

MONOPOLY GAME

GROUP 20

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UI design regarding- supported user commands: Specific Integer

Select the commands below (Type the number):

1.New game
2.Load game
3.customizeBoard
0.Exit Monopoly

Enter the number of players (2 to 6):

2

1
Dice roll is: 7
Do you want to buy Mong Kok ?
1. Buy
2. Not buy
1
Bought Mong Kok successfully!
Player 1 now owns property: Mong Kok

Want to save the game? (0: No, 1: save to save1, 2: save to save2, 3: save to save3)

Select the commands below (Type the number):

1.New game
2.Load game
3.Create Board
0.Exit Monopoly

2

Enter the save number(1, 2, 3):

Choose an option:

1. Edit Existing Board
2. Create New Board
3. Exit

Enter your choice (1/2/3):

Want to save to? (4, 5, 6)

Do you want to save the board? 1:save, 0:no

Or Enter 0 to back home page.....

0

Are you sure to back home page? 0:exit ; 1:continue play

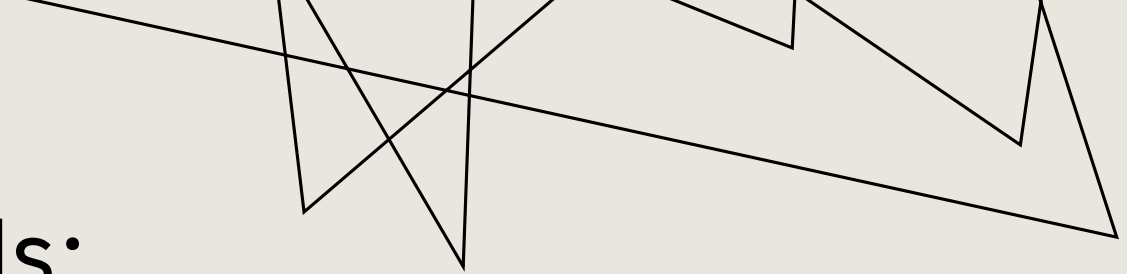
Random Name(1) or Enter Name(0)

Enter the Number to load the board:(4,5,6)

Enter the Number of position of the board:(1 - 20)

Would you like to create a new board or load an existing one? (0: default, 1: Load)

UI design regarding- supported user commands: Specific Integer



```
Select the commands below (Type the number):  
1.New game  
2.Load game  
3.customizeBoard  
0.Exit Monopoly
```

UI design regarding- supported user commands: String

```
Enter details for Square 1:  
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail): Go  
Enter details for Square 2:  
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail): Income tax  
Enter details for Square 3:  
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail): gotojail  
Enter details for Square 4:  
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail): chance  
Enter details for Square 5:  
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail):
```

```
Enter the name for Player 1:  
yilok  
Enter the name for Player 2:  
leon
```

UI design regarding- output of the game status: Create Board Interface

```
Select the commands below (Type the number):
1.New game
2.Load game
3.customizeBoard
0.Exit Monopoly

3
Choose an option:
1. Edit Existing Board
2. Create New Board
3. Exit
Enter your choice (1/2/3): 1
Enter the Number You want to save:(4,5,6) 4
Board loaded successfully from save/board.json
Here is the game board!
1. Go
2. Central Cost: 800 Rent: 90
3. Wan Chai Cost: 700 Rent: 65
4. Income Tax
5. Stanley Cost: 600 Rent: 60
6. In Jail or Just Visiting
7. Shek O Cost: 400 Rent: 60
8. Mong Kok Cost: 500 Rent: 40
9. Chance
10. Tsing Yi Cost: 400 Rent: 15
11. Free Parking
12. Shatin Cost: 700 Rent: 75
13. Chance
14. Tuen Mun Cost: 400 Rent: 20
15. Tai Po Cost: 500 Rent: 25
16. Go To Jail
17. Sai Kung Cost: 400 Rent: 10
18. Yuen Long Cost: 400 Rent: 25
19. Chance
20. Tai O Cost: 600 Rent: 25
Change board?: change(1) , no(0)
1
Enter the Number of position of the board:(1 - 20)
10
Editing position 10:
Do you want to change the type of this square? Please enter 'yes' or 'no': yes
You entered: yes
Enter new square type (Property, Go, Chance, IncomeTax, FreeParking, GoToJail, InJailOrJustVisiting): Go
Square updated successfully!
```

```
Enter the number of squares for the board (20):
Enter details for Square 1:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): Go
Enter details for Square 2:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): Chance
Enter details for Square 3:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): Income Tax
Enter details for Square 4:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): GoToJail
Enter details for Square 5:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): Freeparking
Enter details for Square 6:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): InJailOrJustVisiting
Enter details for Square 7:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
Enter details for Square 8:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): property
Property Name: polyu
Cost: 500
Rent: 10
Color: red
Enter details for Square 9:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
Enter details for Square 10:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): incometax
Invalid square type. Skipping...
Enter details for Square 10:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): income tax
Enter details for Square 11:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
Enter details for Square 12:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): go
Enter details for Square 13:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): freeparking
Enter details for Square 14:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): property
Property Name: hello
Cost: 500
Rent: 10
Color: red
Enter details for Square 15:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): property
Property Name: bybybe
Cost: 600
Rent: 50
Color: blue
Enter details for Square 16:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
Enter details for Square 17:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
Enter details for Square 18:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
Enter details for Square 19:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): chance
```

```
Enter details for Square 20:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, FreeParking, GoToJail): go
Do you want to save the board? 1:save, 0:no
1
Want to save to? (4, 5, 6)
5
Board saved successfully to save/save5.json
Board customized and saved to save/save5.json
```

UI design regarding- output of the game status: Game Interface

```
Select the commands below (Type the number):
1.New game
2.Load game
3.customizeBoard
0.Exit Monopoly

1
Enter the number of players (2 to 6):

2
Would you like to use default or load an existing one? (0: default, 1: Load)
0
Board loaded successfully from save/board.json
Random Name(1) or Enter Name(0)
1
Random Name(1) or Enter Name(0)
0
Enter the name for Player 2:
yilok
Want to save the game? (0: No, 1: save to save1, 2: save to save2, 3: save to save3)
0
Here is the game board!
1. Go
2. Central Cost: 800 Rent: 90
3. Wan Chai Cost: 700 Rent: 65
4. Income Tax
5. Stanley Cost: 600 Rent: 60
6. In Jail or Just Visiting
7. Shek O Cost: 400 Rent: 60
8. Mong Kok Cost: 500 Rent: 40
9. Chance
10. Tsing Yi Cost: 400 Rent: 15
11. Free Parking
12. Shatin Cost: 700 Rent: 75
13. Chance
14. Tuen Mun Cost: 400 Rent: 20
15. Tai Po Cost: 500 Rent: 25
16. Go To Jail
17. Sai Kung Cost: 400 Rent: 10
18. Yuen Long Cost: 400 Rent: 25
19. Chance
20. Tai O Cost: 600 Rent: 25
ROUND: 1

SjgSe   Money: 1500   Position: 1   PosName/state Go   OwnProperty:
yilok   Money: 1500   Position: 1   PosName/state Go   OwnProperty:

SjgSe :
Enter 1 to roll the dice.....
Or Enter 0 to back home page.....
```

UI design regarding- error handling mechanism

```
4
Wrong input, try again...
```

```
Select the commands below (Type the number):
1.New game
2.Load game
3.Create Board
0.Exit Monopoly
```

```
Enter the Number to load the board:(4,5,6) 12321
Input should be number 4 to 6, try again...
```

```
avcas
Input should be number 4 to 6, try again...
```

```
7
Input should be number 2 to 6, try again...

Enter the number of players (2 to 6):
```

```
2e23
Input should be 1 or 0,try again...

vavds
Input should be 1 or 0,try again...
```

```
ab
Input should number 1 to 3, try again...

Enter the save number(1, 2, 3):

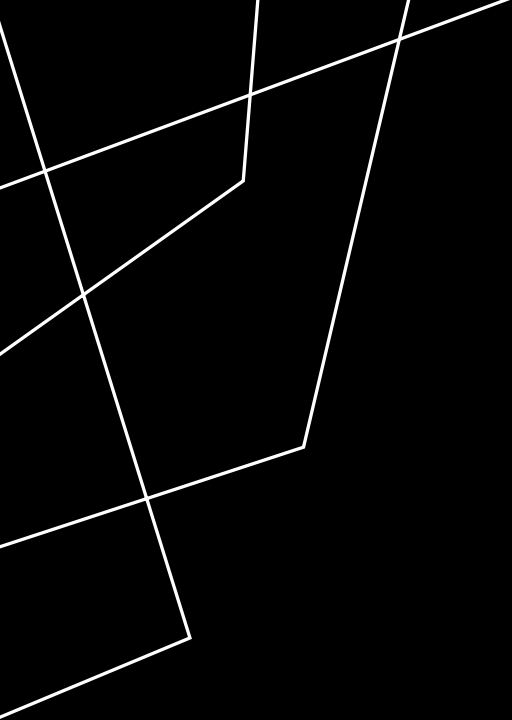
4
Input should number 1 to 3, try again...

Enter the save number(1, 2, 3):
```

```
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail): abcsd
Invalid square type. Skipping...
Enter details for Square 1:
Square Type (Property, Go, Chance, Income Tax, InJailOrJustVisiting, Free Parking, GoToJail): 21321
Invalid square type. Skipping...
Enter details for Square 1:
```

```
Enter the Number of position of the board:(1 - 20)
13214
Input should be number 1 to 20, try again...

sadasd
Input should be number 1 to 20, try again...
```



OVERALL DESIGN

ARCHITECTURAL PATTERN

MVC Architectural is picked for the Monopoly game .Here is the reason:

1. Separation of Concerns

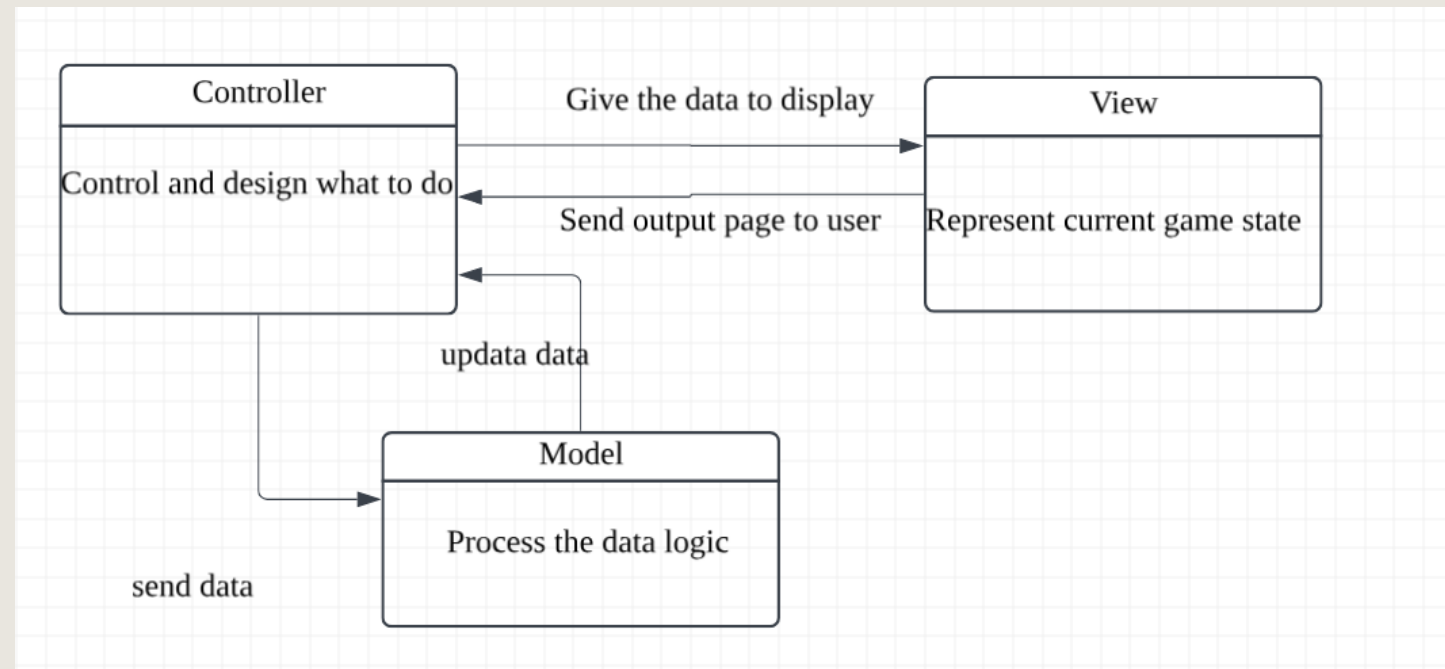
- Keeps game logic (Model), user interface (View), and input handling (Controller) distinct.

2. Maintainability

- Easier to update or modify components without affecting others.

3. Testability

- Allows for independent testing of the model and other components.

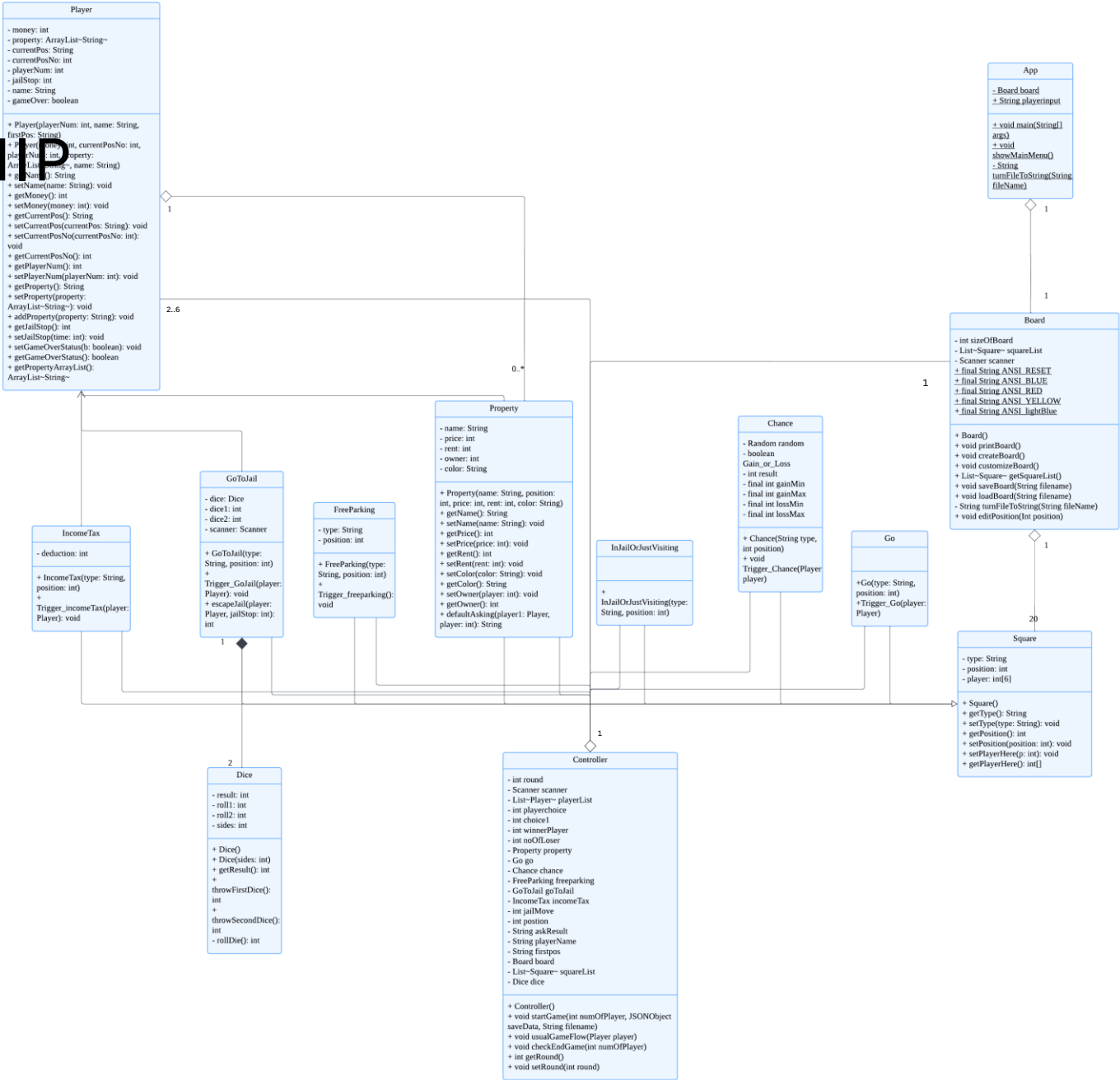


MVC Architectural Patterns of the Monopoly Game

STRUCTURE AND RELATIONSHIP

Class diagram:

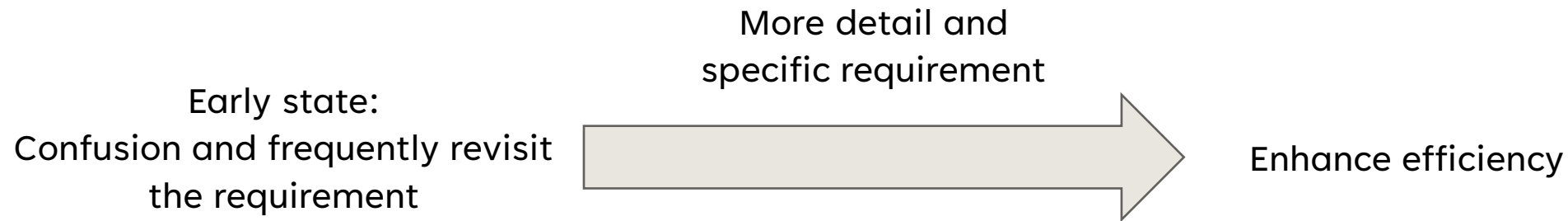
It mainly include the Dice, Player, Board, Controller, App and 7 events (IncomeTax , Go, GoToJail, FreeParking, Property, InJailOrVisiting, Chance).



LESSON LEARNED

User requirement:

Importance of Clear and Detailed Functional Requirements





THANK YOU