

Daffodil International University
Faculty of Business & Entrepreneurship
Department of Finance & Banking
Program: BBA in Finance & Banking

Semester: Fall 2026

Time: 1.5 Hr

Course Code: 0613-201

Teacher's name: Jul Jalal Al-Mamur Sayor (3A), Shimul Chakraborty (3B)

Examination: Midterm

Full Marks: 25

Course Title: Application of Python in Business

Answer the questions:

1. (a) A student from the Finance & Banking Department is writing a Python program to calculate a customer's bank loan interest. To store information such as the customer's name, loan amount, and interest rate, the student needs to create variables in Python. Define variable in Python and explain the rules for naming variables. (3) (CLO-1, L-I)

- (b) A food delivery company wants to calculate a surprise discount for its customers. The system should:

- Accept the total food bill as input.
- Generate a random integer between 10 and 50 using the random module and add it to the total food bill.
- Calculate the total discount by finding the square root of the updated bill and rounding it up to the next whole number using the math module.

Choose the required functions and write a Python program to implement the system.

(4) (CLO-1, L-I)

2. (a) A small financial company is developing a Python program to manage its business data. The program must store different types of information such as unique account IDs, and key-value details like account balances.

Select the two Python data structures and describe them. For each selected data structure, write three valid operations with example code and show the expected output.

(5) (CLO-2, L-III)

- (b) A student wrote the following Python code:

Python
<pre>temperature = "40" if temperature >= 50 Print("High") else: print("Low")</pre>

Identify the errors and rewrite the Python code so that it executes correctly and follows proper Python naming conventions.

(3) (CLO-2, L-III)

Float(input()

3. (a) A university's Examination Office wants to automate its student result processing system. The system should accept a student's marks and assign a grade based on the university's grading policy. Students who achieve 80 marks or above receive an A+ grade, while those who achieve 70 marks or above receive an A grade. Similarly, students who achieve 60 marks or above receive an A- grade, and those who achieve 50 marks or above receive a B grade. Students who score below 50 marks receive a Fail grade in the result of that particular exam. Analyze task and write a Python program to implement this grading system. (5) (CLO-3, L-IV)

(b) A university is developing a Python-based software system to automate routine operations:

- The library module needs to display book ID numbers from 1 to 100 automatically.
- The login module must continuously request a PIN until the correct PIN is entered.

Select and illustrate the appropriate loop for each module with a short Python example. Compare the `for` loop and `while` loop by writing two differences between them.

(5) (CLO-3, L-IV)