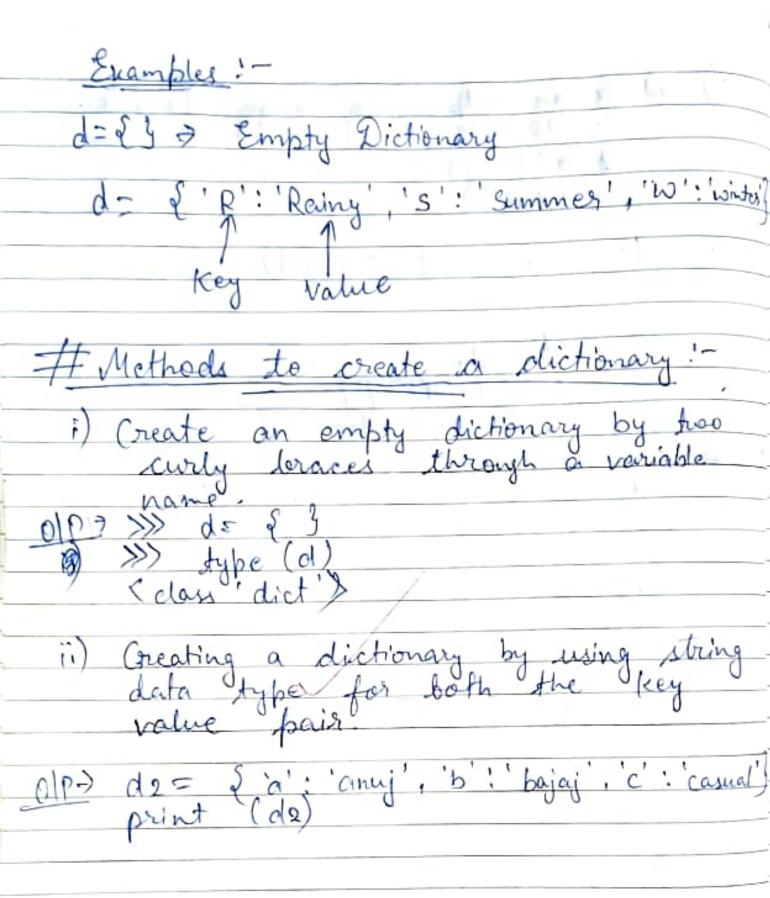
7/11/22 Tuple and Dictionary Tuple -> It is a data structure which contain sequence of values. A Tuple consists of multiple by commes (1). i) Tuples are Enclosed within parenthesis (). ii) Tuple allow duplicate values.

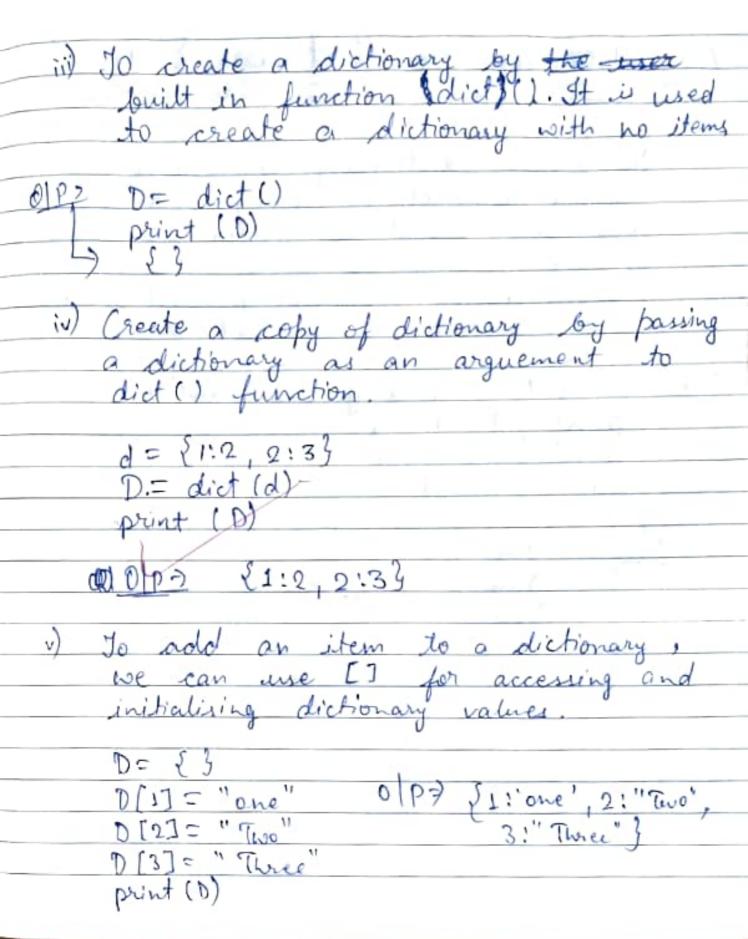
ii) Element in a Tuple are heterogeneous.

iv) Tuples are immutable ic. We cannot This means who we cannot perform insert, update, and delete operation on them. v) Tuple having single value, is known as single element, wi) If a tuple comprises a single element, the element should be followed by commas (1) to distinguish a tuple. Examples: T= (0,1,2,3,4)
T= ("hello", 1,2,3, "Norld") T3= (70,) T4= ((0,1,2), (3,4,5)) L) Nested Tuble.

T= (10, 20, 30, 40, [4,5,6]) ATA[4][1] = 500 print (T) =) (10,20,30,40,[4,500,6]) Dictionary 14/11/22 Dictionary is an unordered collection of item. Each value item is a key value poir. It is separated by its value by a colon of items are separated by commas. They are enclosed in curly braces ('53'). Dictionary are mutable, i.e. we can add new items & change the value of existing items.

The value of a dictionary can be of any type but keys must be an immutable data types such as strings, nos. as tuples





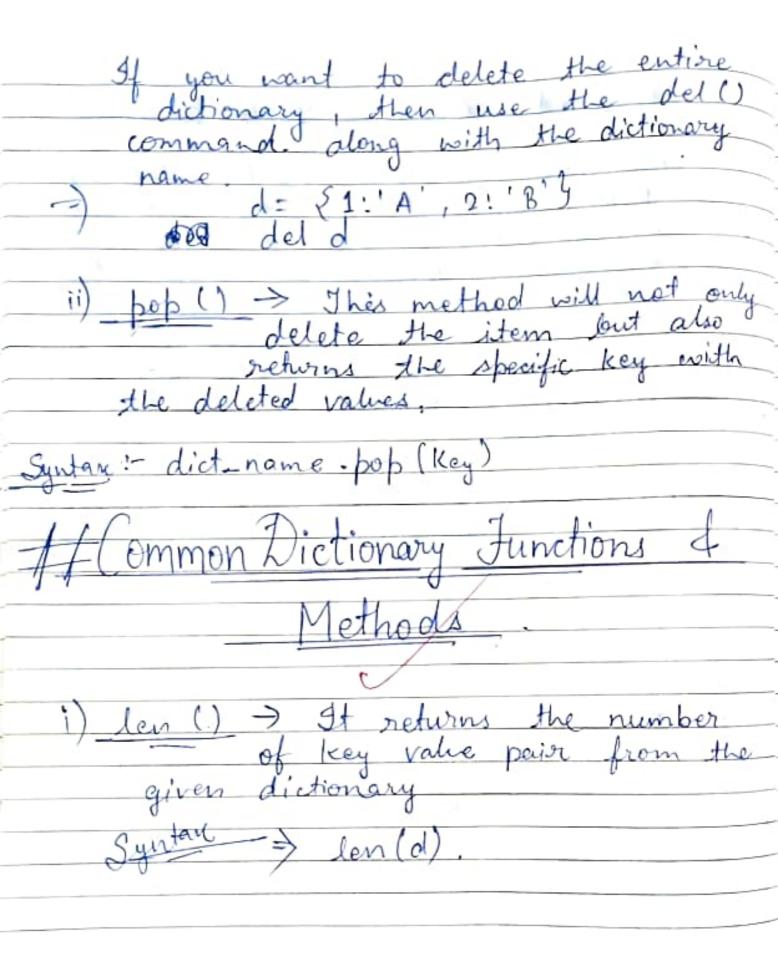
15/11/28 # Accessing the Dictionary Elements To access dictionary element, the square brackets [I along with the key are used to obtain its value If we attempt to access the data item which are not present in the given dictionary, we get an error Euit d= l'Name': 'anuj', 2! Ravi's print (d[2]) print (d['any']) Error.

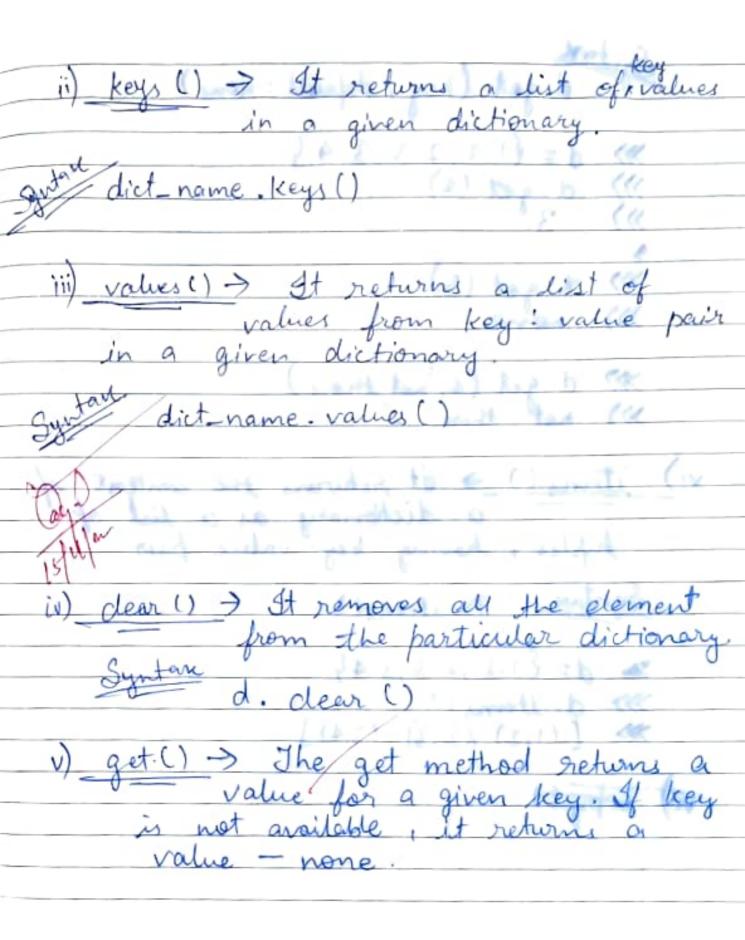
H. Traversing a Dictionary
7 0
Traversing means accessing each dement in a dictionary by using loop!
'in' operator are used with for loop to access each element
Ent d= &'Name': &'anyi', 9: 'Ravi'y  for i in d:  print (i)  print (d[i])
print (dci3)
Appending valuesed to Dictionary.
We can olded new element to the
existing dictionary, join two dictionary into one. If we want to add a single element in a dictionary, then we have to use dictionary name along
a single element in a dictionary, then
we have to use dictionary name along
with the key value.
Suntare
dict name [Ker] = value.

dict\_name [Key] = value.

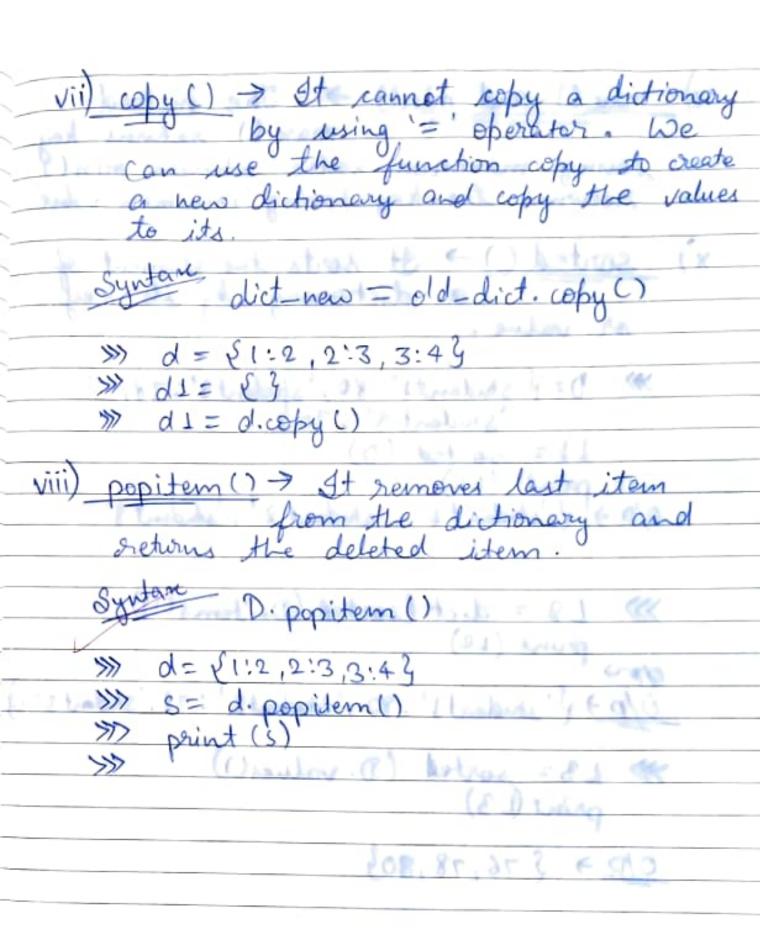
H. Updating element in Dictionary Updating means modifying existing key: value point or merging another dictionary with the another one. Two dictionaries can be merged into one by a using update method. It for merges the key and value of one dictionary with abother and overwrites the value of the same key dict\_1. update (dict\_2) En: d = & Name : 'anuj', 2: 'Aman' 4 37 d = & Tilak' & 2, Name ': Sumen' 4 d. update (d) 0[P=) &' Name': Suman', \* 2: 'Aman', 'Tilak':2]

It 'in' and 'not in' Membership Operator. This operator checks whether the given key is present in the dictionary or not. It returns true if the key element is present otherwise it returns false. Note \* Function such as min(), mare() of sum(), only applies to the keys in a dictionary. # Removing an item from a Dictionary We can remove an item from existing dictionary using del () or pop() function. i) del() -) It deletes the value by taking key as a input. Syntan del. dict - name [Key] If key is not present in the given diet., it will generate an error.





d. get (key, default = none) d = (1:2, 2:3, 3:43)
d. get (2)
3. >>> d. get (5) >>> d. get (4, not there') vi) items () > It returns the content of a dictionary as a list of tuples, having key-value pair. Syntax D. items() 1:2,2:3,3:44



ix) max () and min() > The method having maximum value whereas min () returns the key having minimum value. sorted () > It sorts the element of a dictionary by its key >>> Dz & 'student1': 80, 'student2': 78, "
Student 3': 76 9 LI = sorted (D) O/P > S'student 1', 'student 2', 'student 3' >>> L2 = dict (sorted (D. items())) 0/p -> & student 1': 80, Student 21: 78, Student 3'3 >>> L3= sorted (D. values()) print (L3) O/P > \$76,78,809

17/11/22 Output - Based Questions: 1) >>> d= [1:10, 2:20, 3:30, 4:40] >>> d. items () >>> d. values () >>> -d. keys () [(1,10),(2,20),(3,30),(4,40)] [10,20,30,40] [1,2,3,4]9) >>>  $d = \{1:10, 2:20, 3:30\}$ >>>  $d1 = \{4:40, 6:60\}$ >>> d1. update (d) >>> print (d1) 4:40, 6:60  $\{1:10, 2:20, 3:30\}$ 3) d= {1:10, 2:30, 8:30} del d [3] print (d) =) (1: 10)

- 4) d= \$1:10, 2:20, 3:30, 4:403

  Len(d)

  d. get (6,60)

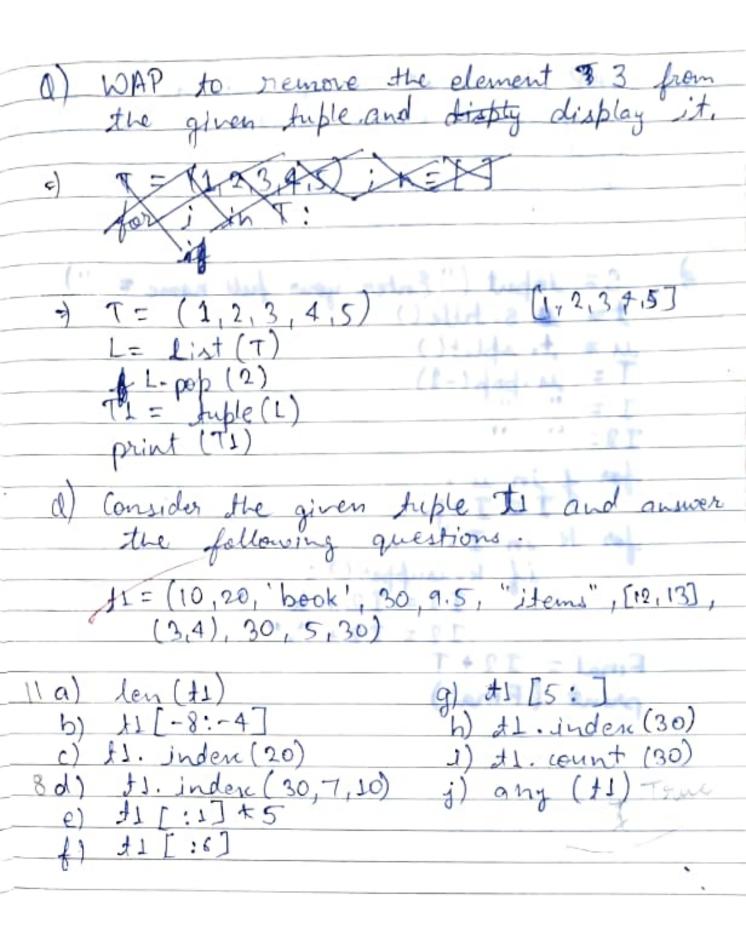
  d [3] =60

  print(d)

  d. clear()

  print(d)
- \$\frac{1}{5}\frac{1}{5
- a) (oneider the following code and find out the evoron in it.
  - a) t= (1, 1 School, 6, 7)
    print (man(+))
  - b) = (1, 's', 'h', 5, 'p')
  - c)  $T_1 = 7$   $T_2 = (1,2,3)$  $T_3 = T_1 + T_2$

d)  $T_1 = (1,2,3)$   $T_2 = (4,5,6)$ 732 (8,9) a, b, c = T1, T2 e) T1 = (1,2,3) T4=T1\*(2,) f) step1 = ("5") \* '3'
print (step1) As a) Man () only works in some data type . chos b) Tuples are immutable. Aught operator do not work with integer and tuple. Only works with two tuples. and so right hand side should be same. To is not there in R.H.S. . Anse) 't' operator requires a tuple and an integer value ich of) " operator only requires integer value to operate. Here 3 is a string.



and title. En! - Ravi Kumar Sahu R.K. Sahu. S= input ("Enter your full name = t= & s. title () = t. split() = u.pop(-1)

dista) 30, 9.5, "items", [12,13] 8 10, 10, 10, 10, 10 book', 30, 9.5 "iten "items", [12,13], (3,4),30,5