary**

**not in  deals with key. Returns true if the specified key is not present in the dictionary**

**Methods**

**1.copy()  makes the duplicate of the dictionary**

**Variable=dictvariable.copy()**

**2.clear()  delete all the keys and values from dictionary**

**Dictvariable.clear()**

**3.get() returns the value based on the given key**

**Variable=dictvariable.get(key)**

**4.keys()  returns the keys from dictionary**

**Variable=Dictvariable.keys()**

**5.values() returns the values from dictionary**

**Variable=Dictvariable.values()**

**6.pop() deletes the value of specified key**

**Variable=dictvariable.pop(key)**

**7.popitem() deletes the last item in the dictionary**

**Variable=dictvariable.popitem()**

**Task**

**Fromkeys(),setdefault(),update(),items()-?**

**Del statement**

**1. delete the particular elements based on key**

**2.delete the dictionary from memory**

**Other Functions**

**1.len()  returns total number of elements**

**2.max()  returns the maximum value of the keys if the keys are number**

**3.min() returns the minimum value of the keys if the keys are number**

**4.sum() add all keys if they are numbers**

**String**

**‘……’**

**“…..”**

**‘’’…………….**

**……………….**

**……………’’’**

**“””………………….**

**………………..**

**…………..”””**

**Accessing the String**

**1.using index(position)**

**2.Using loop for loop**

**While loop**

**Slicing  using : and [] operators**

**[:3]0,1,2 position values**

**[3:] 3,4,5,…n-1 position chars**

**[4:8] 4,5,6,7 position chars**

**[1:10:3] 1,4,7,9 position chars**

**in and not in operator**

**in  returns true if the searched char or string is in the original string**

**not in  returns true if the searched char or string is not in the original string**

**String Methods**

**1.isalpha()returns true if the string contains only alphabets. return false if any one of the char is not alphabets**

**Variable=stringvariable.isalpha()**

**2.isalnum()returns true if the string contains only alphabets or numbers. return false if any one of the char is not alphabets or number**

**Variable=stringvariable.isalnum()**

**3.isdigit()returns true if the string contains only numbers. return false if any one of the char is not number**

**Variable=stringvariable.isdigit()**

**4.isspace()returns true if the string contains only spaces. return false if any one of the char is not space**

**Variable=stringvariable.isspace()**

**5.islower()returns true if the alphabets in the string is lowercase return false if any one of the char is not lowercase**

**Variable=stringvariable.islower()**

**6.isupper(returns true if the alphabets in the string is uppercase return false if any one of the char is not uppercase**

**Variable=stringvariable.isupper()**

**7.capitalize() converts first word first letter as capital**

**Variable=stringvariable.capitalize()**

**8.lower() converts all the alphabets into lower case**

**Variable=stringvariable.lower()**

**9.upper() converts all the alphabets into upper case**

**Variable=stringvariable.upper()**

**10.lstrip() removes the leading spaces or specified char from the string**

**Variable=stringvariable.lstrip([char])**

**11.rstrip() removes the trailing spaces or specified char from the string**

**Variable=stringvariable.rstrip([char])**

**12.strip()removes the leading and trailing spaces or specified char from the string**

**Variable=stringvariable.strip([char])**

**13.startswith() returns true if the string is starts with specified string**

**Variable=stringvariable.startswith(string)**

**14.endswith() returns true if the string is endwith specified string**

**Variable=stringvariable.endswith(string)**

**15.split()split the string based on space or specified char and return as list**

**Variable=stringvariable.split([char])**

**Tasks**

**1. get 5 names using loop and check it it contains only alphabets**

**2. do the task using list**

**X=[1,2,3,4,5]**

**N= number of rotations(3)**

**[5,1,2,3,4]**

**[4,5,1,2,3]**

**[3,4,5,1,2]**

**3. using dictionary function get all the values of the dictionary using while loop**

**4. do the program for rstrip and strip**