Faculty of Engineering and Applied Science

SOFE 3650: Software Architecture and Design

Assignment #2: Architectural Patterns

Due date: October 26, 2022

Group Members: Javier Chung (100785653), Andy Dai (100726784), Mithun John (100781920)

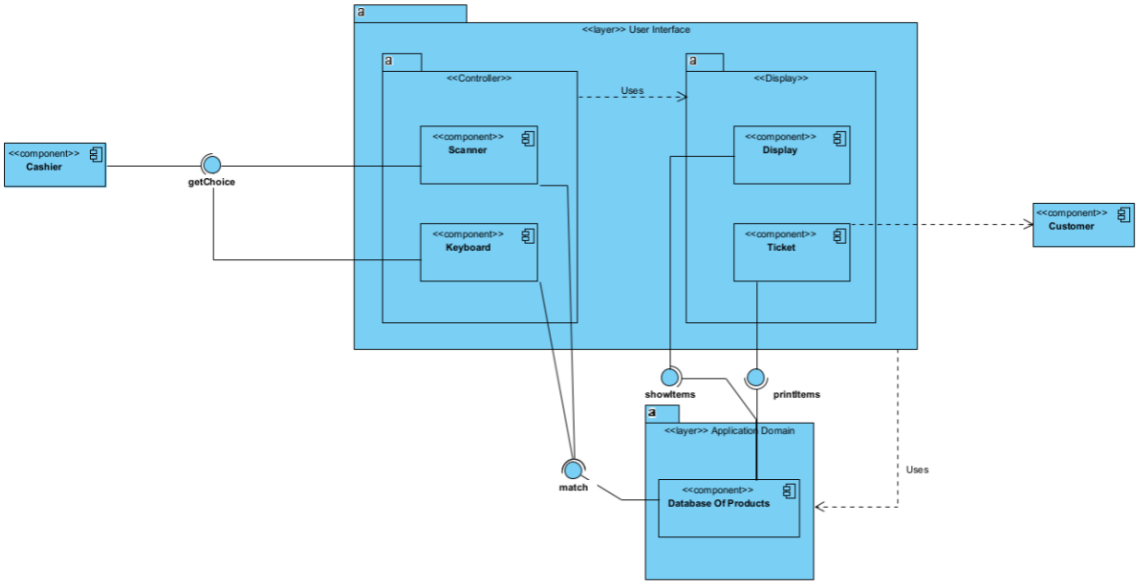
Use Case ID	Description
UC-1: Starting a product purchasing session	A cashier can start a product purchasing session through the use of a keyboard
UC-2: Canceling a product purchasing session	A cashier can cancel a product purchasing session through the use of a keyboard
UC-3: Identifying a product	A cashier can scan a product with a barcode scanner and the name and price are displayed on a display
UC-4: Unable to identify a product	A barcode scanner unable to scan a product will prompt an “Unknown Product” message on a display and the barcode number can be manually entered via keyboard.
UC-5: Selecting Payment	A cashier can select a payment option through the use of a keyboard with ios options such as Cash, Debit or Credit Card
UC-6: Printing a receipt	A cashier can end a product purchasing session after a successful payment verification and print product unit price, quantity and total price all on a printed receipt

ID	Quality Attribute	Scenario	Associated Use Case
QA-1	Usability	Purchasing session should time out after no user activity	UC-2, UC-1
QA-2	Usability	Casher can scan multiple barcodes (items) at a time	UC-3
QA-3	Modifiability, Performance	Cash register is able to easily modify in the future	
QA-4	Interoperability	When products are scanned, they will be recognized in the database	UC-3

Constraints	Description
CON-1	User can only process either a start or cancel product

	purchasing session, one at a time
CON-2	Barcodes on products must be clear (non damaged) in order for the scanner to scan.
CON-3	Any posts or logs made within the past 14 days should be kept and stored in the database

2. MVC layered component diagram of Cash Register System



3. Sequence diagram