

United International University

Department of Computer Science and Engineering

DS 1501: Programming for Data Science

Assignment-02 : Summer 2024

Total Marks: 10

Answer all the 2 questions. Numbers to the right of the questions denote their marks.

1. (a) Find the output of the following Python code : [1.5]

```
a = 5
b = 2.0
c = "3"

print(a + b)
print(b * int(c))
print(c * a)
```

- (b) Correct the errors in the following Python code snippet and ensure valid variable usage: [1.5]

```
a = b = 6, 9
if a > b
    a - b == 2_sum
else :
    sum = a + b

print(z"Sum is : {2_sum}")
```

- (c) Manually trace the following code segment and find the output of it. [2]

```
hi = 0
hlw = 10
num = [10, 20, 30, 40]
hlw = len(num)
for i in range(hlw, 6):
    print(i)
    if hi < len(num) - 1:
        num[hi] = num[hi + 1] - 5
        hi += 1
    print(num)
    hlw -= 2
print(num[-4:-1])
```

2. (a) Suppose, you are given three following lists: [3]

```
movies = ["The Shawshank Redemption", "The Godfather", "The Dark Knight", "Pulp Fiction"]
ratings = [9.3, 9.2, 9.0, 8.9]
genres = ["Drama", "Crime", "Action", "Crime"]
```

Writing a Python program that allows the user to input a movie name, search for the name in the movie list, and print the movie name, rating, and genre if found. If the movie is not found, print a message indicating that the movie is not on the list. **Do not use any list built-in functions like index or count.**

Table 1 shows the sample input and output of the program.

- (b) Show the manual tracing table for the following code. What will be the output of the following snippet of code? [2]

```
n = 3
for i in range(n):
    for j in range(n):
        if i >= j and i + j >= n - 1:
            print(i + 1, end=' ')
        else:
            print(' ', end=' ')
```

`print()`

Sample Input	Sample Output
Enter the name of the movie you want to watch: The Dark Knight	Movie: The Dark Knight Rating: 9.0 Genre: Action
Enter the name of the movie you want to watch: Inception	Movie not found in the list.

Table 1: Sample Input and Output (Question-2(a))