

IT1303 - Programming

PRACTICAL

Module Recap

IF.....ELIF.....ELSE

Exercise 1

Create a simple program to ask user for 2 digit.

After that the program will compare the 2 numbers and declare if one is greater then the other or are they equal.

Sample Output

```
Please enter the first number:5  
Please enter the second number:5  
The numbers are equal
```

```
Please enter the first number:10  
Please enter the second number:5  
The first number is bigger than the second number
```

```
Please enter the first number:3  
Please enter the second number:40  
The second number is bigger than the first number
```

Exercise 2

Create a simple program to ask user for a digit,

The system will check if the number is 0 before determining if the number is even or odd and display on screen.

Sample Output

```
Please enter a number:5  
The number entered is a odd number!
```

```
Please enter a number:888  
The number entered is a even number!
```

```
Please enter a number:0  
The number is zero!
```

For, While Loop

Exercise 3

Create a simple program to ask user for a digit,

The system will check if the number is 0 before determining if the number is even or odd and display on screen. This will continue until the user enter the word “quit”

Sample Output

```
Please enter a number(Enter 'quit' to stop):98
The number entered is a even number!
Please enter a number(Enter 'quit' to stop):50
The number entered is a even number!
Please enter a number(Enter 'quit' to stop):65
The number entered is a odd number!
Please enter a number(Enter 'quit' to stop):0
The number is zero!
Please enter a number(Enter 'quit' to stop):quit
```

Exercise 4

Create a program that will ask the user for the number of iteration that the system will print the '*' symbol.

Sample Output

```
Please enter the number of iteration:5
*
**
***
****
*****
```


Exercise 5

Create a program to calculate the amount spent and the budget left.

At the start of the program, it will ask the user to enter the total budget amount the user have.

Next it will ask for the purchase item and its price.

Next the amount spent will be deducted until there is in-sufficient amount to deduct for the items.

The program will end after this.

Sample Output

```
Please enter the budget available: $100
Please enter the item purchased: bread
Please enter the amount spent for bread: $20
bread purchased at $20.00
Budget left: $80.00
Please enter the item purchased: cakes
Please enter the amount spent for cakes: $40
cakes purchased at $40.00
Budget left: $40.00
Please enter the item purchased: table
Please enter the amount spent for table: $80
Insufficient budget to purchase table at $80.00
```

List

Exercise 6

Create a program that remove the remove all duplicate elements in the list.

Constraints:

Do not use any built-in Python functions or methods that would solve this problem directly.

Add the following code to your program:

```
input_list=[1, 2, 2, 3, 4, 4, 5, 5, 6, 7, 7, 8, 9, 9]
```

Sample Output

```
input list:  [1, 2, 2, 3, 4, 4, 5, 5, 6, 7, 7, 8, 9, 9]  
output list: [1, 2, 3, 4, 5, 6, 7, 8, 9]
```

Tuple

Exercise 7

Your task is to develop a part of the order management system.

The restaurant's menu has various items and each is represented by a tuple with two elements: the name of the item as a string, and the price as a float. The order is also represented by a tuple with two elements, the item name and the quantity of that item in the order.

Add the following code to your program:

```
menu = (("Burger", 4.99), ("Fries", 2.49), ("Drink", 1.99))  
order = (("Burger", 2), ("Fries", 3), ("Drink", 1))
```

Sample Output

```
menu: (('Fries', 2.49), ('Burger', 4.99), ('Drink', 1.99))  
order: (('Burger', 2), ('Fries', 3), ('Drink', 1))  
The total cost is: 19.44
```

Dictionary

Exercise 8

You are a software developer for a large bookstore. Each book in the store has a unique ID and an associate price. The bookstore keeps track of its inventory with dictionary, where each key-value pair represents a book and its price.

The program should apply the discount to the specified book and return the updated inventory dictionary.

Add the following code to your program:

```
# Existing inventory
inventory = {
    "001": 19.99,
    "002": 25.50,
    "003": 12.99
}
```

Sample Output

```
Please enter the book ID: 001
Please enter the discount as a decimal (e.g., 0.15 for 15%): 0.15
{'001': 16.99, '002': 25.5, '003': 12.99}
```

```
Please enter the book ID: 004
Please enter the discount as a decimal (e.g., 0.15 for 15%): 0.20
No book with ID 004 found in the inventory.
{'001': 19.99, '002': 25.5, '003': 12.99}
```