

Block E4 - Effective prompting

How to write a good prompt (30 min)

Rules to follow

- Start with the simplest request
- Use clear separators between different tasks, such as

```
## INTRODUCTION
## OUTPUT STYLE
```
- Use clear words to tell the AI what you want, for instance "Translate", "List", "Explain"
- Be very specific as you add details: "Explain the difference between renewable and non-renewable energy to a 16-year-old. Use simple words. Include three examples each."
- Go to the point and remove all the unnecessary information.
- Do not be generic and specify what you want: "Write a few paragraphs".
Better: "Write 2 paragraphs" or "Write a 200 word essay"
- Instead of saying what not to do, just say what to do.

Good prompt example

You are a librarian

RULES

Before starting generating the output, ask:

- How old are you?
- What is your favorite book?
- How many books per year do you read?
- What is your favorite book genre?

GOAL

Suggest a book based on the user's age, favorite book, number of books read the past year, and book genre.

OUTPUT

- Return a list of 5 books
- Add a 30 word description for each book
- Ask the user if they want 5 more books suggested
- Do not ask further questions

CONSTRAINTS

- Do not suggest the same book
- Do not suggest books from the same saga, if any

Bad prompt example

Suggest some Tolkien-style books.

Appendix D - Exercise Block E4 ChatGPT introduction

Exercise (15 min)

You are tasked with measuring the ambient temperature using a temperature sensor. To do this, you want to create a program to measure the temperature with an Arduino.

Write a good prompt following the requirements:

- The output must be an Arduino `.ino` file
- The code must use the `Seeed_AMG8833_driver.h` library
- The hardware is an AMG8833 thermal sensor with an 8x8 matrix, for a total of 64 pixels
- The program must read the temperature values detected by all 64 pixels
- The program must determine the highest temperature among the 64 pixels
- The highest detected temperature must be printed in degree Celsius as output

Possible exercise solution

You are an Arduino programmer

GOAL

Write Arduino code that reads temperature data from an AMG8833 thermal sensor and prints the highest detected temperature.

HARDWARE

The hardware is an AMG8833 thermal sensor.

The sensor provides an 8x8 thermal matrix, for a total of 64 pixels.

REQUIREMENTS

- The code must use the `Seeed_AMG8833_driver.h` library
- The code must read the temperature values from all 64 pixels
- The code must determine the highest temperature among the 64 pixels
- The code must print the highest detected temperature in degree Celsius

OUTPUT

- Return only Arduino `.ino` code
- The code must be ready to compile
- Do not include explanations outside the code

CONSTRAINTS

- Do not print all 64 pixel values
- Do not use a different library
- Do not add unnecessary features

Possible output

```
1 #include <Seeed_AMG8833_driver.h>
2
3 AMG8833 sensor;
4 float pixels[64];
5
6 void setup() {
7     Serial.begin(115200);
8
9     if (sensor.init() != 0) {
10        Serial.println("AMG8833 init failed");
11        while (1) {
12            delay(1000);
13        }
14    }
15 }
16
17 void loop() {
18     sensor.read_pixel_temperature(pixels);
19     float maxTemp = pixels[0];
20     for (int i = 1; i < 64; i++) {
21         if (pixels[i] > maxTemp) {
22             maxTemp = pixels[i];
23         }
24     }
25
26     Serial.print("Highest temperature: ");
27     Serial.print(maxTemp, 2);
28     Serial.println(" °C");
29     delay(500);
30 }
```