Kingdom of Saudi Arabia Royal Commission at Yanbu Colleges & Institutes Division		المملكة العربية السعودية بينبع الهيئة الملكية قطاع الكليات والمعاهد
Yanbu Industrial College Computer Science & Engineering Dept. Information & Computer Technology Dept.		كلية ينبع الصناعية قسم علوم وهندسة الحاسب الآلي قسم تقنية المعلومات والحاسب الآلي

ASSIGNMENT 1

ACADEMIC YEAR 1443/1444 H (2022/2023 G), SEMESTER I (441)

SELADVANCED TOPIC IN COMPUTER SCIENCE
CS 471

DATE: **19 September, 2022**

STUDENT NAME: **Rahaf Mohammed Alweldi**

STUDENT ID:

3	9	1	0	3	2	2

SECTION: **1**

FOR INSTRUCTOR USE ONLY			
Q. No.	**CLOs (PO)**	**MAX MARK**	**MARKS OBTAINED**
1,2	2.02(A)	5	
3,4	2.02(B)	5	

GENERAL INSTRUCTIONS

- **This is an individual assignment.**
- **Based on the problem statement assigned to you, produce a solution following the description attached to this sheet.**
- **Submission is required in soft-copy form (-a PDF format - copy-paste codes into this form).**
- **Copied work will not be graded.**
- **Write your name and I.D. number in the space provided above.**

TOTAL MARKS	**10**		• **Due is on 25th September 2022 by 4.00 p.m.**

MARKED BY:	**Signature:**
CHECKED BY:	**Signature:**

1. Write a Python script that does the following:
    a. Accept two integers from the user.
    b. Calculate the multiplication and division of the given two numbers and display the results.
    c. Compare the two numbers and determine the smaller value.
    d. Convert the first number into a float number, and the second number into a string.

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))

#a. Accept two integers from the user.
print("\nThe entered numbers are", a, "and", b)
print("\n")

#b. Calculate the multiplication and division of the given two numbers and display the results.
print("Multiplication of the two numbers", a*b, "\nDivision of the two numbers", a/b)
print("\n")

#c. Compare the two numbers and determine the smaller value.
if(a>b):
  print(b,"is the smaller number")
else:
  print(a, "is the smaller number")
print("\n")

#d. Convert the first number into a float number, and the second number into a string.
a_toFloat = float(a)
b_toString = str(b)

print("The number:\tNumber's type:\t\tThe number after converting:\tNumber's type after converting:");
print(a,"\t\t", type(a), "\t\t", a_toFloat,"\t\t\t\t", type(a_toFloat))
print(b,"\t\t", type(b), "\t\t", b_toString, "\t\t\t\t", type(b_toString))
```

```
Enter first number: 8
Enter second number: 4

The entered numbers are 8 and 4


Multiplication of the two numbers 32
Division of the two numbers 2.0


4 is the smaller number


The number:     Number's type:          The number after converting:    Number's type after converting:
8               <class 'int'>           8.0                             <class 'float'>
4               <class 'int'>           4                               <class 'str'>
```

2. Write a program to create a function named employee that does the following:
    a. Accept the name and the salary from the user
    b. Display the given name and the given salary
    c. Assign default values for the parameters, in case of missing values in the function call

```
def employee(name="Mohammed", salary=3000):
  print("\nName of the employee:",name)
  print("Salary:", salary, "SR")

a=str(input("Enter name: "))
b=float(input("Enter salary: "))
employee(a,b)
```

```
Enter name: Ali
Enter salary: 5000

Name of the employee: Ali
Salary: 5000.0 SR
```

3. Write a program to add two lists index-wise. Create a new list containing the 0th index item from both lists, then the 1st index item, and so on until the last element. Any leftover items will get added at the end of the new list.

list1 = [“C” , “47” , “Cou”] list2 = [“S” , “1” , “rse”]
Expected output: [“CS” , “471” , “Course”]

```
list1 = ["C" , "47" , "Cou"]
list2 = ["S" ,  "1" , "rse"]

result = [i + j for i, j in zip(list1, list2)]
print(result)
```

```
['CS', '471', 'Course']
```

4. Create a program that asks the user to enter his name and his date of birth. Display a message that shows the user's name and age.

```python
from datetime import date

def calculate_age(Date_of_birth):
    today = date.today()
    return today.year - Date_of_birth.year - ((today.month, today.day) < (Date_of_birth.month, Date_of_birth.day))

name = str(input("Enter name: "))

print("\n*Date of birth*")
year = int(input("Enter year: "))
month = int(input("Enter month: "))
day = int(input("Enter day: "))

print("\nName:", name)
print("Age:", calculate_age(date(year,month,day)))
```

```
Enter name: Rahaf

*Date of birth*
Enter year: 2000
Enter month: 3
Enter day: 25

Name: Rahaf
Age: 22
```