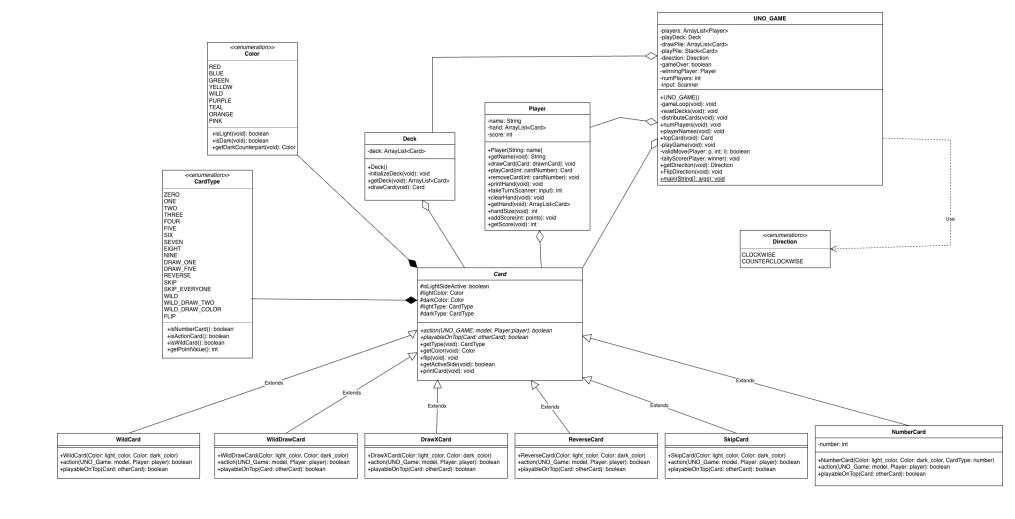
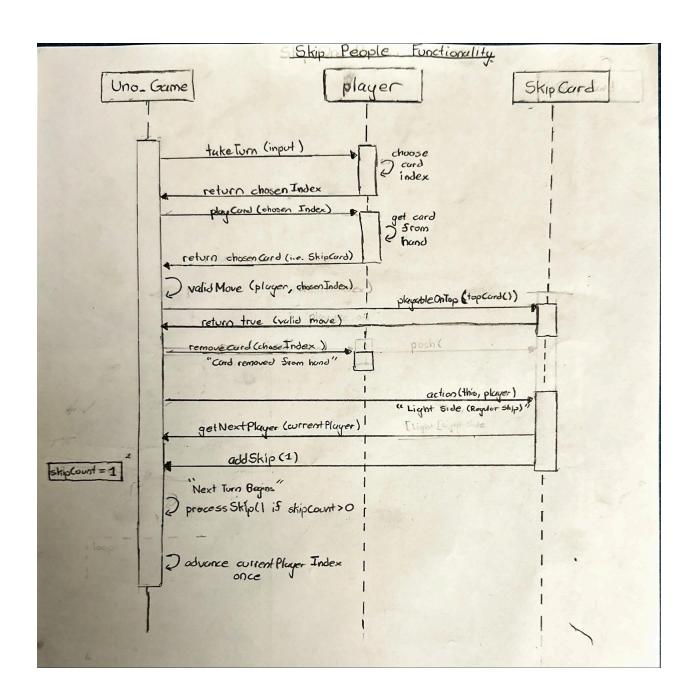
## **Uml Diagram:**



# Sequence Diagrams:

```
Seavence diagram Player turn
                UNO_Game
                                       Card
                                                      Deck
Player
   takeTurn(input)
    Print Hand ()
 K Play Card (index)
                       Playable On TOP (top card)
alt I valid move
                      action (game, Player)
                      E action result
   remove Card (index)
                         draw (ard ()
                       < Jenicary
   draw Card (new Card)
                           next Player ()
```



## Data structures:

## ArrayList;

#### Used in:

- -Deck (private ArrayList<Card> deck;)
- -UNO\_GAME(private ArrayList<Card> drawPile;)
- -Player (private ArrayList<Card> hand;)

#### Why:

- -Has a dynamic size
- -Can store objects
- -able to easily access indexes
- -Able to easily remove objects

#### Enum;

#### Used in:

- -Color (RED, BLUE, YELLOW, etc.)
- -CardType (DRAW\_ONE, WILD, etc.)
- -Direction (CLOCKWISE or COUNTERCLOCKWISE)

#### Why:

- -It's a fixed set of constants
- -Prevents invalid values
- -Has built in helper functions

## Stack;

## Used in:

-UNO\_GAME (private Stack<Card> playPile;)

#### Why:

-The Uno play pile is LIFO since the most recently played card is at the top