



United International University  
B.Sc. in Data Science  
DS 1502: Programming for Data Science Lab  
Coding Test 01: Spring 2024

---

1. Sayem loves exploring the Book Fair. He's planning to buy five books from different genres: thriller, adventure, action, romance, and mystery. [10]

Each genre has a fixed price:

Thriller - 200 TK

Adventure - 180 TK

Action - 220 TK

Romance - 150 TK

Mystery - 170 TK

Sayem wants to know the total cost of his purchase. Additionally, if Sayem spends 1000 TK or more, he'll qualify for a 10% discount.

Write a Python program to assist Sayem in calculating the total price of his book purchase at the Book Fair. Ask Sayem to input the quantity of each book genre he wishes to purchase and then calculate the total price. If Sayem's total bill amounts to 1000 TK or more, apply a 10% discount. Display the total price with or without the discount, based on Sayem's spending.

**Sample Input**

Enter the quantity of thriller books: 2

Enter the quantity of adventure books: 1

Enter the quantity of action books: 1

Enter the quantity of romance books: 0

Enter the quantity of mystery books: 1

**Sample Output**

Total price after discount: 926.0 TK

2. Write a Python program to find the minimum number of notes required to represent a given amount of money in Bangladeshi currency. The available denominations of notes are 1000, 500, 200, 100, 50, 20, 10, 5, 2, and 1. [4]

Your program should take the amount as input from the user and then calculate and print the minimum number of each denomination of notes required to represent that amount.

**Sample Input:**

Enter the amount : 1256

**Sample Output:**

1000 taka notes: 1

500 taka notes: 0

200 taka notes: 1

100 taka notes: 0

50 taka notes: 1

20 taka notes: 0

10 taka notes: 0

5 taka notes: 1

2 taka notes: 0

1 taka notes: 1

3. Sarah is at a cafe, trying to decide what to drink. The cafe offers three types of beverages: coffee, tea, and juice. Each beverage comes in different sizes and prices. Please note that the prices of coffee, tea and juice are fixed. [6]

Coffee:

Small: 50 TK

Medium: 80 TK

Large: 100 TK

Tea:

Small: 40 TK

Medium: 60 TK

Large: 80 TK

Juice:

Small: 60 TK

Medium: 70 TK

Large: 90 TK

Write a Python program to assist Sarah in choosing a drink at the cafe. Ask Sarah to input her preferred beverage (coffee, tea, or juice) and size (small, medium, or large), and then calculate and display the price accordingly.

**Sample Input:**

Enter your preferred beverage (Coffee,  
Tea, Juice): Coffee

Enter your preferred size (Small, Medium,  
Large): Medium

**Sample Output:**

Price: 80 TK