

# **Bhilai Institute of Technology, Durg**

## **Department of Computer Science & Engg.**

### **Experiment Index**

**PYTHON WITH DJANGO LAB 102393CS**

<b>Student's Name</b>	<b>Branch &amp; Semester</b>	<b>Class Roll No.</b>
<b>RITESH CHATURVEDI</b>	<b>CSE 3<sup>rd</sup> SEMESTER</b>	<b>A59</b>

<b>Experiment No.</b>	<b>Date</b>	<b>Aim of Experiment</b>	<b>Page No.</b>	<b>Signature</b>	<b>Remarks</b>
1.1	09/09/22	WAP to input your name and print a welcome message along with your name.	1		
1.2	09/09/22	WAP to demonstrate the use of replacement operators {}, {index} and {alphabet} in format() used in formatted string.	2		
1.3	09/09/22	WAP to demonstrate the use of “%d”, “%f”, “%s” in a formatted string to print values of specific data types.	3		
1.4	09/09/22	WAP to find the sum of 3 numbers taking input from user. Print the 3 numbers and their sum as formatted string in the print() function.	4		
1.5	09/09/22	WAP to find the average if 3 numbers taking input from user. Print the 3 numbers and their average as formatted string in the print() function.	5		
1.6	09/09/22	WAP to swap two variables. Take necessary inputs from user.	6		
1.7	09/09/22	WAP to swap two variables without using a third variable. Take necessary inputs from user. (hint: use comma in between)	7		

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2.1	16/09/22	WAP to use eval() to evaluate an arithmetic expression as a string input from user	8		
2.2	16/09/22	WAP to calculate area of rectangle, square, circle and triangle. Take necessary inputs from user.	9-10		
2.3	16/09/22	WAP for height taken in cms then covert into feet and inches.(1 foot=12 inches and 1 inch=2.54 cm)	11		
2.4	16/09/22	Accept as input the basic salary of a person. His dearness allowance (DA) is 40% of the basic salary and the house rent allowance (HRA) is 20% of the basic salary. Calculate and show the Gross salary.	12		
2.5	16/09/22	Accept as Input the marks obtained by a student in 5 subjects. Show the Aggregate marks and Percentage marks.	13		
2.6	16/09/22	Write a program to read age from keyboard and print whether the person is child,adult or elderly.	14		
2.7	16/09/22	WAP to find whether a given no is even or odd	15		
2.8	16/09/22	WAP to find whether a given number is -ve , +ve or zero.	16		

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3.1	23.09.2022	WAP to find whether an input number is prime or composite.	19		
3.2	23.09.2022	WAP to determine whether the input number is an Armstrong number or not. (Hint: sum of cubes = number itself)	20		
3.3	23.09.2022	Accept a five digit number and reverse the number. Show whether the reversed number is same as the original number or not.	21		
3.4	23.09.2022	WAP to print the Fibonacci sequence up to N terms. Input N from user.	22		
3.5	23.09.2022	WAP to print the pattern using nested for loop * * * * * * * * * * * * * * *	23		
3.6	23.09.2022	Write a program to print the following pattern . 1 12 123 1234	24		

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3.7	23.09.2022	Write a program to print the following pattern . A BB CCC DDDD	25		
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3.8	23.09.2022	WAP to assume that uname="ABC" and pswd="123". Ask user to enter the correct combination of uname and pswd. Print "Welcome to Python" only when both the uname and pswd are correct, otherwise keep on asking user to enter correct uname and pswd.	26		
3.9	23.09.2022	WAP to demonstrate the use of lstrip(), rstrip(), strip(), count(sub_string), count(sub_string,start_index,end_index) and replace(old_string,new_string) on Strings.	27		
3.10	23.09.2022	WAP to demonstrate the use of count(), replace(), split(), rsplit(), join() on Strings.	28		
3.11	23.09.2022	WAP to demonstrate the use of upper(), swapcase(), title(), capitalize(), startswith(), endswith() on Strings.	29		
3.12	23.09.2022	WAP to demonstrate the use of isalpha(), isnumeric(), sorted(), chr() and ord() on Strings.	30		

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4.1	30.09.2022	Write a program to read a string from user and convert it into a list.	31		
4.2	30.09.2022	WAP to demonstrate how to traverse a list 1) using print(), 2) using while loop and 3) using for loop.	32		
4.3	30.09.2022	WAP to print only the even numbers present in a List of integers.	33		
4.4	30.09.2022	WAP to print the List elements using positive and negative indexing..	34		
4.5	30.09.2022	WAP to print the sum and average of all the elements in a List of numbers.	35		
4.6	30.09.2022	WAP to demonstrate the use of append(), clear(), copy() and count() methods	36		
4.7	30.09.2022	WAP to create two Lists, the first List should contain only even numbers and second List should only contain	37		

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		odd numbers from a single main List of numbers.			
4.8	30.09.2022	WAP to create a List of numbers from 1 to 100, where each element should be completely divisible by 10. (hint: use comprehension)	38		
4.9	30.09.2022	WAP to demonstrate the use of sort() of List class, to sort the elements of the List containing Strings based on string length.	39		
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4.10	30.09.2022	WAP to find the greatest list from the following nested list l1=[[10,20,30],[40,50,60],[70,80,90]]	40		
4.11	30.09.2022	WAP to create a list whose elements are squares of integers from 1 to 10. 1) Implement without list comprehension and 2) Implement with list comprehension.	41		
4.12	30.09.2022	WAP to create a list L1 of integers from 1 to 10. From L1 create another list L2 with the condition that at positions having even numbers in L1 that even number will be inserted in L2 else 0 will be inserted. Use list comprehension.	42		
4.13	30.09.2022	WAP to create a list containing only the String length from each string present in another list of strings. Use list comprehension.	43		

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4.14	30.09.2022	WAP to convert the following string "the quick brown fox jumps over the lazy dog" into list of words and then create another list that contains uppercase words extracted from the previous list. Create another list that contains sub-list having uppercase words and its length. Use list comprehension.	44		
4.15	30.09.2022	WAP to remove duplicate elements from a list and create a new list with those unique elements. (Hint: use in and not in )	45		

Experiment No.	Date	Aim of Experiment	Page No.	Signature	Remarks
5.1	07.10.2022	Write a program to read a string from user and convert it into a tuple.	46		
5.2	07.10.2022	WAP to print the sum and average of all the elements in a Tuple of numbers.	47		
5.3	07.10.2022	WAP to create a tuple t2 from an existing tuple t1 = (11, 22, 33, 44, 55, 66) by extracting 33,44 & 55 using slicing	48		
5.4	07.10.2022	WAP to modify the first item (22) of a list inside a following tuple to 222 where t1=(11, [22, 33], 44, 55)	49		
5.5	07.10.2022	WAP to create two Tuples, the first Tuple should contain only even numbers and second Tuple should only	50		



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		contain odd numbers from a single main Tuple of numbers. Use tuple comprehension			
5.6	07.10.2022	WAP to build a tuple T1 containing ages ranging from 10 to 70 with a gap of 5 years in between. Extract a tuple T2 containing ages below 30. Extract another tuple T3 containing ages above 30 but below 50 and extract another tuple T4 having ages above 50. Use Tuple comprehension.	51		
5.7	07.10.2022	WAP to read a string from user and convert it into a set.	52		

Experiment No.	Date	Aim of Experiment	Page No.	Signature	Remarks
5.8	07.10.2022	WAP to convert a list of numbers with duplicate entries into a set and display the result. Use set comprehension.	53		
5.9	07.10.2022	WAP to create a list containing unique elements from another list. Use set comprehension.	54		
5.10	07.10.2022	WAP to create a set containing even numbers from 1 to 10 and insert 0 if odd numbers are encountered. Use set comprehension.	55		
5.11	07.10.2022	WAP to input values from user into two sets and perform set union, intersection and difference	56-57		

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5.12	07.10.2022	WAP to implement some general purpose functions in python.	58-61		
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6.1	14/10/22	WAP to build a dictionary from two lists, one containing names of 5 usernames and another list containing their passwords. Use dictionary comprehension. (Hint: use zip())	62		
6.2	14/10/22	WAP to create two dictionaries, one should contain keys as even numbers and their respective values and another dictionary should contain as odd numbers and their respective values. List 1 contents are [1,2,3,4,5,6,7,8,9]. List 2 contents are extracted from the string "One Two	63		

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		Three Four Five Six Seven Eight Nine". Use Dictionary comprehension (Hint: use zip())			
6.3	14/10/22	WAP to read five subject names and their corresponding marks and store it in a dictionary. Display that dictionary.	64-65		
6.4	14/10/22	WAP to read five subject names and their corresponding marks and store it in a dictionary. Display subject name with marks that is maximum and minimum.	66-67		
6.5	14/10/22	WAP to create a Login validator. Use Dictionary to hold all users and their passwords. The existing users should be able to login by entering correct username and password.	68		
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6.6	14/10/22	WAP to build a Dictionary to hold Name, Dept, Salary, DA and Gross of an employee. i. Input the Name, Dept and Salary details from the user. ii. Calculate DA as 20% of the Salary iii. Gross = Salary + DA iv. Display all the contents	69		
6.7	14/10/22	WAP to build a Dictionary to hold Name, Dept, AggMarks, AggPer and Div for a student. i. Input the Name and Dept details from the user.	70		

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		ii.Input marks of 5 subjects (out of 100) and store the aggregate in AggMarks. iii.percentage out of 500 and store in AggMarks. iv.Display all the contents			
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7.1	07/11/22	WAP to demonstrate the application of class, objects, data members and member methods.	71		
7.2	07/11/22	WAP to demonstrate the application of constructor.	72		
7.3	07/11/22	WAP to demonstrate the application of destructor del , None	73		
7.4	07/11/22	WAP to demonstrate two ways of calling the overridden parent class methods from child classes	74		

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7.5	07/11/22	WAP to print the unique ID of each object created and destroyed. Also print the number of objects created. (hint: use instance and static members)	75		
7.6	07/11/22	WAP to create a list of 5 objects and call the member methods of each object in the list.	76		
7.7	07/11/22	WAP to create a list of 5 students and each student should have its roll number, name and aggregate marks. Implement necessary methods for filling the student details, displaying the student details and also display the student with highest and lowest aggregate marks.	77-79		

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7.8	07/11/22	WAP to demonstrate Single level inheritance.	80		
7.9	07/11/22	WAP to demonstrate Multi level inheritance.	81		
7.10	07/11/22	WAP to demonstrate Multiple level inheritance.	82		
7.11	07/11/22	WAP to demonstrate Hierarchical level inheritance.	83		

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7.12	07/11/22	WAP to demonstrate Hybrid level inheritance.	84		
7.13	07/11/22	WAP to create a parent class named Shape with a member method area() which has no definition, derive two child classes Circle and Triangle, implement the area() in both the child classes and necessary member methods to input necessary data. Display the area of Circle	85-86		
7.14	07/11/22	WAP to create a parent class named Person with two member methods about() and biodata() without any definitions, derive two child classes named Actor and Actress, both should implement the about() to store the person's name along with other details and biodata() details of the cinema they have done. Also include necessary members so that we can store and view 5 Actor and Actresses details.	87-89		
Experiment No.	Date	Aim of Experiment	Page No.	Signature	Remarks
8.1	14/11/22	WAP to demonstrate the application of try, except, else and finally.	90		
8.2	14/11/22	WAP to demonstrate how to raise an in-built exception and a customized exception.	91		
8.3	14/11/22	WAP to generate a user defined exception whenever a numeric value is found in a string which is input from the user.	92		

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8.4	14/11/22	WAP to generate a user defined exception whenever a character value is found in a string which is input from the user.	93		
8.5	14/11/22	WAP to generate a user defined exception whenever a special symbol is found in a string which is input from the user.	94		
8.6	14/11/22	WAP to input name and age from user. The program should generate an exception if the name and age are not in proper format i.e. age should be numeric and name should only contain alphabets.	95-96		
8.7	14/11/22	WAP to input age from user. The program should generate an exception if age contains any non-numeric data or if the age entered is below 1 or above 90.	97		

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8.8	14/11/22	WAP to develop a Name verifier, if the name contains any special symbol or numeric value then the program should generate a customized exception to indicate that only alphabets are allowed. The verification should be done using a	98		

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		dedicated method (eg. verifyName(string nm))			
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