Task 3: Class Diagram and Design Pattern

Class DiagramA picture containing text, diagram, plan, parallel

Description automatically generated

This is the class diagram. For the ‘**User**’ class, user able to have three ways of payment: Cash, Scan, and credit card under ‘**Payment**’ Class. The ‘**Booking cart**’ class which shows and list out the items the user booked, ‘**selling items list**’ class that list out the items that user is selling, and the ‘**comment section**’ class that stores the comments about this user are composition to the ‘**User**’ Class, three of them not able to standalone without the ‘**User**’ Class. the Subclass ‘**Item**’ stores inside ‘**Booking cart**’ class, the subclass ‘**Selling Items**’ stores inside ‘**Selling items list**’ class, both subclass presents the detail information of a single Items inside those lists. The ‘**User**’ Class and ‘**Staff**’ Class also act as Sub Class of the ‘**Account**’ Class, and the ‘**Staff**’ Class having aggregation relationship with the ‘**Staff Store Room**’ Class.

Design Pattern

A diagram of a student business system

Description automatically generated with low confidence

Factory Method is one of the design methods of **Creational design pattern**. There are three functions subclass under the superclass ‘Student Business System’: ‘Payment’, ‘show item list’ and ‘book for item’ .

Three of those subclasses sharing the two attributes of superclass, ‘Item\_Price’ with integer type and ‘Item\_Name’ with Varchar type.