**Cinema Program**

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**Module:**

**CS4227 (System Architecture and Design)**

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**Design Patterns**

## 1: Builder

The builder design pattern was used as one of our Creational design patterns. It is used to build an account comprised of different components such as the username, password and email address all entered by the user at the registration screen, this information is then sent to the server to be stored and accessed later on.

The builder is stored in the BuilderPackage which is accessed from the registerScreen class. The accountBuilder class builds all the separate components of an account and builds the account using the getAccount() method.

## 2: Memento

The memento design pattern is one of our Behavioural design patterns. The Memento design pattern is used to store previous payment info allowing the user to use other cards to complete a purchase (As seen with Amazon). The server passes in the current payment details which may be nothing and the user can revert to their original payment method using the ‘Revert Payment Method’ button in the Account Details screen.

The server sets the current payment details and then the paymentMemento saves the current state of information. The user is then free to change info from there and once they ‘Revert Payment Info’ the memento restores its state to the original payment info.

**Coding Fragments**

## Memento

paymentMemento

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paymentInfo

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(Reference)