

Watopoly Demo Handout

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This handout is dedicated to showcase major features, enhancements and general workflow of Watopoly. For demonstration purposes, all the tests are carried out in testing mode to eliminate random number generation, and we have provided screenshots to better assist with the explanation for each section.

- **General workflow**

1. After entering the game, the first thing to do is to add players. The command for adding players is “add <player-name> <player-symbol>”

```
Welcome to Watopoly! Please type "add Player_name Player_symbol" to add an player. After adding players, type begin to begin the game.
ad Ivan 1
Invalid command. Please type "add Player_name Player_symbol" to add an player. After adding players, type begin to begin the game.
add Ivan i
add Alroy a
add Steven s
```

begin															
Goose		NEEDLES		V1		CIP		GO TO							
Nesting		HALL						TINS							
EV1		EV2		EV3		PHYS		B1		B2					

- Once players are added, type “begin” to start playing. The initial board will be displayed and it dictates the first player to take actions.
- A player can do several things in his round. Command “roll” rolls the dice twice and moves him to the new location (dice1 + dice2) steps from his old position. Different effects will take place depending on the nature of that piece, eg. buy properties, pay tuition, collect money. Meanwhile, the board will be updated with the current state of the game. Other available commands include trade, improve, mortgage, etc, and will be elaborated after. Command “next” signals the end of this round.

```

First player is Alroy.
roll 1 2
Alroy arrives at ML
This building has no owner! Do you want to purchase this building?
Purchase cost is $60
yes
Alroy pays $60 to Bank.

Alroy has bought ML.

|Goose ||NEEDLES||V1 ||CIF ||GO TO| | | | | | | | | |
|Nesting||HALL ||EV1 ||PHYS ||B1 ||B2 ||TIMS|
|EV1 ||EV2 ||EV3 || || || || || ||
| || || || || || || || || ||

|-----|
|OPT|
|-----|
|BHH|
|-----|
|SLC|
|-----|
|LHI|
|-----|
|UWP|
|-----|
|CPH|
|-----|
|DWE|
|-----|
|PAC|
|-----|
|RCH|
|-----|

|-----|
|EIT|
|-----|
|ESC|
|-----|
|SLC|
|-----|
|C2|
|-----|
|REV|
|-----|
|NEEDLES|
|HALL|
|-----|
|MC|
|-----|
|COOP|
|FEE|
|-----|
|DC|
|-----|

|DC Time||NEEDLES||MKV ||TUITION||SLC ||COLLECT| | | | | |
|Line ||HALL ||ECH || ||IML ||AL ||OSAP|
| ||HH ||PAS || || ||la || ||1 s|
| || || || || || || || ||

next
Next player is Ivan

```

4. If a player owes more money than his cash, then he can declare bankruptcy or raise money by mortgage or sell improvement.

```
all
Player: Alroy
Cash: 299
Properties: AL
Roll Up the Rim Cup: 0
Player: Ivan
Cash: 2661
Properties:
Roll Up the Rim Cup: 0
roll 1 2
roll
Alroy arrives at Tuition
Tuition
You need to pay tuition :(
Do you want to pay $300(A) or 10% of your total worth(B)?
A
You don't have enough cash! You need 1 dollars.
Do you want to bankrupt?
yes
Next player is Ivan
Ivan is the only player left. Ivan has won!
```

5. The game ends when there is only one player who has not bankrupted.
This player is the winner.

- **Command: Assets**

Displays the assets of the current player.

```
assets
Current player: Alroy
Cash: 1440
Properties: ML
Roll Up the Rim Cup: 0
```

*initial state of this example can be loaded from "assets.in".

- **Command: all**

Displays the assets of all players on board.

```
all
Player: Alroy
Cash: 1440
Properties: ML
Roll Up the Rim Cup: 0
Player: Ivan
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
Player: Steven
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
```

*initial state of this example can be loaded from “all.in”.

- **Command: trade**

Takes the form “trade <player> <item-get> <item-give>”. Does not allow trading money for money and handles exceptions for wrong building/player names.

```
all
Player: Alroy
Cash: 1440
Properties: ML
Roll Up the Rim Cup: 0
Player: Ivan
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
Player: Steven
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
trade Ivan ML 100
Does Ivan accept the trade of giving $100 in exchange for ML ?
accept
Ivan now has ML.
Ivan pays $100 to Alroy.

all
Player: Alroy
Cash: 1540
Properties:
Roll Up the Rim Cup: 0
Player: Ivan
Cash: 1400
Properties: ML
Roll Up the Rim Cup: 0
Player: Steven
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
```

```

trade Ivan 100 33
Cannot trade money for money!
trade Ivan 100 DCz
Does Ivan accept the trade of giving DCz in exchange for $100 ?
accept
This building does not exist!
This trade is cancelled.
trade ivan ML 100
Does ivan accept the trade of giving $100 in exchange for ML ?
accept
Wrong player name.

```

*initial state of this example can be loaded from “trade.in”.

- **Auction**

When a player decides not to buy a property or declares bankruptcy to the bank, properties will be auctioned. During an auction, players can either raise the current bid or withdraw from the auction. When only one player has not withdrawn from the auction, they are the winner and must pay their final bid.

```

First player is Ivan.
all
Player: Ivan
Cash: 60
Properties: ML
Roll Up the Rim Cup: 0
Player: Steven
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
Player: Alroy
Cash: 2880
Properties:
Roll Up the Rim Cup: 0
roll 2 2
Ivan arrives at Tuition
Tuition
You need to pay tuition :(
Do you want to pay $300(A) or 10% of your total worth(B)?
A
You don't have enough cash! You need 240 dollars.
Do you want to bankrupt?
yes
Current player declares bankruptcy to the bank. All assets will be auctioned.
Alroy 100
Steven 90
Need to spend more money than $100
Steven 200
Alroy withdraw
!Alroy has withdrawn from the current auction.
Steven pays $200 to Bank.

Steven now has ML.
Next player is Steven.

```

*initial state of this example can be loaded from “trade.in”.

- **Improvement**

Command “improve <building> buy/sell” attempts to buy or sell an improvement for a property. Exceptions are handled if the player does not have full monopoly of that building or maximum/minimum improvement level reached. Players can do multiple improvements in one round. Each improvement will update the current state of the board.

```
improve AL buy
You need to own the entire Arts1 monopoly before buying improvement of AL.
```

```
improve AL buy
Alroy pays $50 to Bank.

You have bought improvement for AL.
```

```

-----
|DC Tims| | | |NEEDLES| |MKV| |TUTION| | |SLC| |IIIII| |COLLECT| |
|Line   | | | |HALL| | | | | | | | | | |OSAP|
| | | | | | | |ECH| | | | | | | | | |
| | | | | | | | | | | | | | | | |
-----
improve AL buy
This building has full improvement.
```

- **Mortgage**

Players can mortgage their properties to the bank in exchange for money.

Exceptions are handled for incorrect commands.

```

mortgage AL
You have mortgaged AL and received $20.
unmortgage AL
Alroy pays $24 to Bank.

You have unmortgaged AL.
all
Player: Alroy
Cash: 1456
Properties: AL
Roll Up the Rim Cup: 0
Player: Ivan
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
mortgage AL
You have mortgaged AL and received $20.
all
Player: Alroy
Cash: 1476
Properties: AL
Roll Up the Rim Cup: 0
Player: Ivan
Cash: 1500
Properties:
Roll Up the Rim Cup: 0
mortgage AL
This building has been mortgaged!
```


*initial state of this example can be loaded from “mortgage.in”

- **Loading and saving game**

Existing game progress can be loaded instead of starting with a new game.

This is achieved by the command line argument “-loading <filename>”. Also

users can save the current game progress into a file with command

“save <filename>”.

- **Go To Tims and DC Tims Line**

When landed on Go To Tims, Players are sent to the DC Tims Line.

```
Next player is Steven
roll 15 15
Steven arrives at GotoTims
Go to Tims
You are sent to DC Tims Line.
```

In their next round, they have three options to choose from.

```
Do you want to roll dice, pay $50 or use a Roll Up the Rim Cup?
pay
Alroy pays $50 to Bank.

You payed $50!
You are out of the line!
```

On their third turn of being in the DC Tims Line, if a player does not roll doubles, the player must leave the DC Tims Line, either by paying or using a Roll Up the Rim cup. At this point, they move the sum of the dice from their last roll.

```
It is your third turn in the DC Tims line. If you do not roll doubles, you must leave the line by either paying $50 or using a Roll Up the Rim cup.
Do you want to roll dice, pay $50 or use a Roll Up the Rim Cup?
roll
Dice: 1
Dice: 6
Your didn't roll doubles...
You need to pay $50 or using a Roll Up the Rim Cup.
pay
Ivan pays $50 to Bank.

You payed $50!
You are out of the line!
Ivan arrives at SLC
```

- **SLC and Needles Hall**

Players will experience different consequences by chance when landed on these two locations.

```
First player is Alroy.  
roll 1 1  
Alroy arrives at SLC  
You reached SLC  
You need to go back 3 steps.  
Alroy arrives at DC
```

```
Next player is Ivan  
roll 3 4  
Ivan arrives at NeedlesHall  
You reached Needles hall  
You receive 25 dollars.
```

- **No enough money**

When a player owes money, he can either go bankrupt or raise money by selling improvements or mortgaging properties. Once money is enough, the money-raising process is stopped and the player pays the debt.

```
all  
Player: Ivan  
Cash: 2661  
Properties:  
Roll Up the Rim Cup: 0  
Player: Klaus  
Cash: 299  
Properties: AL  
Roll Up the Rim Cup: 0  
roll 1 2  
Klaus arrives at Tuition  
Tuition  
You need to pay tuition :(  
Do you want to pay $300(A) or 10% of your total worth(B)?  
A  
You don't have enough cash! You need 1 dollars.  
Do you want to bankrupt?  
no  
You need to raise $1 by mortgaging properties or sell improvements.  
mortgage AL  
You have mortgaged AL and received $20.  
Klaus pays $300 to Bank.
```

*initial state of this example can be loaded from “noEnoughMoney.in”