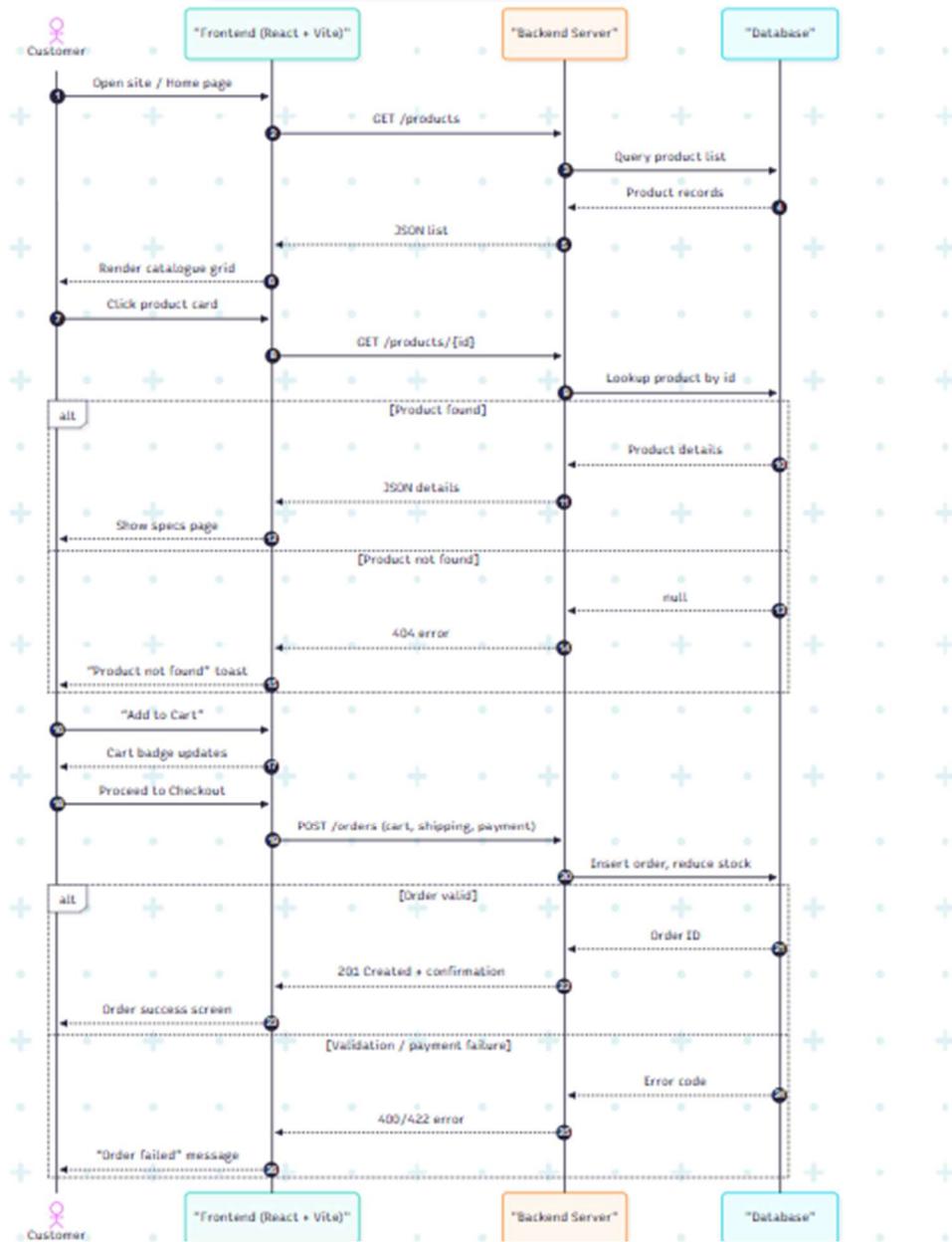


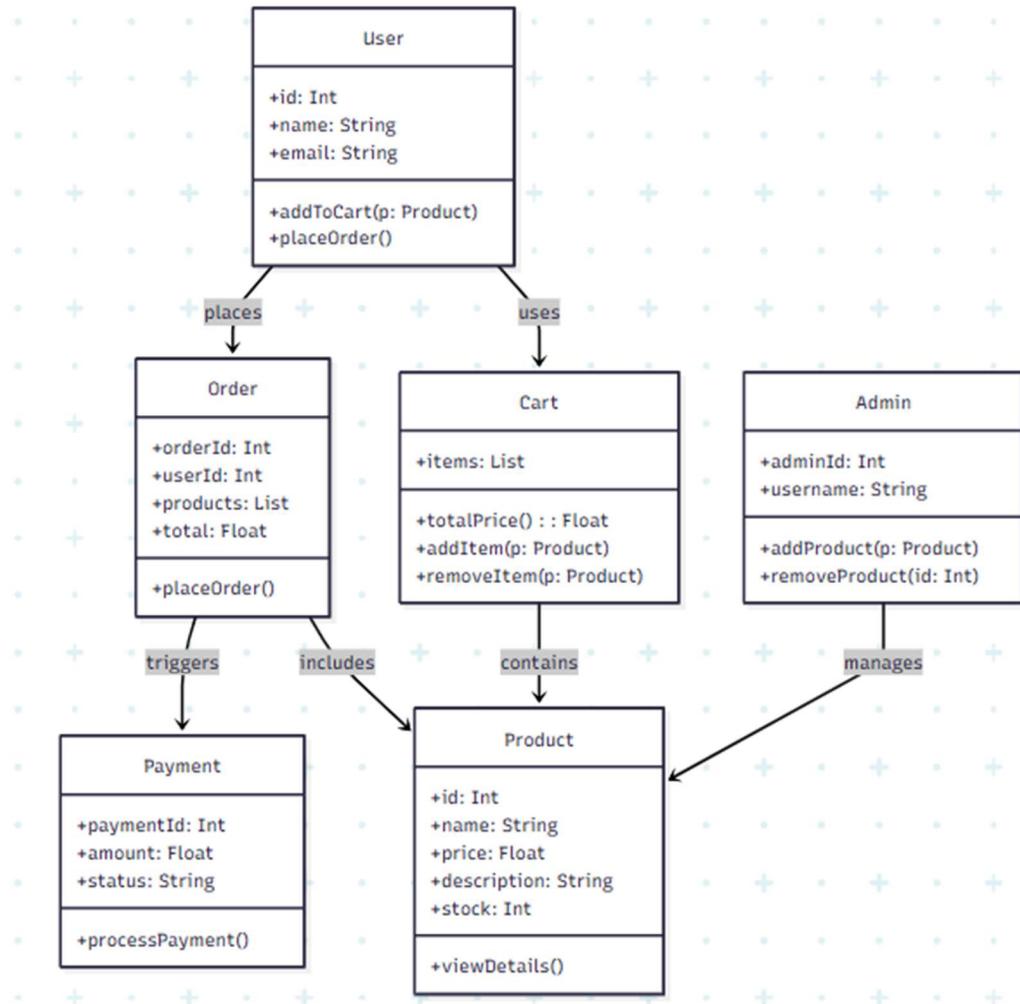
**Name:** Aliyan Ahmed Cheema

**Reg #** FA22-BCE-028

## Sequence Diagram:



## Class Diagram:



## Black Box Testing

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### ◆ 1. Equivalence Class Partitioning (ECP)

#### Use Case: Add Product to Cart

Input Condition	Valid Class	Invalid Class
Product ID	Existing product	Non-existing product
Quantity	1-10	0 or >10
User authentication	Logged in	Not logged in

#### Example:

- Add to cart(ProductID=3, Quantity=2) → Valid

- Add to cart(ProductID=100, Quantity=5) → ✗ Invalid product
  - Add to cart(ProductID=1, Quantity=0) → ✗ Invalid quantity
- 

## ◆ 2. Boundary Value Analysis (BVA)

### Use Case: Checkout Total Price Validation (0–99999 PKR)

**Test Case      Input Value (Total Price)      Expected Result**

Min-1	-1	✗ Reject (Invalid)
Minimum	0	✓ Accept
Just Above Min	1	✓ Accept
Mid Value	50000	✓ Accept
Just Below Max	99998	✓ Accept
Maximum	99999	✓ Accept
Max+1	100000	✗ Reject (Invalid)

---

## ◆ 3. Decision Table

### Use Case: Place Order

**Condition                          C1 C2 C3 C4**

User is logged in                          Yes No Yes Yes

Cart is not empty                          Yes Yes No Yes

Valid shipping & payment info    Yes - - No

**Action: Allow Checkout                  Yes No No No**

 = All conditions met

 = One or more key conditions failed