	Practical No. 5			
	Date:			
Aim:	Implementing the concept of sets and the Dictionaries in pythan.			

Aim:	Implementing the concept of sets & the Dictionances in python.
Theony:	A set is an Unordered Collection of unique elements in python. Unlike list or tuples, sets do not allow duplicate values. Sets are also mutable, meaning user can add ar remove items after the set's creation. key (horateristics of set: i) Unordered of The sets items in a set are not stored in a specific order, so you cannot access elements by index ii) Unique items: A set does not allow duplicates. iii) Mutable: User can add ar remove items, but the items themselves must be immutable (eg: numbers, strings or tuples) iv) Optimized: For membership testing making them ideal for checking if an item exsists in a collection.
CT MIN	Common Set Operations: 1) Creating a set. IV) Set operations like: 11) Adding elements. * Union, Intersection, Difference 111) Removing elements. & Symmetric Difference 111) ICENT PALLOTTI COLLEGE OF ENGINEERING & TECHNOLOGY, NAGPUR-441 108

Codes:	1) (realing a set:
	my set = { 1, 2, 3, 4}
	empty set = set () #creating an empty set.
	2) Adding elements:
	m_{y} -set = $\{1, 2, 3, 4\}$.
	my_set. 85 add (6) # Add "6" to the set.
2	3) Removing elements:
	my set mmove (2) # Removes 2" raises error if
	the element is not mesent
	my-set-discoved (7) # Removes "7", but No error if Plement is not present.
	element is not present.
	4) Set Operations:
100	1) Union (tombine elements from both sets):
	Set_1 = {1,2,3}
1	set-2 = \{3,4,5\}
	union_set = Set_1_union(set_2)
	ii) Intersection (common elements from both sets):
	$set_{1} = \{1, 2, 3\}$
	set_2 = {3,4,5}
	intersection_set = set1. intersection (set-2)
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	iii/Difference : (Elements in set but not in set 2): set-1 = {1 2 3}
	Set-1- (1 2 3)
	set_2 = {3,4,5}
	différence Set = Set-1. différence (Set-2)
	3
	iv) Symmetric Difference Celements in either set-1
N 1997 - 2	or set_2 but not buth):
	Set-1 = { 1,23}
	set_2 = {3,4,5}
ž	Sym_diff_set = set_1 . Symmetric difference (set_2)
Theory:	Dictionance :
7	A dictionaries in python is an unordered collection
	at key-value pairs. Each key is associated with a
	value & both keys & values can be not any data
1.05	type. However each key must be unique &
	immutable (eg: strings, numbers or tuples).
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	Key Characteristics of Dictionary:
	i) Key value Pairs: Fach item in a dictionary is
-	stored as a pair of key and it's rom. value.
	ii) Unordered : Like sets, the dictionaries do not
	maintain any specific order.
	iii) Mutable: User can add, update on delete key-
	value pair after creating the dictionary
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	Common Dictionary Openation	ms :
	i) Creating a Dictionary	•
	ii Accessing Values	Dictionary
	iii Adding lupdating Vulues	
	iv>Removing Elements.	3
Codes:		
·	my-dictionary = { name ;	John age : 25
	'city': 'New	York
	empty-dict = {} # creating	an empty dictionary.
	27 Accessing Values:	
	print lmy-dictionary ['nom	e)
	print my dict get l'age',	key not found'))
	# .get() to avoid emo	ns.
	7	
	3) Adding Tupdating Values :	8
÷	my_dic [lige1] = 26 #Upd	ates the key value
.: 7	my-dic ['lountay'] = 'USA' =	
		pair.
	47 Removing Flements:	
	my dictionary pap ('city') -	# Removes the key city
		raises error if not found
	del my dictionary ['name']	#-Removes 'name 'key.
		 1

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	These examples I codes Showcase how sets and the dictionwies work in python, along with their common operations.
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	5) Therating through a Dictionary:
	for key, value in my dictionary items ():
	print (f' {key} : {value}')
Conclusion:	These examples lodes showcase how sets &
	the dictionaries work in python, along with their
	Common operations.
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