



EASY2LEARN WITH JYOTI

CLASS -9

**PYTHON
PRACTICAL FILE**

ARTIFICIAL INTELLIGENCE - 417

CLASS-IX

417- ARTIFICIAL INTELLIGENCE

PRACTICAL FILE



PRACTICAL NO: 1	
OBJECTIVE	Write a program to input a “Welcome” Message and display it.
SOURCE CODE:	<pre>name= input("Please enter your name: ") print("Welcome", name)</pre>
OUTPUT:	<pre>Please enter your name: Class IX Welcome Class IX</pre>
PRACTICAL NO: 2	
OBJECTIVE	Write a program that accepts radius of a circle and prints its area.
SOURCE CODE:	<pre>r=int(input('Enter the radius of circle:')) Area=3.14*r**2 print('The area of the circle is:', Area)</pre>
OUTPUT:	<pre>Enter the radius of the circle:4 The area of the circle is: 50.24</pre>
PRACTICAL NO: 3	
OBJECTIVE	Write a program that inputs a student’s marks in three subjects (out of 100) and prints the percentage marks.
SOURCE CODE:	<pre>print('Enter the marks of five subjects out of 100 each') sub1=float(input('Enter the marks of first subject:')) sub2=float(input('Enter the marks of second subject:')) sub3=float(input('Enter the marks of third subject:')) sub4=float(input('Enter the marks of second subject:')) sub5=float(input('Enter the marks of third subject:')) average=(sub1+sub2+sub3+sub4+sub5)/5 print('The Average marks are:', average)</pre>
OUTPUT:	<pre>Enter the marks of five subjects out of 100 each Enter the marks of the first subject:90 Enter the marks of the second subject:95 Enter the marks of the third subject:85 Enter the marks of the fourth subject:90 Enter the marks of the fifth subject:90 The Average marks are: 90.0</pre>

PRACTICAL NO: 4	
OBJECTIVE	Write a program that reads the number n and print the value of n^2, n^3 and n^4.
SOURCE CODE:	<pre>n=float(input('Enter the value of n:')) a=n**2 b=n**3 c=n**4 print('The value of n² is:', a) print('The value of n³ is:', b) print('The value of n⁴ is:', c)</pre>
OUTPUT:	<pre>Enter the value of n:2 The value of n² is: 4.0 The value of n³ is: 8.0 The value of n⁴ is: 16.0</pre>
PRACTICAL NO: 5	
OBJECTIVE	Write a program to calculate simple interest.
SOURCE CODE:	<pre>P=float(input('Enter the principal amount in Rs.:')) R=float(input('Enter the rate of interest:')) T=float(input('Enter the time in years:')) SI=(P*R*T)/100 print('The simple interest is: Rs.', SI)</pre>
OUTPUT:	<pre>Enter the principal amount in Rs.:100 Enter the rate of interest:10 Enter the time in years:2 The simple interest is: Rs. 20.0</pre>
PRACTICAL NO: 6	
OBJECTIVE	Write a program to input length and breadth of rectangle and calculate its area.
SOURCE CODE:	<pre>l=float(input('Enter the length of rectangle:')) b=float(input('Enter the breadth of rectangle:')) area=l*b print('Rectangle Specifications') print('Length=',l) print('Breadth=', b) print('Area=', area)</pre>
OUTPUT:	<pre>Enter the length of rectangle:23 Enter the breadth of rectangle:22 Rectangle Specifications Length= 23.0 Breadth= 22.0 Area= 506.0</pre>

PRACTICAL NO: 8	
OBJECTIVE	<p>write a program to obtain temperature in Celsius and convert it into Fahrenheit.</p> <p>Formula : $F = C * (9/5 + 32)$</p>
SOURCE CODE:	<pre>cel = float(input("Enter the temperature: ")) Fah = (9/5)*cel + 32 print ("The temperature in Fahrenheit is ", Fah)</pre>
OUTPUT:	<p>Enter the temperature: 100</p> <p>The temperature in Fahrenheit is 212.0</p>
PRACTICAL NO: 8	
OBJECTIVE	<p>Write a program to read details like name, class, age of a student and then print the details in same line and then in separate lines.</p> <p>(Make sure to have two blank lines in these two different types of prints.)</p>
SOURCE CODE:	<pre>n = input("Enter name of student: ") c = int(input("Enter class of student: ")) a = int(input("Enter age of student: ")) print("Name:", n, "Class:", c, "Age:", a) print() print() print("Name:", n) print("Class:", c) print("Age:", a)</pre>
OUTPUT:	<p>Enter name of student: AMIT</p> <p>Enter class of student: 9</p> <p>Enter age of student: 15</p> <p>Name: AMIT Class: 9 Age: 15</p> <p>Name: AMIT</p> <p>Class: 9</p> <p>Age: 15</p>

PRACTICAL NO: 9	
OBJECTIVE	Write a Program to display the n terms of Fibonacci series.
SOURCE CODE:	<pre> n = int(input("Enter the Range Number: ")) a = 0 b = 1 if n == 1: print(a) else: print (a, b, end=' ') for i in range (2, n): c = a + b a = b b = c print(c, end=' ') </pre>
OUTPUT:	Enter the Range Number: 10 0 1 1 2 3 5 8 13 21 34
PRACTICAL NO: 10	
OBJECTIVE	Write a program to input two numbers and swap them.
SOURCE CODE:	<pre> Num1=int(input("Enter Number-1: ")) Num2=int(input("Enter Number-2: ")) print("Before Swap: ") print("Num1: ", Num1) print("Num2: ", Num2) Num1, Num2= Num2, Num1 print("After Swap:") print("Num1: ", Num1) print("Num2: ", Num2) </pre>
OUTPUT	X = 10 Y = 20 AFTER SWAP X = 20 Y = 10

PRACTICAL NO: 11	
OBJECTIVE	Write a program to input two numbers and display the largest/smaller number.
SOURCE CODE:	<pre> a=int(input('Enter the first integer:')) b=int(input('Enter the second integer:')) if a!=b: if a>b: max=a min=b if b>a: max=b min=a print(max, 'is the largest integer.') print(min, 'is the smaller integer.') else: print('Both are equal.')</pre>
OUTPUT:	<p>Case:1 Enter the first integer:10 Enter the second integer:10 Both are equal</p> <p>Case:2 Enter the first integer:10 Enter the second integer:20 20 is the largest integer 10 is the smaller integer</p>
PRACTICAL NO: 12	
OBJECTIVE	Write a program to input three integers and display the largest/smaller number.
SOURCE CODE:	<pre> num1 = int(input('Enter First number : ')) num2 = int(input('Enter Second number : ')) num3 = int(input('Enter Third number : ')) # largest number if (num1 >= num2) and (num1 >= num3): largest_num = num1 if (num2 >= num1) and (num2 >= num3): largest_num = num2 if (num3 >= num1) and (num3 >= num2): largest_num = num3 print("The largest number is : ", largest_num)</pre>

	<pre> #smallest number if (num1 <= num2) and (num1 <= num3): smallest_num = num1 if (num2 <= num1) and (num2 <= num3): smallest_num = num2 if (num3 <= num1) and (num3 <= num2): smallest_num = num3 print("The smallest number is : ", smallest_num) </pre>
OUTPUT:	<p>Case :1 Enter First number : 10 Enter Second number : 20 Enter Third number : 30 The largest number is : 30 The smallest number is : 10</p> <p>Case :2 Enter First number : 10 Enter Second number : 20 Enter Third number : 20 The largest number is : 20 The smallest number is : 10</p>
	PRACTICAL NO: 13
OBJECTIVE	<p>Write a program to take a list of items and print each item in the list using for loop. Animals=['cat', 'dog', 'mouse', 'hamster']</p>
SOURCE CODE:	<pre> Animals=['cat', 'dog', 'mouse', 'hamster'] print("Animals in given list are : ") for a in Animals: print(a) </pre>
OUTPUT:	<p>Animals in given list are : cat dog mouse hamster</p>
	PRACTICAL NO: 14
OBJECTIVE	<p>Write a program to create a list namely test having at least 3 integers, 2 floating point numbers and two strings.</p>

	test=[11, 33,99, 20.25, 95.2,'Apple', 'Pencil']
SOURCE CODE:	<pre> test=[11, 33,99, 20.25, 95.2,'Apple', 'Pencil'] print('The Given List Test = ', test) #1. print the first element of the list test print('The first element of the list test is :',test[0]) #2. print the last element of the list test print('The last element of the list test is :',test[-1]) #3. print the 2nd element of the list test print('The 2nd element of the list test is :',test[1]) #4. print the 4th element of the list test print('The 4th element of the list test is :',test[3]) #5. print the 2nd last element of the list test print('The 2nd last element of the list test is :',test[-2]) #6. print all elements of the list test print('All elements of the list test are :',test) #8. print the size of the list test print('The size of the list test is :', len(test)) </pre>
OUTPUT:	<pre> The Given List Test = [11, 33, 99, 20.25, 95.2, 'Apple', 'Pencil'] The first element of the list test is: 11 The last element of the list test is: Pencil The 2nd element of the list test is: 33 The 4th element of the list test is: 20.25 The 2nd last element of the list test is: Apple All elements of the list test are : [11, 33, 99, 20.25, 95.2, 'Apple', 'Pencil'] The size of the list test is : 8 </pre>
	PRACTICAL NO: 15
OBJECTIVE	Write a program to input a number and display the table of that number.
SOURCE CODE:	<pre> n=int(input("Enter The Number : ")) i=1 while(i<=10): t=n*i print(n,"x",i,"=",t) i=i+1 </pre>

OUTPUT:

Enter The Number: 8

8 x 1 = 8

8 x 2 = 14

8 x 3 = 21

8 x 4 = 28

8 x 5 = 35

8 x 6 = 42

8 x 8 = 49

8 x 8 = 56

8 x 9 = 63

8 x 10 = 80