Learning the Shell with GameShell

GameShell is a game that runs inside a real terminal. Each mission is a small quest ("go to the top of the tower", "put the coins in your chest"), and every quest turns out to be an ordinary shell command: `cd`, `mkdir`, `mv`, `rm`, `cp`, wildcards, and on from there.

Why. In class you'll take apart a live web app from a terminal. From Lab 5 on, your deliverable is a server that runs in a terminal. And when an agent works for you, the terminal is where it acts: if you can't read what it typed, you can't check its work.

The assignment

Play for 30 minutes, then stop wherever you are. This is a timebox, not a finish line. The first dozen missions cover moving around, making and moving files, and wildcards. Past those come aliases, tab completion, background jobs, and pipes. If you already live in a terminal, you'll get well into those.

Do it without AI. The point is for these commands to be in your fingers, not in a chat window. `man ls` and `ls --help` are fair game.

Watch the GameShell video first, https://youtu.be/GDYjhdFNjKg, then use this sheet as your checklist.

1. Start the game (about 3 minutes)

Use GameShell's own Codespace. It works the same on Mac, Windows, and Linux.

1. Signed in to GitHub, open **https://codespaces.new/phyver/GameShell** and click **Create codespace**. The first build takes a couple of minutes.
2. In the terminal at the bottom of the window, run:

```
bash start.sh
```

3. Press **Enter** through the welcome screens. You're playing when the prompt reads `[mission 1] $`.

2. The four commands you need

Command	What it does
`gsh goal`	Shows the current mission. Re-read it whenever you're unsure.
`gsh check`	"Am I done?" If you aren't, the mission **resets**, so only check once you think you're done.
`gsh reset`	Starts this mission over, e.g. after you delete something you needed.
`gsh help`	Lists the rest.

Everything else you type is ordinary shell.

3. Tips

- **Translate the story into commands.** "Go to" is `cd`, "build" is `mkdir`, "put" or "move" is `mv`, "get rid of" is `rm`.

- **Know where you are.** Run `pwd` and `ls` often.
- **Let the shell type for you. Tab** completes file and folder names; ↑ brings back your previous command.
- **Cancelled missions are expected.** A mission that needs a graphical display (it will mention `DISPLAY` or an X server) gets cancelled in a Codespace, and the game moves on to the next one.

4. Stopping and resuming

- **To quit:** `gsh exit`, or **Ctrl-D**. Your progress is saved.
- **To resume:** reopen the codespace from https://github.com/codespaces and run `bash start.sh` again. It asks:

```
Do you want to remove it and start a new game? [y/N]
```

  Just press Enter to continue where you left off. Typing `y` erases your progress.

Once you're finished with GameShell for good, delete its codespace at https://github.com/codespaces so it doesn't use up your free Codespaces storage.

> ℹ Prefer your own terminal? (macOS or Linux)
>
> ```
> curl -LO https://github.com/phyver/GameShell/releases/download/latest/gameshell.sh
> bash gameshell.sh
> ```
>
> Quitting saves your game to `gameshell-save.sh`; run `bash gameshell-save.sh` to pick up again. On a Mac, a few missions may be cancelled for missing tools. The Codespace doesn't have that problem.