**FYBCA**

**SEMESTER – I**

**BCA1111C03: Introduction to Programming using Python**

**Date : 21/09/2022**

**Instructions:**

         Properly name your variables.

         Use comments wherever required

         Write problem objective with the necessary details in the beginning of each program.

1. Write a program to print type of following variables:
2. A = 5
3. B = 10.5
4. C= “FYBCA”

**print("Data type of num int:",type(A))**

**print("Data type of num float :",type(B))**

**print("Data type of num str:",type(C))**

1. Write a program to print no. Of days of Month. If you enter March as month then output should be like this : No of days of “March” is : 31
2. Write a Program to check character, whether a character is Vowel or not.

**ch = input("Enter a character: ")**

**if(ch=='A' or ch=='a' or ch=='E' or ch =='e' or ch=='I'**

**or ch=='i' or ch=='O' or ch=='o' or ch=='U' or ch=='u'):**

**print(ch, "is a Vowel")**

**else:**

**print(ch, "is a Consonant")**

1. Write a program to find the largest of given two numbers.
2. Write a program to find largest of given three numbers.

**num1 = float(input("Enter first number: "))**

**num2 = float(input("Enter second number: "))**

**num3 = float(input("Enter third number: "))**

**if (num1 > num2) and (num1 > num3):**

**largest = num1**

**elif (num2 > num1) and (num2 > num3):**

**largest = num2**

**else:**

**largest = num3**

**print("The largest number is",largest)**

1. Write a program to find area of a triangle.

**a = float(input('Enter first side: '))**

**b = float(input('Enter second side: '))**

**c = float(input('Enter third side: '))**

**# calculate the semi-perimeter**

**s = (a + b + c) / 2**

**# calculate the area**

**area = (s\*(s-a)\*(s-b)\*(s-c)) \*\* 0.5**

**print('The area of the triangle is ',format(area,'.2f'))**

1. Write a program to check whether the given number is between 1 and 100 or not.
2. Write a program to find the area of a Rectangle.
3. Write a program to convert kilogram into pound.

**kg = input("Enter the weight in KG ")**

**pounds = float(kg) \* 2.2**

**print("Equivalent KG in Pounds is”, pounds)**

1. Write a program to convert temperature in Celsius to Fahrenheit.(Hint: celsius = (fahrenheit - 32) / 1.8)
2. Write a Python program to check if the input year is a leap year or not.

**year = int(input("Enter a year: "))**

**if (year % 400 == 0) and (year % 100 == 0):**

**print("{0} is a leap year”. format(year)) elif (year % 4 ==0) and (year % 100 != 0): print ("{0} is a leap year”. format(year)) else: print ("{0} is not a leap year”. format (year))**

# divided by 100 means century year (ending with 00) # century year divided by 400 is leap year

# not divided by 100 means not a century year

# year divided by 4 is a leap year # if not divided by both 400 (century year) and 4 (not century year)

# year is not leap year

1. Write a program to count total number of notes of denomination 50,100,500,2000 Rupees in given amount.

(Eg: Amount 20000:- 2000-10,

500-20,

100-200,

50-400)

1. Write a program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:

Percentage >= 90% : Grade A

Percentage >= 80% : Grade B

Percentage >= 70% : Grade C

Percentage >= 60% : Grade D

Percentage >= 40% : Grade E

Percentage < 40% : Print Fail Message

1. Write a program to find duplicate characters in a given string.
2. Write a program to check whether a string is a palindrome or not.

**str=input(("Enter a word:"))**

**if(str==str[::-1]):**

**print("The letter is a palindrome")**

**else:**

**print("The letter is not a palindrome")**