

Welcome to the walkthrough of Dices and Dimes (yes it's dices)! This game is based on a small part of Dungeons and Dragons, a fantasy tabletop role-playing game that you might have heard of or played. Dices and Dimes may be developed further for fun after this O1 assignment, that's why it currently has many packages, classes, objects, etc.

Instead of a Grid map in O1, we'll use a HexaGrid map, which is the picture in the root folder. The map is made of hexagons. HexaGrid and HexaGridPos are pretty similar to Grid and GridPos in O1, respectively. Each HexaGridPos has (x,y) coordinates like in the map picture. You may want to check the map while playing because it has coordinates, which is convenient.

**How to start:** Please start *FinalBattle* or *FinalBattleTextUI* in the package *game*. You will control 4 characters, which are at 4 locations (4 orange hexagons in the map picture). Your characters are:

Alphonse, race Elf, class Fighter, subclass Arcane Archer

Riptide, race Tiefling, class Warlock, subclass Hexblade

Cottoni, race Tabaxi, class Bard, subclass Glamour

Andre, race Halfling, class Paladin, subclass Oath of devotion

**Win condition\*:** Kill Acererak (yellow hexagon in the map picture), which means to reduce its HP level to 0.

**Lost condition:** All 4 playable characters are dead.

**How to win (easily):** move character *Alphonse* toward location (13, 5) to receive the buff from the *Tile of Wonder* mentioned below, because he's the highest damage dealer of the bunch from a distance. Afterward, spam action 1 at the boss in addition to *action surge*, also check below, to win.

\*As the battle was set, it's difficult to lose because there are 4 characters vs 1 boss. Uncomment the Hard mode in *FinalBattle* or *FinalBattleSetting* if you use *FinalBattle* or *FinalBattleTextUI* respectively to play the game.

**Background:** When you start *FinalBattle*, the game gives all characters, including Acererak, an initiative number. Character getting the highest number will take the first turn, and the lowest number will take the last turn.

You won't need to control the dice nor understand how the dice work, but the original game Dungeons and Dragons uses polyhedral dice with different numbers of sides, and our combat game is implemented based on the dice. Each action will invoke a different dice roll which is already built-in. For example, a "D4" is a four-sided die, a "D20" is a 20-sided die and so on. All dice can be found in package *dice*.

### **Stats and abilities:**

All characters have 6 stats that describe their characteristics: Strength, Dexterity, Constitution, Intelligence, Wisdom, and Charisma. Each stat has a number that defines the magnitude of that stat. The stat abbreviations are "str", "dex", "con", "int",

"wis", "cha", which can be used with the check command (further details about commands below).

Characters also have some abilities corresponding to those stats, e.g., "insight" is an ability of Wisdom. Abilities are also measured by number. All stat abbreviations and abilities can be found in the *constants* file. (As far as this battle was implemented, the abilities don't matter at all, but they're just there for future purposes.)

**Tile of Wonder:** One special HexaGridPos at coordinates (13, 5). If you move a character to it, all stats of that character will increase significantly!

In the battle, all characters, including Acererak, take turns to do something. Here is what you can do: In each of your character's turns, you can input these commands.

Command	Action
help	Print all common commands, plus the specific commands for the race, classes, and subclasses of the character in the turn.
check status	Check own status, e.g., character's level, appearance, remaining HP, remaining speed, location etc.
action 0 [any target's name]	Drink potion or give potion to another to drink. It will increase the current HP of character drinking it.
action [action number] [target's name]	Perform an action on a target, such as casting a spell or fighting. Each of your characters can do 1 action in their turn. The specific actions depend on the character's race, class, and subclass. For example, if it's Andre's turn, input <i>action 1 acererak</i> to smite Acererak with a thunderous strike.
move [x coordinate] [y coordinate]	If there's sufficient speed remaining, move to a new position, e.g., <i>move 9 5</i> . Moving costs an amount of speed.
distance [x coordinate] [y coordinate]	Distance to a position on hexagrid map
distance [target's name]	Distance to a target, e.g., <i>distance acererak</i>
check locations	Check all other characters' locations
check [stat abbreviation]	Check stat modifiers that affect attacks, e.g. <i>check str</i> , <i>check dex</i>

check saving [stat abbreviation]	Check stat saving, which affects the saving throws (an attempt to resist a spell/an attack). For example, <i>check saving str</i> , <i>check saving wis</i>
check ability [ability name]	Check ability to perform tasks (mostly off combat)
check [target's name]	check target's appearance relatively to full health, for example, <i>check acererak</i> , <i>check cottoni</i>
next	next character's turn
end	end the current combat

**Printed game messages:** They are enclosed in a box of asterisks (\*). It isn't necessary to read other text outputs that are not in the asterisk box (they are just console output to keep track).

The game messages are the results of your commands, e.g., where you've moved to, whether your attack on Acererak is successful. If it prints out that you've used up your actions in this turn, you can't implement more *action* commands, but you can still use other commands such as *help*, *check*, or *move*.

The game will print out messages once you win or lose the battle. Enjoy the game!