

Sorcery Demo

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This demo will run you through our sorcery project, highlighting all the key features and card abilities

Before we begin, please use the command “make” to create an executable named “sorcery”

Minions

Please use the following command to begin the program:

```
valgrind --leak-check=full ./sorcery -deck1 minions1.deck -deck2 minions2.deck -testing -init addMagic.txt
```

The following list of commands will run you through all the minion abilities, as well as the attack system in the game.

<u>Command</u>	<u>Effect</u>
board	Empty board
hand	
inspect 1	No minion to inspect
play 1	Earth Elemental (minion) enters for player test1
board	Updated board
draw	
hand	Draw function works in testing mode
play 2	Fire Elemental enters for player test1
play 2	Potion Seller enters for player test1
play 2	Apprentice Summoner enters for player test1
play 2	Air Elemental enters for player test1
board	
draw	Deck empty; does not work (displays error message)
play 1	No minion spots left (displays error message)
use 4 2 1	- Use non-target ability with target - still runs - Board full, appSummoner ability can't run

board	Magic unchanged - ability not used
end	
board	Potion Seller ability in effect
hand	
play 1	Bomb enters for player test2
play 1	Bomb enters for player test2
play 2	- Master Summon enters for player test2 - test1 Fire elemental triggered ability damaged the 3 minions that have entered for player test2
use 3	- Master Summoner ability - Summoned Air Elementals are automatically killed from Fire Elemental triggered ability
board	
play 2	Potion Seller enters for player test2
draw	
hand	
play 2	Earth Elemental enters for player test2
use 3	Master Summoner has no actions left
attack 3	Master Summoner has no actions left
attack 3 3	Master Summoner has no actions left
board	
attack 5 5	Get rid of Air Elemental (sent to Grave)
board	
end	
use 4	Use Apprentice Summoner's ability
board	
attack 2 5	
board	Fire Elemental sent to Grave
attack 4 4	test 1's Summoned Air Elemental sent to grave
attack 2 4	
attack 1 4	

board	Potion Seller killed and sent to the grave. Also, minions that attacked potion seller also took damage in the process
play 1	Bomb enters for player test1
hand	Empty hand
end	
play 2	Invalid card
play 1	Novice Pyromancer enters for player test2
board	
use 3	Player test2 Master Summoner can't use ability as there are no spots left on the board for air elementals to be summoned
attack 4 2	
board	Both cards involved in attack go to grave
use 3	Master Summoner summons 1 Air Elemental
board	Air Elemental from Master Summoner's triggered ability in last spot
attack 5 3	
use 4	Error: Novice Pyromancer needs a target
use 4 1 3	Novice Pyromancer ability damages player test1's bomb
board	
end	
attack 2 2	Player test1 Apprentice Summoner attacks opposing players bomb
end	
use 4 2 1	Player test2's Novice Pyromancer uses ability to attack own bomb
board	All bombs defense is 1
attack 1 3	Bomb's attack each other leading to a chained bomb effect
board	
use 1	Using player test2's Master Summon ability to summon 3 Air Elementals
board	
quit	

Basic Spells: Blizzard, Banish, Raise Dead, Unsummon

Please use the following command to begin the program:

```
valgrind --leak-check=full ./sorcery -deck1 spells.deck -deck2 spells.deck -testing -init SpellInit.txt
```

Command	Effect
board	
hand	
play 3 1 2	Will output message that card did not need any targets, and will run as if no targets were passed, so blizzard is played
board	All minions defense have gone down by 2
hand	
play 3	Raise dead not played since graveyard is empty
hand	Raise dead is still there
board	Note that player test1's magic hasn't gone down since Raise dead was not played because test1's graveyard is empty
play 2	Error handling - Banish needs a target
play 2 1 5	Banish used on player test1's 5th minion
board	Player test1's 5th minion is in the graveyard
hand	
play 3	
board	Player test1 has no more space left on board for minions to enter
play 2	Error handling - Output error message
hand	Since there wasn't enough space for minion to be resurrected, Raise Dead was not used and thus is still in test1's hand
Play 1 1 5	Air elemental added to hand by playing unsummon
hand	
board	Player test1's Air Elemental not there because it was returned to hand by unsummon
play 1	Used Raise Dead

board	Raise Dead brought back earth elemental with defense set to 1
draw	Draws a card from test1's deck
hand	
play 2 2 5	Played unsummon on player test2's 5'th minion. Since test2's hand was full, unsummon sent the 5th minion to the grave instead
board	Minions defense intact when unsummon called in previous command
end	
hand	
play 1 2 1	
hand	Unsummon removed from hand and Earth Elemental added
play 1 1 1	Banish destroy player test1's first minion
board	
hand	
play 1	Plays blizzard
board	All minions sent to graveyard because of blizzard
quit	

Enchantments

Test 1:

Please use the following command to begin the program:

```
valgrind --leak-check=full ./sorcery -deck1 enchant.deck -deck2 enchant.deck -testing -init EnchantInit.txt
```

Note that this test also shows how "Disenchant" works.

Commands	Effects
board	
hand	
play 1 1 1	Use disenchant on card with no enchantments
hand	Disenchant is still there since card it was used on had no enchantments
play 2 1 1	

play 2 1 1	
play 2 1 1	
inspect 1	Minions defense and attack changed based on the enchantments added. Note enchantments effects applied from left to right (oldest to newest).
hand	
play 1 1 1	Disenchant removes top most enchantment, which in this case is enrage
inspect 1	Minions defense and attack changed based on enchantment being removed
board	
hand	
play 1 1 1	
draw	
draw	
draw	
draw	
draw	
hand	
play 1 1 1	
play 1 1 1	
play 1 1 1	
inspect 1	More than 5 enchantments on minion printed in 2 rows
board	
attack 1	
board	Player test2 health went down from previous attack
attack 1 1	Showing minion has no actions left
end	
end	
attack 1	Minion has no actions left because of delay enchantment
inspect 1	Both delay cards were removed from player test1's first minion

use 1	Minion not affected by Magic Fatigue and Silence
draw	
board	
hand	
play 1 1 2	
play 1 1 2	
play 1 1 2	
play 1 1 2	
inspect 2	Novice Pyromancer not used this turn (action points is 1)
end	
end	
inspect 2	Delay enchantment removed but had no effect since Novice Pyromancer had it's action point remaining from previous turn
board	
use 2 2 1	
board	Note that Novice Pyromancer's ability cost went up to 3 and this amount was removed from player test1's magic
hand	
play 1 1 2	
inspect 2	
end	
end	
use 2 2 1	Novice Pyromancer can't use ability because of Silence enchantment
inspect 2	Silence enchantment remains
quit	

Test 2:

Please use the following command to begin the program:

```
valgrind --leak-check=full ./sorcery -deck1 enchant2.deck -deck2 enchant2.deck -testing -init  
EnchantInit2.txt
```

Note that this test also displays the win condition

Commands	Effect
board	
hand	
inspect 1	Player test1's Earth Elemental has 2 enchantments. Note player test2's Earth Elemental also has the same enchantments which were added in the init file
attack 1 1	
board	Earth Elemental in grave and enchantments removed (attack values back to normal)
hand	
play 1	Raise Dead played
board	
inspect 1	Earth Elemental has no enchantments
draw	
draw	
hand	
end	
end	
play 1 1 1	
play 1 1 1	
play 1 1 1	
play 1 1 1	
inspect 1	Earth Elemental has its stats boosted by enchantments
board	
attack 1	Win condition reached - player test1's Earth Elemental has attack equal to 20, which completely depletes player test2's health

Rituals

Please use the following command to begin the program:

```
valgrind --leak-check=full ./sorcery -deck1 ritual.deck -deck2 ritual.deck -testing
```

* Enter any names for player 1 and player 2

Note that this test also shows how “Banish” and “Recharge work with rituals.

Commands	Effect
board	
hand	
play 1 1 r	Showcasing error handling
play 2 1 r	Showcasing error handling
play 3 1 r	Showing that when playing a ritual target isn't needed, ritual is played as if no targets were given
board	
end	
end	
board	Dark ritual applied its effect, player's 1 magic went up by 2 (1 from ritual and 1 from start of turn). Ritual charge went down by its cost
hand	
play 1 1 r	
board	Banish spell destroyed ritual so board is now empty
play 2	
board	Aura of Power in play for player 1
end	
hand	
play 5	
board	Standstill in play for player 2
end	
board	Player 1's magic only goes up by 1 as per the game rules, since no dark ritual in play

hand	
play 3	
board	Effects of Aura of Power applied first on minion (increasing attack to 5) then Standstill destroyed it
end	
hand	
play 5	
board	Effects of Standstill are applied and Earth Elemental is destroyed. Note Aura of Power had no effect since it is the other players ritual
end	
end	
hand	
play 2	Rituals charges went up by 3 since Recharge was applied
board	
end	
end	
end	
end	
end	
hand	
play 2	
board	Standstill is now player 1's ritual and Aura of Power is removed. Note player 2's standstill does not affect player 1's ritual coming into play since Standstill only affects minions
end	
hand	
play 4	
board	Both Standstill's lost charges since both used their abilities to destroy Earth Elemental
end	

end	
end	
end	
end	
hand	
play 2	
board	Player 1's Standstill destroys Earth Elemental and its charges decrease by 2, but player 2's Standstill didn't do anything since it only had 1 charge left but its cost was 2
end	
hand	
play 4	
board	Earth elemental shows up on board because both player's Standstills don't have enough charges
quit	

Testing mode specific features

- No shuffling
- Use discard
- You still can play a spell or use a minion ability without enough magic

Please use the following command to begin the program:

`valgrind --leak-check=full ./sorcery -testing -deck1 testing.deck -deck2 notExist.txt`

* Enter any names for player 1 and player 2

Commands	Effect
hand	
play 1	
board	Player 1 has no magic left
hand	
discard 1	Discard functionality available in testing mode

hand	First card in hand is gone
play 1	Cant play ritual because you don't have enough magic
play 3 1 1	Can't play enchantment because you don't have enough magic
hand	
play 2	
board	Even though player didn't have enough magic, Blizzard was still played and minions defense went down by 2 because testing mode is enabled
end	
hand	Player 2 was given the default deck since a file that could not be opened was passed by the command line argument
end	
hand	
board	
use 1	
board	Master Summoner ability was still activated even though the user did not have enough magic because we're in testing mode. Note that player 1's magic has been set to 0.
quit	

Non-testing mode

- Try draw and discard, also make note of the shuffle

Please use the following command to begin the game:

```
valgrind --leak-check=full ./sorcery -deck1 testing.deck
```

* Enter any names for player 1 and player 2

Note since the decks are shuffled we have provided general commands instead of specific inputs

Commands	Effect
hand	

Play Master Summoner	
Play Blizzard	Not enough magic to do so
Use Master Summoner's ability	Not enough magic to do so
hand	
Discard Earth Elemental	Function only available in testing mode
end	
hand	Hand is shuffled since testing mode is not enabled
Play minion or ritual if you have one in hand, else play any card	
draw	Function only available in testing mode

Unsummon card: Special design decision

- send to grave if opponent's hand is full

Please use the following command to begin the program:

```
valgrind --leak-check=full ./sorcery -deck1 spells2.deck -deck2 spells2.deck -testing -init SpellInit2.txt
```

Commands	Effect
inspect 1	Note that player 1's first Earth Elemental has 1 enchantment
hand	Notice that player 1's hand is full
end	
hand	
board	
play 1 1 1	Play Unsummon on player 1's first Earth Elemental
board	
end	
hand	
play 4	

inspect 5	Notice that the Earth Elemental still has its enchantments since it was sent to the graveyard by Unsummon because the player's hand was full
quit	

The Extra Win Condition:

- If the hand, minions, and deck are empty, you lose

Idea: Use bombs to lead to a draw condition

Please use the following command to begin the game:

valgrind --leak-check=full ./sorcery -deck1 win.deck -deck2 win.deck -init winInit.txt

Command	Effect
board	
attack 2 1	Game ended in draw, no minions left in play, no cards in hand or deck