



# National University

of Computer & Emerging Sciences Peshawar Campus



10/09/23  
21/09/23

Student Name: \_\_\_\_\_

Roll No: \_\_\_\_\_

Program: BSE, BCS, BAI

Examination: Sessional 1

Semester: Fall-2023

Total Marks: 40 Weightage: 15

Time Allowed: 1 hour

Date: Sep 23, 2023

Course: Programming Fundamentals (CS1002)

**NOTE:** Attempt all questions. Question paper must be returned. Calculator not allowed.

10 MARKS, (CLO 1)

Q 1)

- a) Write a program to take number input from user and then display a character against that value provided by user. (Hint: ASCII)

SAMPLE INPUT: 35

SAMPLE OUTPUT: #

- b) Write a program to give exactly this output  
"The coding 'is' real \fun "
- c) What is this ++ operator called, and what happens when we write ++x?
- d) Which of these is used for most precise values: long double, float or double?

Q 2) Write a program to convert

10 MARKS, (CLO 2)

- a) feet to inch  
b) inch to feet  
c) kg to pound  
d) pound to kg

Each of the conversion should be done through separate functions, you should take input from user using another function named 'take\_val', then pass the input values to other functions from within tak\_val function. Those function should display the conversion answers. Hint: 1 kg = 2.2 pound

Sample input:

feet : 3  
inch : 12  
kg : 3  
pound : 2.2

Sample Output:

1500 gram = 1.5 kg  
2 kg = 2000 gram  
3 feet = 36 inch  
12 inch = 1 feet  
3 kg = 6.6 pound  
2.2 pound = 1 kg

Q 3) Write program for following expression

10 MARKS, (CLO 2)

$$\text{result} = a + (a + b * c) / d - e + f \% g * ((h * i) - (j + k)) / (i * m \% p);$$

Let the following be global variables.

$a = 5, b = 3, c = 2, d = 10, e = 4, f = 8, g = 6, h = 7, i = 1, j = 12, k = 2, m = 2, p = 4$

result is to be calculated in function 'calc\_ans' with no parameters, this function will return the result. In main function declare a local variable 'answer' and assign it the value returned from calc\_ans. Then display value of 'answer'.

After writing the code, solve the expression step by step and write answer?

Q4 ) A shop contains following items.

10 MARKS, (CLO 2)

Cocomo	60 Rupee
Tuc	20 Rupee
Eclair	5 Rupee
Wavy	50 Rupee
Tang	15 Rupee
Pringles	400 Rupee

The user can purchase any of these in any quantity. e.g., Three Tuc Biscuits will cost 60 Rupee and One Tang will cost 15 Rupee, so the total bill would be 75 Rupee. (Remember the price of each item is fixed; cannot be changed).

Ask user his/her name let's suppose the name has 5 letters, the name must be taken writing a single line of code (The name is to be shown on top of receipt). And then enter count of each purchased item. In receipt below the name; show all the items purchased, their quantity, cost, total cost for item and whole bill is to be shown.

Write a program to calculate bill and generate a receipt which is supposed to be displayed.

#### SAMPLE OUTPUT

NAME: KINZA

ITEM: PRICE: QUANTITY: COST

Cocomo : 60 : 0 : 0

Tuc : 20 : 3 : 60

Eclair : 5 : 0 : 0

Wavy : 50 : 0 : 0

Tang : 15 : 1 : 15

Pringles : 400 : 0

TOTAL = 75