```java
package game;

import game.Account.IllegalAmountException;

public class PlayerController {
    private Player[] players;
    private final int PASS_START_MONEY = 4000;
    private final int TOTAL_FIELDS;
    private TradeController tradeController = new TradeController();

    public PlayerController(Player[] players, int sTART_MONEY, int totalFields) {
        super();
        this.players = players;
        this.TOTAL_FIELDS = totalFields;
    }
    // Constructor
    public PlayerController(int startMoney, int totalfields) {
        this.TOTAL_FIELDS = totalfields;
    }
    //Ordinary commands
    public int getTotalAssets(BoardController boardController, Player player) {
        int totalAssets =0;
        totalAssets += player.getAccount().getBalance();
        System.out.println("totalAssets:" +totalAssets);
        for (Field field : BoardController.getFieldsbyPlayer(player)){
            totalAssets += ((Ownable)field).getPrice();
            System.out.println(totalAssets);
            if (field instanceof Street){
                totalAssets += ((Street)field).getBuildingBuyValue();
            }
        }

        return totalAssets;
    }


    //Getters and Setters
    public Player[] getPlayers() {
        return players;
    }
    public void setPlayers(Player[] players) {
        this.players = players;
    }

    // Takes a player and a sum and moves the player that sum forwards
    public void move(Player player, int sum,Decorator decorator,
            PlayerController playerController, CardController cardController, BoardController boardController) {
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53          int currentField = player.getCurrentFieldNumber();
54          if((currentField + sum) > TOTAL_FIELDS){
55              passStart(player);
56          }
57          if((currentField + sum >= 1)){
58              player.setCurrentFieldNumber(((currentField - 1 + sum)
59                      % TOTAL_FIELDS)+1);
60          } else {
61              player.setCurrentFieldNumber(currentField + sum + 40);
62          }
63          decorator.updatePlayer(player);
64          boardController.landOnField(player, player.getCurrentFieldNumber(),
  decorator, this, cardController);
65      }
66      // moves a player to a specific field
67      public void moveTo(Player player, int fieldInt, BoardController
  boardController, Decorator decorator, CardController cardController, int
  rentModifier){
68          if (player.getCurrentFieldNumber() > fieldInt){
69              passStart(player);
70          }
71          player.setCurrentFieldNumber(fieldInt);
72          decorator.updatePlayer(player);
73          boardController.landOnField(player, fieldInt, decorator, this,
  cardController, rentModifier);
74      }
75      public void moveTo(Player player, int fieldInt, BoardController
  boardController, Decorator decorator, CardController cardController){
76          moveTo(player, fieldInt, boardController, decorator,
  cardController, 1);
77      }
78
79      public void moveToJail(Player player, int jailField){
80          player.setInJail(1);
81          player.setCurrentFieldNumber(jailField);
82          player.setTwoOfAKindCount(0);
83      }
84
85      // Adds START_MONEY to a players account
86      public void passStart(Player player){
87          try {
88              player.getAccount().deposit(PASS_START_MONEY);
89          } catch (Exception e) {
90              System.err.println("fail in passStart");
91              e.printStackTrace();
92          }
93      }
94      public boolean payDebt(Player debitor, Player creditor, Decorator
  decorator, String[] msg, int debt) {
95          boolean debtPayed = false;
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 96         while (!debtPayed){
 97             decorator.showMessage(msg);
 98             try {
 99                 debitor.getAccount().withdraw(debt);
100                 if (creditor != null) {
101                     creditor.getAccount().deposit(debt); //Should be handled in a seperate statement - future
102                 }
103                 debtPayed = true;
104             } catch (InsufficientFundsException e) {
105                 //insufficient funds to pay player
106                 System.out.println("Insufficient funds for transaction");
107                 //If player has any unpawned fields, he is forced to pawn them
108                 if(BoardController.hasAnyUnPawnedFields(debitor)){
109                     String[] msg1 = new String[]{"YouMustAtLeastPawnAllFields"};
110                     decorator.showMessage(msg1);
111                     handleInsufficientFunds(debitor, debt, decorator);
112                 } else {
113                     //Else he can choose between trying to raise money
114                     String[] messageString = new String[] {"TradeOrGoBroke"};
115                     String[] buttons = new String[] {"Trade","Bankrupt"};
116                     int selection = decorator.getUserButtonPressed(messageString, buttons);
117                     if (selection == 0){
118                         handleInsufficientFunds(debitor, debt, decorator);
119                     } else {
120                         hostileTakeOver(creditor, debitor);
121                         break;
122                     }
123                 }
124             } catch (IllegalAmountException e) {
125                 System.err.println("IllegalAmount LandOnOwnable");
126                 e.printStackTrace();
127                 break;
128             }
129         }
130         return debtPayed;
131     }
132     public boolean handleInsufficientFunds(Player player, int amount, Decorator decorator) {
133         String[] msg1 = new String[]{"YouMustPawnTrade"};
134         String[] msg2 = new String[]{"TradeOrNot"};
135         String[] opt0 = new String[]{"Trade","Buildings", "Cancel"};
136         while(player.getAccount().getBalance() < amount){
137             String[] msg0 = new String[]{"NotEnoughMoneyYouNeed", Integer.toString(amount)};
138             decorator.showMessage(StringTools.add(msg0, msg1));
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139             int choice = decorator.getUserButtonPressed(msg2, opt0);
140             if(choice == 0){
141                 tradeController.trade(player, decorator, this);
142             }
143             if(choice == 1){
144                 tradeController.buildings(player, this, decorator);
145             }
146             else{
147                 break;
148             }
149             decorator.updatePlayer(player);
150         }
151         return player.getAccount().getBalance() > amount;
152     }
153 
154     public int getNumberOfPlayersLeft(){
155         int numberOfPlayersLeft = 0;
156         for(Player p: players){
157             if(!p.isBroke()){
158                 numberOfPlayersLeft++;
159             }
160         }
161         return numberOfPlayersLeft;
162     }
163 
164     // some kind of error
165     public void hostileTakeOver(Player kreditor, Player debitor){
166         Field[] fieldsToReset = BoardController.getFieldsbyPlayer(debitor);
167         if(kreditor == null){
168             //TODO make auktion available then this method can be built
    properly
169             for(Field f: fieldsToReset){
170                 if(f instanceof Ownable){
171                     ((Ownable) f).setOwner(null);
172                 }
173 
174             }
175         }
176         else{
177             for(Field f: fieldsToReset){
178                 if(f instanceof Ownable){
179                     ((Ownable) f).setOwner(kreditor);
180                 }
181             }
182         }
183         try {
184             debitor.getAccount().setBalance(0);
185         } catch (Exception e) {
186             e.printStackTrace();
187         }
```

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188         debitor.setIsBroke(true);
189     }
190     public void trade(Player activePlayer, Decorator decorator) {
191         tradeController.trade(activePlayer, decorator, this);
192 
193     }
194     public void buyHouse(Player activePlayer, Decorator decorator) {
195         tradeController.buildings(activePlayer, this, decorator);
196 
197     }
198     public void playerSetup(GameController gameController, Decorator
    decorator, int startBalance) {
199         String[] options = {"2 Players","3 Players","4 Players","5
    Players","6 Players"};
200         int numberOfPlayers = (decorator.getUserSelection(new String[]
    {"SelectNumberOfPlayers"}, options))+2;
201         this.players = new Player[numberOfPlayers];
202         String PlayerName = null;
203         for (int i = 0;i<players.length;i++){
204             PlayerName = nameCheck(gameController, decorator, players,
    PlayerName, i);
205             players[i] = new Player(PlayerName, startBalance);
206         }
207     }
208     private String nameCheck(GameController gameController, Decorator
    decorator, Player[] players, String PlayerName, int i) {
209         boolean sameName = true;
210         while (sameName  == true){
211             PlayerName = decorator.getUserString(new String[]
    {"EnterPlayerName", "Player",String.valueOf(i+1)});
212             sameName = false;
213             for (int j = 0;j<i;j++){
214                 if
    (PlayerName.toLowerCase().equals(players[j].getPlayerName().toLowerCase())){
215                     decorator.showMessage(new String[] {"NameTaken"});
216                     sameName= true;
217                     break;
218                 } else {
219                     sameName = false;
220                 }
221             }
222         }
223         return PlayerName;
224     }
225 
226 
227     //  public static void main(String[] args){
228     //      //Test - move()
229     //      Player p = new Player("ChristiansMor", 6000);
230     //      PlayerController testController = new PlayerController(30000,
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   40);
231    //      testController.move(p, 4, decorator,
232    //                playerController,  cardController,  boardController);
233    //      System.out.println(p.getCurrentFieldNumber() + "\t" +
   p.getAccount());
234    //
235    //      //Test - moveTo()
236    ////         testController.moveTo(p, 0);
237    ////         System.out.println(p.getCurrentFieldNumber() + "\t" +
   p.getAccount());
238    //
239    //      //Test - moveToJail()
240    //      testController.moveToJail(p, 3);
241    //      System.out.println(p.getCurrentFieldNumber() + "\t" + p + "\t"
   + p.getInJail());
242    //  }
243
244 }
245
```