

# MONOPOLY

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## \* Fast-dealing Property Trading Game \*

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We will be implementing the game of Monopoly in the console for users to play.

Below is a list of Beginning, Intermediate, Advanced and Other rules to implement. Begin with the Beginner functionality, and then when that is done, move on to the Intermediate functionality, and so on.

Feel free to ask questions and clarify any ambiguity in the rules below, because there will probably be issues.



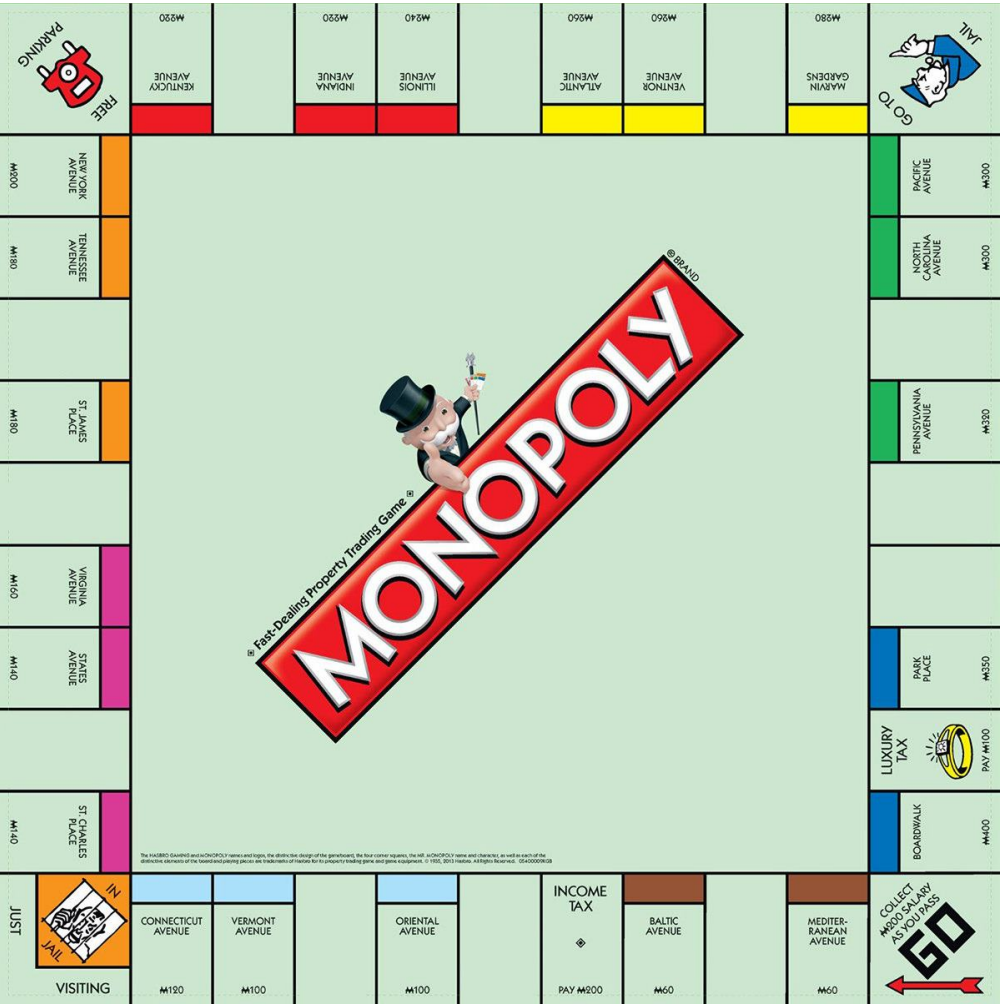
Goal: At the end of the next three days, you should be able to show off your game by running the program.

Good luck!

## Beginner

- 2 Players initially
- Player starts with a configurable amount of money
  - Rolling doubles gives you another turn
    - Rolling doubles 3 times send you to jail
      - You stay in jail until you roll doubles again (max 3 turns)
  - Passing GO gives you \$200
  - See beginner board game image for space positions
    - No community chest or chance cards
    - No railroads or utilities
    - Two taxing spaces (Income Tax and Luxury Tax)
      - Luxury Tax is \$100
      - Income Tax is \$200
    - All other spaces are properties that a user can buy if they land on the space and have enough money
  - No Houses or Hotels
  - No Morgaging properties
  - No trading between players
  - See sample beginning board game image for space positions
  - When a player lands on a space owned by another player they have to pay rent
    - Rent is a fixed price
  - If a player doesn't have enough money to pay rent they go bankrupt
    - The first person that goes bankrupt ends the game
    - The other player wins the game
- Visuals
  - Print out actions to the console so that the users can see what is going on in the game

Beginner Board



## Intermediate

### Changes between Beginning and Intermediate

- Houses & Hotels
- See intermediate board game image for space positions
- X number of players (should be input before the game starts)
- Passing GO money amount is configurable
- Rent is doubled if the owner has all of the spaces of that color (a monopoly)
- Including railroads and utilities for board spaces
  - Railroad rent is based on how many railroads the owner has
  - Utility rent is based on how many utilities the owner has
    - 1 utility is 4 times the dice roll
    - 2 utilities is 10 times the dice roll
- The game ends when all but one player is bankrupt
- Landing on GO gives you an extra money

Intermediate Board



## Advanced

### Changes between Intermediate and Advanced

- See advanced board game image for space positions
- Community Chest/Chance cards and spaces
  - See CommunityChestAndChance.txt for all card titles and text
  - Some cards, like "Get Out Of Jail Free" can be held on to by the user!
- Buying/Selling Houses and hotels before rolling the dice on the players turn
  - See the property tables value for house and hotel prices:
    - [http://monopoly.wikia.com/wiki/List\\_of\\_Monopoly\\_Properties](http://monopoly.wikia.com/wiki/List_of_Monopoly_Properties)
  - Keep in mind that rent prices change when the houses/hotels are placed on that space
  - Houses and hotels can be sold back to the bank at half the price that they were purchased for
  - Houses and hotels can only be purchased if the player has a monopoly of those properties (all properties of the same color)
- Mortgaging houses if the player is out of money
- Trading and buying properties from other players
  - Only the following can be offered in trade:
    - Properties (mortgaged and unmortgaged)
    - Get Out Of Jail Free cards
    - Cash
  - Houses and Hotels CANNOT be traded.
- Bankruptcy rules (different rules apply depending on who your debt is owed to)
  - Debt to Player
    - Return houses and hotels to the bank for half of the amount paid
    - Turn over cash and property to player
    - Mortgaged property stays mortgaged, but the other player has a chance to un-mortgage all obtained properties (with 10% interest to the bank) immediately.
  - Debt to Bank
    - Return houses and hotels to the bank for half of the amount paid
    - Turn over cash and property to bank
    - Bank immediately auctions off all property (without buildings).
- Income Tax space is \$200 or 10% of all of the players assets (money, properties, houses, hotels)
- If a player lands on a property and no one owns it, if the player doesn't buy it (or can't buy it), put it up for auction so that all players have a chance to buy it.
- Print out a visual of the board game in the console for the user to see on their turn (not just text)

	M880 MARVIN GARDENS		M150 WATER WORKS	M650 VENTNOR AVENUE	M660 ATLANTIC AVENUE	M800 B & O RAILROAD	M840 ILLINOIS AVENUE	M820 INDIANA AVENUE		M920 KENTUCKY AVENUE							
PACIFIC AVENUE M4300	NORTH CAROLINA AVENUE M4300	COMMUNITY CHEST  M4300	PENNSYLVANIA AVENUE M4300	SHORT LINE  M4800	CHANCE  M4350	LUXURY TAX  PAY M4000	BOARDWALK M4000	COLLECT MISO SALARY AS YOU PASS  M4000	MEDITERRANEAN AVENUE M650	BALTIC AVENUE M650	INCOME TAX PAY M200	READING RAILROAD M200	ORIENTAL AVENUE M100	CHANCE  M100	VERMONT AVENUE M100	CONNECTICUT AVENUE M120	JUST VISITING  M400

## Other

Optional house rules (after Advanced section is done)

*Implement these changes via a config file for the game*

- All taxes go to the free parking space, and whoever lands on the space gets the money
- Make Passing GO money configurable (\$100, \$400, \$1000, etc.)