Square

-id:int

+givemessage(Player,Player,Player,String):String
+setId(int):void
+getId():int

Tax

+Tax(int)
+paytax(Player,Banker):void
+givemessage(Player,Player,Player,String):String

FreeParking

+FreeParking(int)
+waitingparking(Player):void

+givemessage(Player,Player,Player,String):String

GotoJail

+GotoJail(int)
+gotojail(Player):void
+givemessage(Player,Player,Player,String):String

Railroad

+Railroad(int,String,int)
+rent(int):void

Go

+Go(int id)
+givemessage(Player,Player,Player,String):String

Jail

+Jail(int)
+waitingjail(Player):void
+givemessage(Player,Player,Player,String):String

Property

-name:String
-cost:int
-rent:int

+Property(int,String,int)
+buyproperty(Player,Banker,Square):void
+rent(int):void
+payrent(Square,Player,Player,String):void
+payrentmessage(Square,Player,Player,String):String
+buypropertymessage(Square,Player,Player,Player,String):String
+haspropertymessage(Square,Player,Player,Player,String):String
+getName():String
+getRent():int
+getCost():int

Land

+Land(int,String,int)
+rent(int):void

Company

+Company(int,String,int)
+rent(int):void

CommunityChest

+CommunityChest(String)
+CommunityChest(int)
+givemessage(ListJsonReader,Player,Player,Player,String):String
+drawcommunity(Player,Player,Banker):void

Action

-item:String

+Action(int)
+Action(String)
+givemessage(ListJsonReader,Player,Player,Player,String):String
+setItem(String):void
+getItem():String

Chance

+Chance(String)
+Chance(int)
+givemessage(ListJsonReader,Player,Player,Player,String):String
+drawchance(ListJsonReader,PropertyJsonReader,PrintWriter,Player,Player,Player,Banker,String):String

Player

-chanceindex:int
- communindex:int
- count:int
- initialmoney:int
-parkcount:int
-position:int
-playerdrawcard :boolean
bankruptflag:boolean
playerpro:ArrayList<Square>

+goesbankrupt(Player):boolean
+setPosition(int):void
+getPosition():int
+setPlayerdrawcard(boolean):void
+getPlayerdrawcard():boolean

Users

-name:String
-money:int

+show(PrintWriter,Player,Player,Banker):void
+setName(String):void
+getName():String
+setMoney(int):void
+getMoney():int

Banker

In this assignment, the most important class is 'Square', everything is built on it. First of all, I created a squares list that includes all of the square types. Then, I created classes for all of the square types. Each of them has their own functions and called from GameBegins class after determining the square type.

GameBegins class is used to call functions of class of current position with appropriate parameters by separating commands. It uses polymorphism and inheritance features while executing commands. 'givemessage' function in Square is overrided in almost all of the subclasses, according to message.

I chose 'Property' as an abstract class, because the rent function changes in all of its subclasses, and there is no such thing as 'Property rent'. Also, I chose 'Action' as an abstract class, because the 'givemessage' function from superclass Square wasn't appropriate for CommunityChest and Chance classes, they print card features as well. I created 'givemessage' as an abstract method in Action class, since there is no specific message about Action square.

'Users' class has subclasses 'Player' and 'Banker', includes money and name fields since both Player and Banker has them. Also, 'show()' command is executed via show method in 'Users'.