INFS 1101 – Lab 15

Instructions

The lab consists of two parts:

* Part I consists of fundamental exercises: you need to complete, understand, and submit these exercises by midnight.
* Part II consists of additional exercises that you need to finish in the next **2 Days** and submit it.

For this lab, you will need to develop the flowchart for each exercise, And should be developed with drawio,

Once you are done, put all flowcharts in two zipped folders (**Lab15-part1.zip)** and (**Lab15-part2.zip)** , submit both parts in the same D2L dropbox.

Part I

## Exercise 1

Develop an algorithm called **DrivingLicense** that asks the user to enter their name and age. If the user is at least 18 years old, display a message telling the user they can apply for their driving license. Alternatively, display a message telling the user they are too young to apply for a driving license.

**Constraint**: you should develop a function called **AgeChecker** that take the age as an **input** parameter and **displays** the adequate message.

#### Sample run 1:

**Please enter you name: samia  
Please enter your age: 16  
Samia, you are too young to apply for a driving license!**

#### Sample run 2:

**Please enter you name: mira   
Please enter your age: 18  
Mira, you may apply for a driving license.**

## Exercise 2

Write an algorithm called **MovieTicketPrice** that asks the user to enter their age. Based on the age, calculate the ticket price:

* Children (under 12 years): $5
* Teens (12 to 17 years): $8
* Adults (18 to 64 years): $10
* Seniors (65 and above): $7

Display a message telling the user the cost of their movie ticket based on their age.

**Constraint**: you should develop a function called **AgeChecker** that takes the **age** as an **input** parameter and **displays** the adequate pricing based on the age.

**Hint**: the variables of your algorithm are highlighted in purple and the user inputs are highlighted in green in the sample run.

#### Sample run 1:

**Enter your age: 15  
Your movie ticket price is: $8**

#### Sample run 2:

**Enter your age: 10  
Your movie ticket price is: $5**

#### Sample run 3:

**Enter your age: 70  
Your movie ticket price is: $7**

Part II

## Exercise 3

**Problem**: Write the Python code of a program called **TipCalculator**. The program should ask the user to enter the total amount of their bill. Then, it should present options for standard tipping rates:

1. 10% (Standard)
2. 15% (Good Service)
3. 20% (Excellent Service)

The user should choose one of these options. Based on the user's selection, calculate the tip amount and the total amount (bill + tip). Display both the tip amount and the total amount to the user.

**Constraint**: you should develop a function called **FinalPriceCalculator** that takes the bill amount and the tipping rate as **input** parameters and **returns** the adequate pricing. The printing of the pricing should be handled within the main program.

#### Sample run 1:

**Enter the total amount of your bill: $50  
Choose a tipping rate:  
1. 10% (Standard)  
2. 15% (Good Service)  
3. 20% (Excellent Service)**

**Enter your choice (1/2/3): 2**

**Tip Amount: $7.50  
Total Amount (Including Tip): $57.50**

#### Sample run 2:

**Enter the total amount of your bill: $50  
Choose a tipping rate:  
1. 10% (Standard)  
2. 15% (Good Service)  
3. 20% (Excellent Service)**

**Enter your choice (1/2/3): 1**

**Tip Amount: $5.0  
Total Amount (Including Tip): $55.0**

#### Sample run 3:

**Enter the total amount of your bill: $100  
Choose a tipping rate:  
1. 10% (Standard)  
2. 15% (Good Service)  
3. 20% (Excellent Service)**

**Enter your choice (1/2/3): 3**

**Tip Amount: $20.0**  
**Total Amount (Including Tip): $120.0**

#### Sample run 4:

**Enter the total amount of your bill: $100  
Choose a tipping rate:  
1. 10% (Standard)  
2. 15% (Good Service)  
3. 20% (Excellent Service)**

**Enter your choice (1/2/3): 6**  
**Invalid choice**