

Homework 2: Race Two Cars (Claude Code Edition)

Time: ~30 minutes

Prerequisites: Claude Code installed (one-time setup at <https://docs.claude.com/claude-code>)

Step 1 — Open Claude Code

Open your terminal and run:

```
claude
```

Step 2 — Paste this one prompt

Copy this entire block into Claude Code:

Clone the repo <https://github.com/learnwithallen/ROAR-Academy> into a new folder, then create a file `race.py` inside it with a `Car` class. Each car has a name, top speed (km/h), and fuel (liters). It burns 1 liter per 10 km. Add a `drive_one_hour()` method that stops cleanly when fuel runs out, and a `race(car_a, car_b, hours)` function that prints the winner. At the bottom, race Lightning (120 km/h, 8 L) against Thunder (100 km/h, 15 L) for 10 hours. Then run the file and show me the output.

Approve any actions Claude Code asks to take (cloning, creating files, running Python).

Step 3 — Copy the output

Paste the final race output into your submission document.

Step 4 — Ask Claude to explain

In the same Claude Code session, type:

Explain in plain English: (1) what `__init__` does, (2) what happens in `drive_one_hour()` when fuel runs out, (3) why `race` needs a for loop. Then wait for me to write my own answers.

Read its explanations, then write your own answers in your own words (2–3 sentences each) into your submission.

Step 5 — One modification

Tell Claude Code:

Modify `race.py` so that every car's distance is halved during hour 5 (a rainy lap). Re-run it and show the new output.

Paste the new output into your submission.

Submit

- race.py (find it in the ROAR-Academy folder Claude cloned)
- PDF with: Step 2 output, Step 4 your three answers, Step 5 output

Homework 2 submission:

<https://docs.google.com/forms/d/e/1FAIpQLSch4dyBMMTi6pDiJgsoyPqCA22EAJYb9ICt9UMFXC3ypf6M0w/viewform?usp=dialog>