PYTHON ASSIGNMENT

COURSE: BCA-A

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QUESTION NO. 1

a **=** int(input("Enter first number: "))

b **=** int(input("Enter second number: "))

print(a **+** b)

print(a **-** b)

print(a **\*** b)

print(round(a **/** b,2))

print(a **%** b)

print(a **\*\*** b)

print(a **//** b)

EXPLAINATION: This Python program performs basic arithmetic operations (addition, subtraction, multiplication, division, remainder, power and floor division) on two user-inputted integers and writes the result in a concise manner. in this function like +:used for addition ,-:used for subtraction,\*:used for multiplication,/:used for division,%:used for remainder,\*\*:used for power,//:used to get floor division and in last it performs all these arithmetic operators and give a perfect output.

QUESTION NO.2 a **=** int(input("Enter first number: "))

b **=** int(input("Enter second number: "))

**if** a**>**b:

print("A is greater than B")

**elif** a**==**b:

print("A and B are equal")

**else**:

print("A is less than B")

EXPLAINATION: The Comparison Program is a simple Python script designed to compare two integers inputted by the user in which total three conditions (if, elif, else) and two operators which are (>,<). In this the two input was given by the user and the input will be checked by the every condition and the condition which satisfies its condition will be printed as output.

QUESTION NO.3 a**=**(input("Enter the first value:"))**.**strip()**.**lower()**==**"true" b**=**(input("Enter the second vale:"))**.**strip()**.**lower()**==**"true"

c**=**(input("Enter the third value:"))**.**strip()**.**lower()**==**"true"

r1**=**a **and** b **and** c

r2**=**a **or** b **or** c

r3**=** **not** a

r4**=** **not** b

r5**=** **not** c

print(f"The AND operator result:{r1}"

print(f"The OR operator result:{r2}")

print(f"The NOT operator result:{r3}")

print(f"The NOT operator result:{r4}")

print(f"The NOT operator result:{r5}")

EXPLAINATION: This python program consist of three Boolean values (true/false) and these values will be evaluated by logic operations which are AND, OR, NOT. They are evaluated like AND (a and b and c),OR(a or b or c), not (not a ,not b ,not c) . In this when we give input Boolean values it use logic operation and solve the value and give us input in a consulted manner.

QUESTION NO.4

a**=**input("enter a string:")

print(len(a))

print(a[0],a[**-**1])

print(a[::**-**1])

print(a**.**upper(),a**.**lower())

EXPLAINATION: This Python program:

1. Prompts user for a string input.
2. Performs various string operations:
   * Length calculation (len(a))
   * First character access (a[0])
   * Last character access (a[-1])
   * Reversal (a[::-1])
   * Uppercase conversion (a.upper())
   * Lowercase conversion (a.lower())

QUESTION NO.5

name = input("Enter your name: ")

age = int(input("Enter your age: "))

print("Hello",name, "you are",age,"years old")

EXPLAINATION: This python program consist of name ,age and print . in which user user have to first give its name and then second input will be its age , and then program will give the output according to the program we used in the print and it will print the personalized greetings message.

QUESTION NO.6

sentence **=** input("Enter a sentence: ")

word **=** input("Enter a word to search: ")

**if** word **in** sentence:

print(sentence**.**index(word))

**else**:

print("Word not found")

EXPLAINATION: This python program consist of sentence,word and condition statement.it will asks for a sentence and a word to search . and then it checks the word is present in the sentence or not and if it is present than it print the index(position) and the output will appears.

QUESTION NO.7

numbers **=** [float(input("Enter number: ")) **for** \_ **in** range(5)]

print(sum(numbers))

print(max(numbers) , min(numbers))

EXPLAINATION: this python program consist of numbers .in this program it asks for five numbers and then stores the number in list and then calculate the numbers and then it print the sum, maximum and minimum numbers as asked in the print by the user and the output will be appear.

QUESTION NO.8

a**=**[]

**for** i **in** range(5): *.*

b**=**input(f"Enter the Fruit {i**+**1}:")

a**.**append(b)

print(f"The First list:{a}")

c**=**input("Enter the fruit you want to add:")

a**.**append(c)

print(f"The added fruit list:{a}")

d**=**a**.**pop(1)

print(f"The removed and updated list of fruits:{a}")

EXPLAINATION: this python program first creates an empty list and then asks user to give five inputs and stores them in list a and then prints the initial list and then ask another fruit to add in it and appends the new fruit and then it prints the updated list and then it remove the fruit at index 1 and then prints the final list .

QUESTION NO. 9

numbers **=** []

**while** len(numbers) **<** 5:

num **=** int(input("Enter a number: "))

numbers**.**append(num)

print("Ascending order:", sorted(numbers))

print("Descending order:", sorted(numbers, reverse**=True**))

EXPLAINATION: this python program first creates an empty list named as numbers and then it asks to users for five numbers by using while loop and then it store the number in the list and print them in the ascending and descending order as asked in the question by the user.

QUESTION NO. 10

numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

print(numbers[:5])

print(numbers[5:])

print(numbers[2:8])

EXPLAINATION: This Python program demonstrates list slicing using the numbers list and then it firstly print the fist five numbers and then it will print the last five numbers and then it will print the numbers from index 2 to 7, it does not include the 8, it will print like this because the condition is numbers[start:stop:step].