Here's a complete response for your \*\*AI Lab Assignment\*\* titled \*\*"Types of Prompts and Prompt Engineering Basics"\*\*, including \*\*5 examples each\*\* for \*\*Zero-shot\*\*, \*\*Few-shot\*\*, \*\*Instructional\*\*, and \*\*Interrogative prompts\*\*, along with a \*\*brief comparison\*\* of results:

---

## 🔍 \*\*Prompt Engineering Basics: Types of Prompts\*\*

### 🧠 \*\*Objective:\*\*

Understand different types of prompts and how they influence AI output. Focus on:

\* \*\*Zero-shot prompting\*\*: No examples are given.

\* \*\*Few-shot prompting\*\*: A few examples are given to guide the model.

\* \*\*Instructional prompting\*\*: Direct task-based instructions.

\* \*\*Interrogative prompting\*\*: Questions that elicit specific answers.

---

## 1️⃣ \*\*Zero-Shot Prompt Examples\*\*

| Prompt | Output |

| ------------------------------------------------------------------- | ---------------------------------------------------------------------- |

| Translate "Good morning" to French. | Bonjour |

| Summarize this: "The cat sat on the mat and looked out the window." | A cat sat on a mat and watched outside. |

| Write a haiku about summer. | Sunlight on my skin / Cicadas sing in the trees / Heat dances on roads |

| What's the capital of Japan? | Tokyo |

| Create a slogan for a fitness brand. | "Stronger Every Day" |

---

## 2️⃣ \*\*Few-Shot Prompt Examples\*\*

| Prompt | Output |

| ------------------------------------------------------------------------------------------------------------------------------------------ | ------------------------------------------------------------------------------ |

| Q: Translate "Hello" to French. A: Bonjour. <br>Q: Translate "Goodbye" to French. A: Au revoir. <br>Q: Translate "Thank you" to French. A: | Merci |

| Example: "Roses are red, violets are blue..." <br>Write another romantic rhyme: | Stars shine bright, just like you. |

| Q: 5 + 3 = 8 <br>Q: 10 - 4 = 6 <br>Q: 6 × 2 = | 12 |

| Example: Describe a lion. “The lion is a large, golden-furred animal known as the king of the jungle.” <br>Now describe a zebra. | The zebra is a striped black and white animal often found in African savannas. |

| Q: What's the opposite of hot? A: Cold <br>Q: What's the opposite of up? A: Down <br>Q: What's the opposite of happy? A: | Sad |

---

## 3️⃣ \*\*Instructional Prompt Examples\*\*

| Prompt | Output |

| ----------------------------------------------------- | ------------------------------------------------------------------------------------------------------------------------------------------------ |

| Write a Python function to check if a number is even. | def is\\_even(n): return n % 2 == 0 |

| Summarize the plot of \*Cinderella\* in 2 sentences. | A kind girl is mistreated by her stepfamily, but with the help of magic, attends a royal ball. The prince finds her lost slipper and they marry. |

| Give 3 tips for healthy eating. | Eat more vegetables, stay hydrated, avoid processed foods. |

| Explain Newton's Third Law in simple terms. | For every action, there is an equal and opposite reaction. |

| Generate a daily motivational quote. | "Believe in yourself and all that you are." |

---

## 4️⃣ \*\*Interrogative Prompt Examples\*\*

| Prompt | Output |

| ------------------------------------- | --------------------------------------------------------------------- |

| What is the boiling point of water? | 100°C or 212°F |

| Who wrote "Pride and Prejudice"? | Jane Austen |

| How does photosynthesis work? | Plants use sunlight to convert CO₂ and water into glucose and oxygen. |

| Why is the sky blue? | Due to Rayleigh scattering of sunlight in the atmosphere. |

| When was the first computer invented? | Around 1943–1945 (ENIAC) |

---

## 🔍 \*\*Comparison of Prompt Types\*\*

| Type | Strengths | Limitations | Ideal For |

| ----------------- | ------------------------------------------- | ------------------------------------ | -------------------------------------- |

| \*\*Zero-Shot\*\* | Quick, general-purpose | May lack context or accuracy | Simple tasks like translation or facts |

| \*\*Few-Shot\*\* | Mimics human examples, better understanding | Needs space, careful crafting | Pattern replication, formatting |

| \*\*Instructional\*\* | Clear and direct outputs | Less creativity, too rigid sometimes | Code, summaries, tasks |

| \*\*Interrogative\*\* | Precise factual responses | May miss nuance or depth | Q\&A, knowledge checks |

---

## ✅ \*\*Conclusion\*\*

Prompt engineering is key to getting useful responses from AI. By experimenting with \*\*zero-shot, few-shot, instructional, and interrogative prompts\*\*, users can fine-tune outputs for \*\*accuracy\*\*, \*\*creativity\*\*, or \*\*efficiency\*\* depending on their needs.

---

Would you like this formatted as a Word or PDF file for submission?