CT-2
Section : C

Course name: Object Oriented Programming II: Visual and Web Programming

Course code: CSE 309 **Marks:** 20

Time :30 minutes

Name:

ID: Date:

1.	Write a Python function called fibonacci_series that takes an integer n as input and returns a list of the first n numbers in the Fibonacci sequence. The Fibonacci sequence is a series of numbers where each number is the sum of the two preceding ones, starting from 0 and 1. **Sample input** n = 6 **Sample output** [0, 1, 1, 2, 3, 5]	10

2.	Write a Python function called **add_book** that takes a dictionary representing the **library's inventory** and two strings: **title** (the name of the book) and **status** (a string indicating whether the book is "available" or "checked out"). The function should add the book to the dictionary. If the book already exists, it should update its status.
	
	Sample input
	library_inventory = {
	"The Great Gatsby": "available",
	"To Kill a Mockingbird": "checked out"
	}
	
	add_book(library_inventory, "1984", "available")
	
	add_book(library_inventory, "The Great Gatsby", "checked out")
	
	Sample output
	{'The Great Gatsby': 'checked out', 'To Kill a Mockingbird': 'checked out', '1984': 'available'}
		10

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1.	Write a Python function called lucas_series that takes an integer n as input and returns a list of the first n numbers in the Lucas series. The Lucas series is similar to the Fibonacci series, but it starts with the numbers 2 and 1. Each subsequent number is the sum of the two preceding ones **Sample input** n = 6 **Sample output** [2, 1, 3, 4, 7, 11]	10

2.	Write a Python function called **update_price** that takes a dictionary representing the **product catalog** and two strings: **product** (the name of the product) and **price** (the new price as a string). The function should add the product to the dictionary. If the product already exists, it should update its price.
	
	Sample input
	product_catalog = {
	"Laptop": "$999",
	"Smartphone": "$699"
	}
	
	update_price(product_catalog, "Tablet", "$499")
	update_price(product_catalog, "Laptop", "$949")
	
	Sample Output:
	{'Laptop': '$949', 'Smartphone': '$699', 'Tablet': '$499'}
		10

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1.	Write a Python function called tribonacci_series that takes an integer n as input and returns a list of the first n numbers in the Tribonacci sequence. The Tribonacci sequence is a generalization of the Fibonacci sequence where each number is the sum of the three preceding ones. The sequence starts with 0, 1, and 1. **Sample input** n = 7 **Sample output** [0, 1, 1, 2, 4, 7, 13]	10

2.	Write a Python function called **add_contact** that takes a dictionary representing the **contact book** and **a name** (as a string) and **a phone number** (as a string). The function should add the contact to the dictionary. If the contact already exists, it should update the phone number.
	
	Sample input
	contact_book = {
	"Alice": "123",
	"Bob": "987"
	}
	
	add_contact(contact_book, "Charlie", "555")
	
	add_contact(contact_book, "Alice", "111")
	
	Sample output
	{'Alice': '123', 'Bob': '987', 'Charlie': '555'}
		10