

CS 115 - Introduction to Programming in Python

Lab 01

Lab Objectives: Input/output, data, expressions, selection statements.

Q1: Write a program `Lab01_Q1.py` to input the purchase amount and define the discount and sales tax rates, (discount rate = %20 and sales tax = %15) the program should print the following:

- The amount of the discount
- The discounted amount
- The amount of sales tax
- The amount to be paid

Sample Run:

```
Enter purchase amount(in dollars): 1000
Amount discount: $ 200.0
Price after discount: $ 800.0
Sales Tax: $ 120.0
Amount due: $ 920.0
```

Q2: Write a program `Lab01_Q2.` to prepare a menu for a restaurant customer. The customer will input his/her budget, and the program will compute their bill based on the following. The customer must order a main dish (15TL). If they have money remaining, a starter, dessert or both will be added to their menu, depending on the remaining budget. (Starter costs 10 TL, Dessert costs 8 TL) The program will display the final bill, as well as their remaining budget.

| | |
|--|---|
| <p>Sample Run:</p> <pre>Enter budget: 24 Main dish added. Budget not sufficient for starter... Dessert added. Total Meal Cost: 23 Remaining Budget: 1</pre> | <p>Sample Run:</p> <pre>Enter budget: 50 Main dish added. Starter added. Dessert added. Total Meal Cost: 33 Remaining Budget: 17</pre> |
| <p>Sample Run:</p> <pre>Enter budget: 28 Main dish added. Starter added. Budget not sufficient for dessert... Total Meal Cost: 25</pre> | <p>Sample Run:</p> <pre>Enter budget: 12 More money needed</pre> |

| | |
|---------------------|--|
| Remaining Budget: 3 | |
|---------------------|--|

Q3: Write a program `Lab01_Q3.py` to calculate the total university fee of a student. The tuition is \$14500. Dormitory fees are \$5000 for a single room and \$3500 for a double room. The meal plan is \$600 per year .

The program will display total fee to be paid for the academic year.

Sample Run:

```
Dormitory (y/n): y
(S)ingle Room or (D)ouble Room: D
Add meal plan? (true/false): false
Total Fee Due: $18000.00
```

Sample Run:

```
Dormitory (y/n): n
Total Fee Due: $14500.00
```

Sample Run:

```
Dormitory (y/n): y
(S)ingle Room or (D)ouble Room: S
Add meal plan? (true/false): true
Total Fee Due: $20100.00
```