INSTRUCTIONS:
Create a separate word document named progress report in the folder. Add a log of your work clearly in the document along with each deliverable. i.e. create a new page for each deliverable and put the deliverable heading at the top; create a heading for each roll number on that page and mention the artifacts produced by that roll number.

Deliverable 2:

20L-1116

Artifacts Produced:

Identified, made and wrote Use-Case descriptions for the following use-cases:

1. Manage and Assign Roles to User
2. Deactivate Account
3. Manage Inventory
4. Update Policy
5. Scan Loyalty Card
6. Display Customer Record
7. Mark Attendance
8. Manage Sales Agents
9. Login

Identified and made the following Actors:

1. Inventory Manager
2. Sales Agent
3. Store Admin

20L-0921

Artifacts Produced:

Identified, made and wrote Use-Case descriptions for the following use-cases:

1. Issue Card
2. Issue Points
3. Redeem Points
4. Reset Points
5. Display Collection Online
6. Add/Remove From Cart
7. Checkout
8. Point of Sale

Identified and made the following external systems:

1. FBR System
2. Payment Service System
3. Order Processing System

Identified and made the following Actors:

1. Customers (and all the types)
2. Admin

20L-1186

Artifacts Produced:

Identified, made and wrote Use-Case descriptions for the following use-cases:

1. Offer Discount
2. Track Attendance of Staff
3. Run Annual and Monthly Report
4. Modify discount policy
5. Create Outlet
6. Update Outlet
7. Process Return of Items

8. Change Sales Agent’s Work Shift

Identified and made the following Actors:

1. Floor Manager
2. Store Manager
3. Store Admin
4. Admin

Deliverable 3:

20L-1116

Artifacts Produced:

Identified and made the following classes:

S&J Boutique
Loyalty Card
Silver Card
Gold Card
Platinum Card
Campaigns
Store Policy
Reports for Performance

Made the following State Diagrams

1. Store Inventory
2. Online Store
3. Loyalty Card

20L-0921

Artifacts Produced:

Identified and made the following classes:

1) Online Store
2) Payment
3) Product

4) Sale Record
5) Customer Cart
6) Return Item
7) Best Selling
8) Store Inventory

Made State Diagrams for the following classes:

1) Payment
2) Outlet

20L-1186

Artifacts Produced:

Made the following classes:

1. Store Admin
2. Store Manager
3. Inventory Manager
4. Sale agent
5. Floor Manager
6. Attendance
7. Outlet
8. Customer

Made State Diagrams for the following classes:

1. Change Work Shift
2. Attendance

Deliverable 4:

20L-1116

Artifacts Produced:

Made changes to functions in classes, The relationships of classes and the access of attributes and functions in classes for the following classes:

1. S&J Boutique
   Patterns Applied:
   Creator Class(creates object of Online Store and Outlet/POS class)
   Information Expert(It has the information about all the outlets and online stores so it can perform a function without any help from other class)
2. Loyalty Card
   Patterns Applied:
   Polymorphism(handling variation for different types of cards becomes easy)
   Protected Variations(Added functions so that variations doesn't effect the child classes)
   High Cohesion(removed unnecessary functions of class and added checkValidity from child classes to parent class)
3. Gold Card
   Patterns Applied
   High Cohesion(removed unnecessary functions)
   Low Coupling
4. Silver Card
   Patterns Applied
   High Cohesion(removed unnecessary functions)
   Low Coupling
5. Platinum Card
   Patterns Applied

High Cohesion(removed unnecessary functions)
LowCoupling

6. Campaigns
   Patterns Applied
   Low Coupling(No longer linked with S&J boutique class.It now has a relationship with the Product class as it uses attribute of product class to apply discount on products)
   High Cohesion(All related functions in one class and removed unnecessary functionality)
7. Store Policy
   Patterns Applied
   Low Coupling (Has a composition relationship with only outlet/POS class)
8. Reports for Performances
   Patterns Applied
   Low Coupling(Removed the links with each staff class and instead made a new parent class for users and linked the reports class with the new user class so that there are less linkages and less coupling)

NOTE: CHANGES MADE IN CLASS DIAGRAM ARE HIGHLIGHTED IN RED

Made Sequence Diagrams of the following use cases:

Manage and Assign Roles to User
Deactivate Account
Manage Inventory
Update Policy(made two sequence diagrams one for store manager and one for inventory manager)
Scan Loyalty Card
Display Customer Record
Mark Attendance

Manage Sales Agents
Login

20L-0921

Artifacts Produced:

Made changes to functions in classes, The relationships of classes and the access of attributes and functions in classes for the following classes:

1. Online Store
   Patterns Applied:
   High Cohesion (removed unnecessary functions from class)
   Controller (controls where customer goes)
   Low coupling (No longer linked with customer cart)
2. Payment
   Patterns Applied:
   Low coupling (not dependent on any class except Customer Cart)
3. Product:
   Patterns Applied:
   Information Expert (added add/remove from cart function)
   High Cohesion
4. Sale Record
   Patterns Applied:
   Low coupling (no longer completely dependent on product class)
5. Customer Cart
   Patterns Applied:
   Creator (instantiates payment class)

Indirection (checkout functionality added in this class)
High Cohesion

6. Return Item
   Patterns Applied:
   Protected Variations (made returnItem function private)
7. Best Selling
   Patterns Applied:
   Protected Variations (made add product function private)
8. Store Inventory
   Pattern Applied:
   Information Expert (has all the product information in one class like product id)

<u>NOTE: CHANGES MADE IN CLASS DIAGRAM ARE HIGHLIGHTED IN RED</u>

<u>Made Sequence Diagrams of the following use cases:</u>

1. Issue Card
2. Issue Points
3. Redeem Points
4. Reset Points
5. Display Collection Online
6. Add/Remove From Cart
7. Checkout
8. Point of Sale

20L-1186

<u>Artifacts Produced:</u>

Made changes to functions in classes, The relationships of classes and the access of attributes and functions in classes for the following classes:

1. **Store Admin**
   Pattern Applied:
   - Protected variation(Store admin class is further categorized into UI_User and UI_outlet interfaces so that their respective calls can not affect each other.)
   - Bloated Controller(more controller UI_outlet and UI_User are added)
2. **Store Manager**
   Pattern Applied:
   Controller(User is controller class that invoke manager objects further)
3. **Inventory Manager**
   Pattern Applied:
   Controller(User is controller class that invoke manager objects further)
4. **Sale agent**
   Pattern Applied:
   Controller(User is controller class that invoke sale agent objects further)

5. **Floor Manager**
   Pattern Applied:
   Controller(User is controller class that invoke manager objects further)

6. **Attendance**
   Pattern Applied:

Information Expert(It has all the information to perform function of check-in/check-out)

7. **Outlet**

   Pattern Applied:

   Indirection(Outlet class will access store admin through UI_outlet)

8. **Customer**

   Same

9. **User**

   Pattern Applied:

   - Controller(User is controller class that invoke managers and sale agent objects further)
   - Indirection(User class will access store admin through UI_User)
   - Polymorphism(It determines the type of manager or working agent)

NOTE: CHANGES MADE IN CLASS DIAGRAM ARE HIGHLIGHTED IN RED

Made Sequence Diagrams of the following use cases:

1. Attendance
2. Return of Item
3. Change work shift
4. Modify Discount policy
5. Create outlet
6. Modify outlet
7. Offer Discount

Deliverable 5:

Github Link : https://github.com/AishaMNz/SDA-Deliverable-5
//In order to Run And compile this code. Copy the code in Visual Studio and Click the green button that says "Local Windows Debugger"
//Incase github link is not accessible, All the relevant c++ code files are submitted on google classroom as well.

NOTE: ALL CHANGES MADE TO CLASS DIAGRAM OF DELIVERABLE 4 ARE BOLD AND IN RED COLOR

20L-1116

Artifacts Produced:

Made changes to Class Diagram with new functions added and some removed. Changed a few relationships between classes as well as wrote C++ code for the following classes:

1. S&J Boutique
2. Loyalty Card
3. Silver Card
4. Gold Card
5. Platinum Card
6. Campaigns
7. Store Policy
8. Reports for Performance

Made Detailed Sequence Diagrams for the following use cases:

1. Manage and Assign Roles to User
2. Deactivate Account
3. Manage Inventory
4. Update Policy(made two sequence diagrams one for store manager and one for inventory manager)
5. Scan Loyalty Card
6. Display Customer Record
7. Mark Attendance
8. Manage Sales Agents
9. Login

Also wrote the code for the menu for the boutique using resource files provided for a project in previous semesters.

20L-0921

Artifacts Produced:

Made changes to Class Diagram with new functions added and some removed. Changed a few relationships between classes as well as wrote C++ code for the following classes:

1. Online Store
2. Payment
3. Product
4. Sale Record
5. Customer Cart
6. Return Item
7. Best Selling
8. Store Inventory

Made Detailed Sequence Diagrams for the following use cases:

1. Issue Card
2. Issue Points
3. Redeem Points
4. Reset Points
5. Display Collection Online
6. Add/Remove From Cart
7. Checkout
8. Point of Sale

20L-1186

Artifacts Produced:

Made changes to Class Diagram with new functions added and some removed. Changed a few relationships between classes as well as wrote C++ code for the following classes:

1.Store Admin
2.Store Manager
3.Inventory Manager
4.Sale agent
5.Floor Manager
6.Attendance
7.Outlet
8.Customer
9.User

Made Detailed Sequence Diagrams for the following use cases:

1.Attendance
2.Return of Item
3.Change work shift
4.Modify Discount policy
5.Create outlet
6.Modify outlet
7.Offer Discount

Deliverable 6:

Github Link : https://github.com/AishaMNz/SDA-Deliverable-6.git
//In order to Run And compile this code. Copy the code in Visual Studio and Click the green button that says "Local Windows Debugger"
//Incase github link is not accessible, All the relevant c++ code files are submitted on google classroom as well.

20L-1116

Artifacts Produced:

Generated c++ code for Implementation of use case: Assign Card
Jointly Implemented the use case: Checkout

20L-0921

Artifacts Produced:

Generated c++ code for Implementation of use case: Display Collection

Jointly Implemented the use case: Checkout

20L-1186

Artifacts Produced:

Generated c++ code for Implementation of use case: Login & Signup

Jointly Implemented the use case: Checkout