1. What is AI?
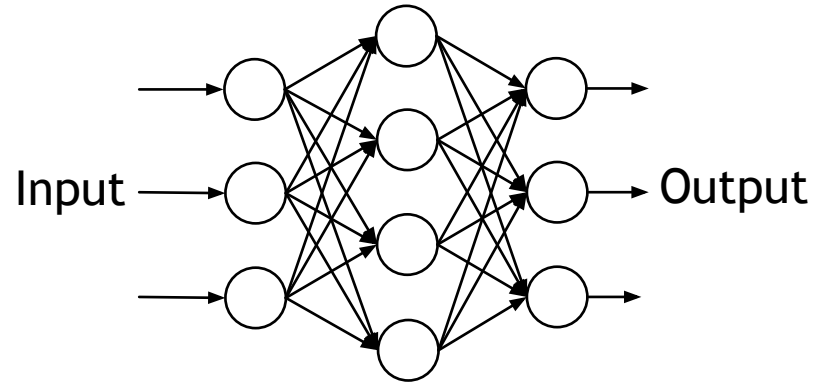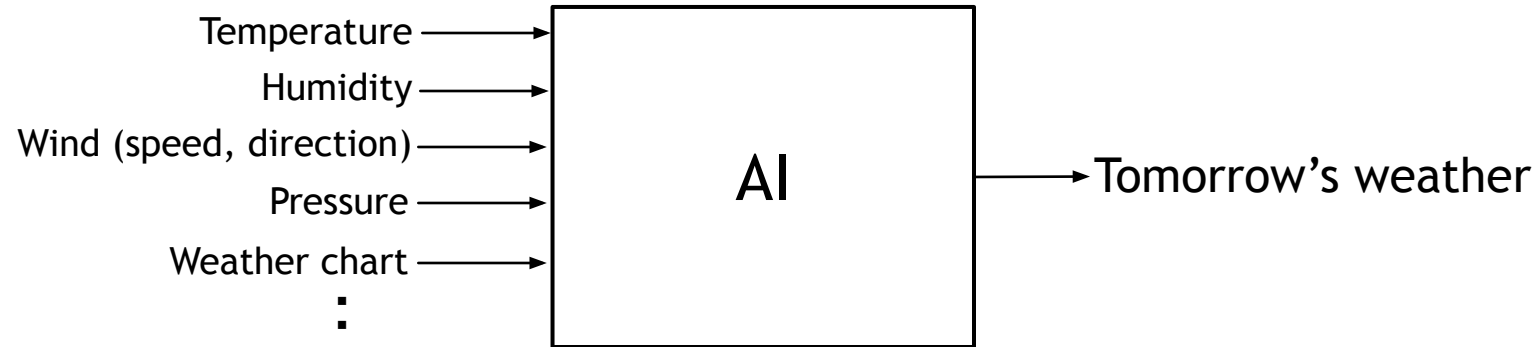
A computer algorithm that mimics a human brain.
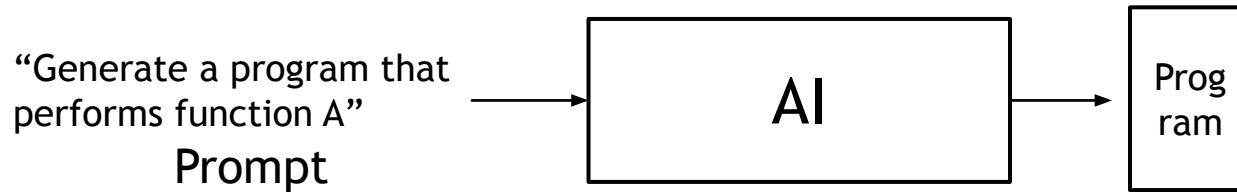

(1) AI (neural network) comprises nodes (circles) and links (arrows) connecting nodes.

(2) Each link has its own "weight", the node is active or inactive depending on the inputs.

　　・Active if (weight1)*(input1)+(weight2)*(input2)+… > threshold.

　　・Inactive if (weight1)*(input1)+(weight2)*(input2)+… < threshold.

(3) The weight of each link is optimized by training the neural network (using large volume of data).
　　→The neural network outputs (most probable) answer to the input.

2. Use of AI

(1) Prediction

Temperature ⟶
Humidity ⟶
Wind (speed, direction) ⟶
Pressure ⟶
Weather chart ⟶
:

AI ⟶ Tomorrow's weather

(2) Generative AI (e.g. LLM(Large Language Model))

"Generate a program that performs function A"
Prompt
⟶ **AI** ⟶ Program

(3) Materials informatics

Material having property B ⟶ **AI** ⟶ Chemical structure of the material

3. Implementation

(1) AI provider – user terminal

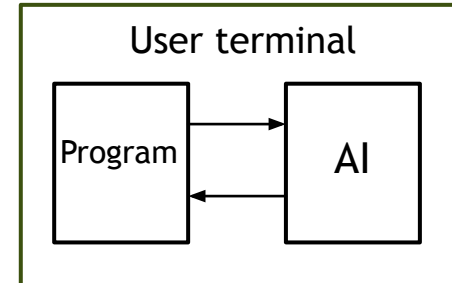## (3) Server - user terminal
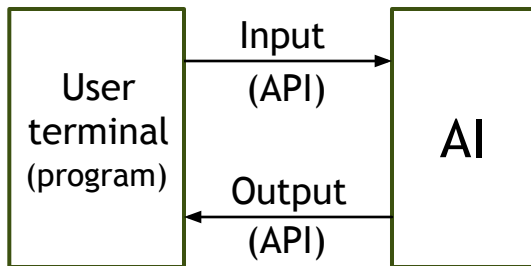
(2) AI provider – server- user terminal
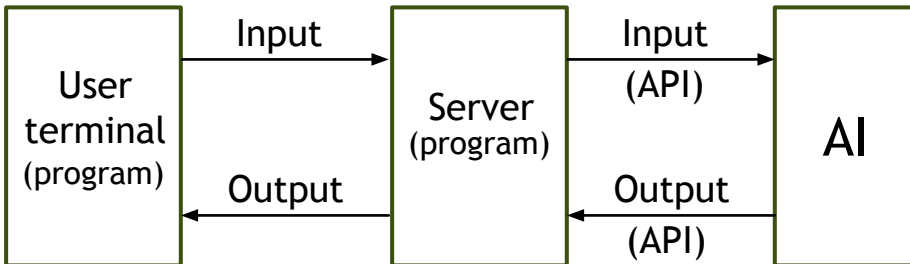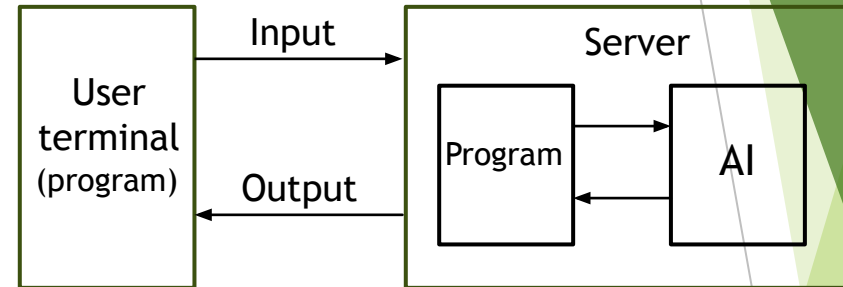
(4) User terminal

4. Claim category

(1) System

A system comprising:
  a terminal; and
  a server obtaining an output based on an input from the terminal using an AI model, and sending the output to the terminal.
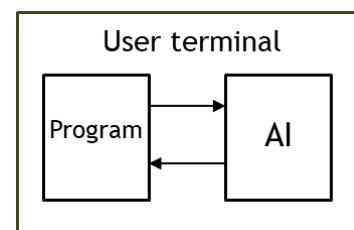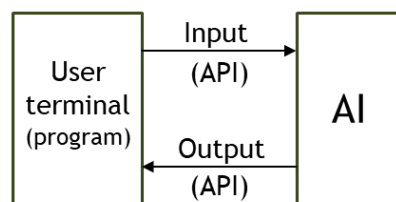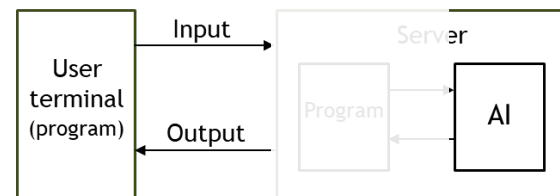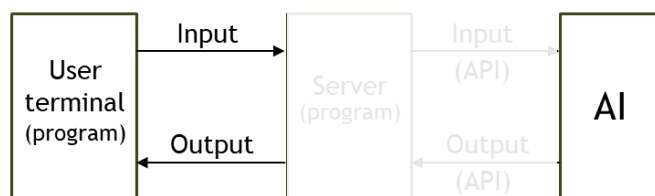

(2) Server

A server obtaining an output based on an input (from the terminal) using an AI model(, sending the output to the terminal).

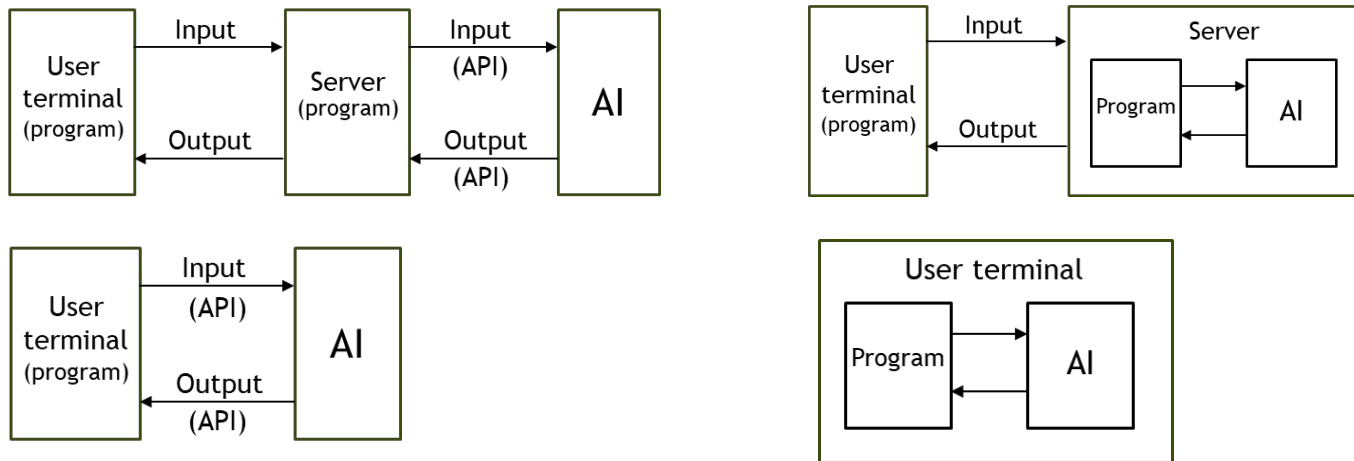# 4. Claim category

(3) Terminal

A terminal obtaining an output based on an input using an AI model.
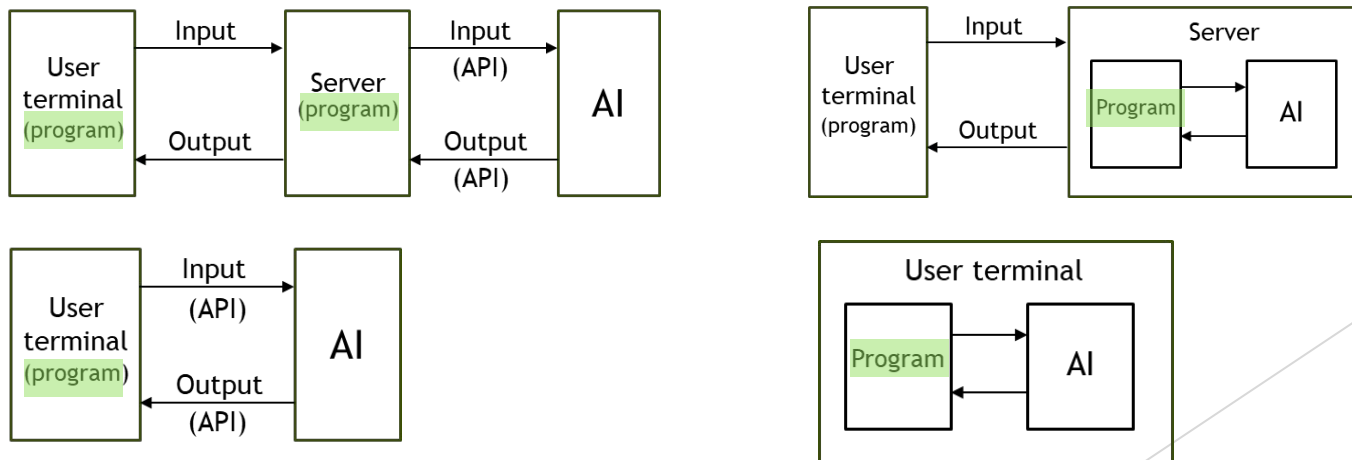
4. Claim category

(4) Method

A method comprising:
obtaining an output based on an input using an AI model.

(5) Program (Medium storing a program)

A program causing a computer to obtain an output based on an input using an AI model.
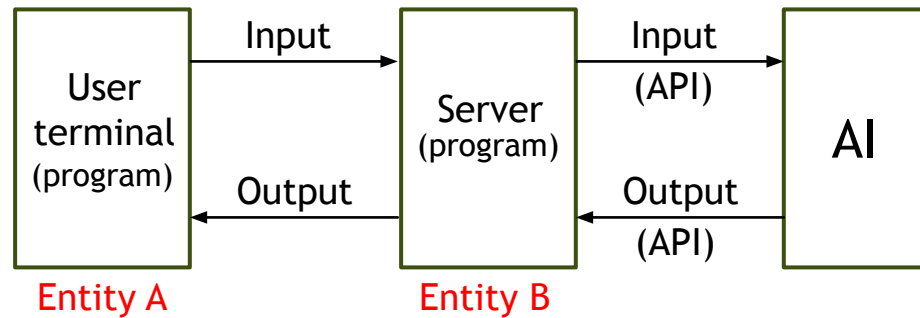
5. Issues

(1) Patentability

(a) Eligibility

(b) Inventive step

(c) Description requirement (support, enablement, clarity)

⇨ Each country has its own standard for these requirements.

(See "Examination practices on AI-related inventions" (of 5 IP offices))
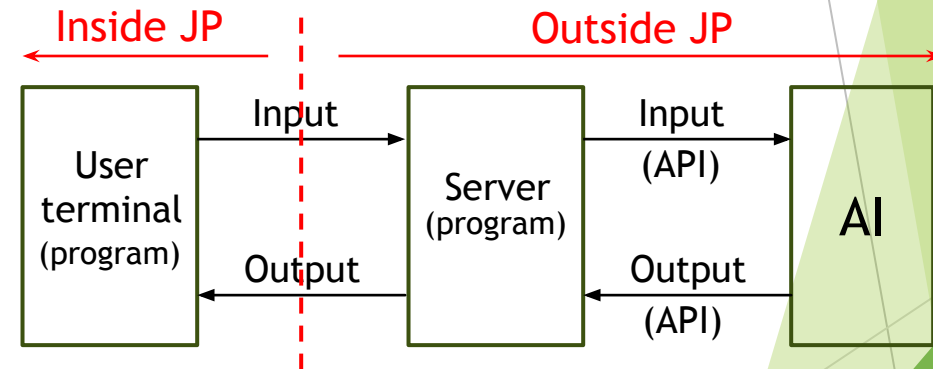https://www.jpo.go.jp/news/kokusai/ip5/document/gochou_ai/chart.pdf

(2) Infringement

Inside JP ← → Outside JP

The user terminal is used by an entity A.
The server is operated by an entity B.

Patent infringement against B based on a system claim?

The user terminal is inside JP.
The server is outside JP.

Patent infringement based on a system claim?