

## Ai Agent Learning & Test Assignment

### Daily Deliverables Task---

#### Day 1—

Q.1 1-2 page summary “Understanding AI Agents in my own words”.

#### Ans- 1. What Exactly Is an AI Agent?

In simple words, an AI agent is like a smart helper that can:

- Read instructions (prompt)
- Understand what is needed
- Plan the steps
- Use external tools or websites
- Give the final output

Example:

If I tell an AI agent, “Find me 5 entry-level data analyst jobs and email me,” it can:

1. Search the web
2. Collect job info
3. Write an email
4. Send it automatically

This ability to plan + take action is what makes it an "agent".

#### 2. Key Abilities of an AI Agent

##### ✓ 1. Reasoning

It can think step by step.

Example: “To book a cab → I need to check location → compare fares → confirm booking.”

##### ✓ 2. Tool Use

Agents can use calculators, APIs, web browsers, databases, emails, spreadsheets, etc.

Example: An agent can open Gmail → compose → send an email.

##### ✓ 3. Planning

Agents create a small plan internally, like:

“Task: Create a report → gather data → clean → analyze → write → save PDF.”

##### ✓ 4. Autonomy

They can complete tasks without humans telling every step.

### **3. How AI Agents Work (Simple Explanation)**

#### **Step 1: Understand user request**

AI converts your instruction (prompt) into a clear task.

#### **Step 2: Break into steps (Reasoning)**

The agent thinks:

“What steps should I take?”

#### **Step 3: Choose tools**

The agent selects tools like web search, Python, email API, etc.

#### **Step 4: Execute tasks**

It performs actions one by one.

#### **Step 5: Check output & correct itself**

If something goes wrong, the agent tries again.

#### **Step 6: Produce final result**

It gives the final answer — which may be a report, email, summary, file, or automation.

## **Q.2 3-5 sample prompts of different types (system prompts, task prompts, tool based prompts) .**

**System prompts --** **(1)** You are an AI research assistant. Always think step-by-step, provide clear explanations, and verify facts before answering. If the user gives incomplete details, ask clarifying questions first.

**(2)** You are a job-search automation agent. Your goal is to find accurate job listings, organize them in a table, and avoid outdated information. Always follow the user's criteria strictly.

**Task prompts—(1)** Explain how large language models work in simple words and give 2 real-life examples.

**(2)** Create a step-by-step learning plan for becoming a data analyst in 3 months. Include tools, projects, and daily practice goals.

**(3)** Summarize this text into 5 key points and rewrite it in easy English.

**Tool based prompts—(1)** Draft an email and send it to my address.

Subject: Daily Job Report

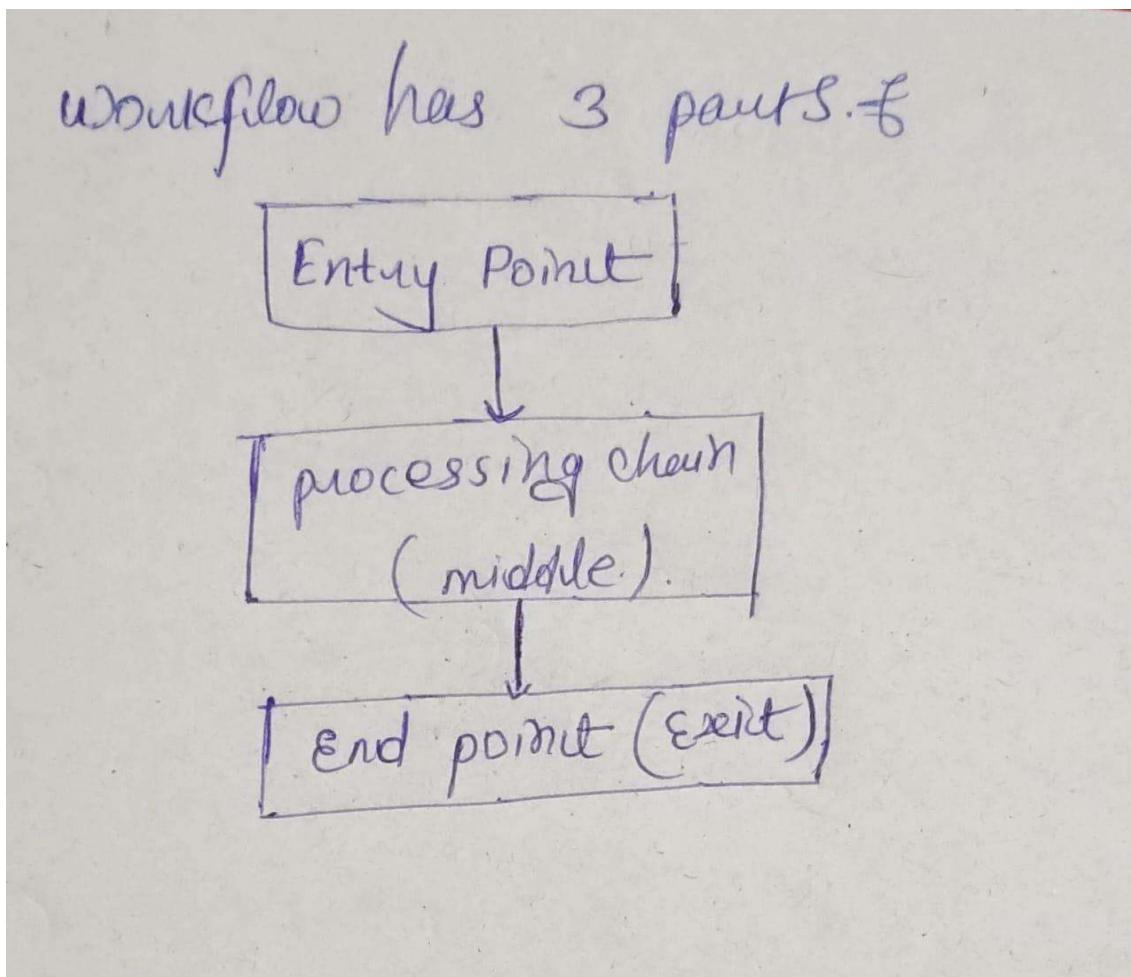
Body: Attach today's list of data analyst jobs and include a short summary.

## Day 2

### Q.1 Working simple agents.

I am work on one simple project using n8n agent framework. this is the best of create any ai agent . it is very harmful . there is use first step in work flow trigger node and second step process use ai agents and any API and use many more tools. And last step generate output.

### Q.2 A small workflow diagram (hand-drawn or digital) explaining how the agent work.



**Work flow has 3 parts:**

**1.Entry point (start):** Every work flow start with a trigger node.

**Ex.** Schedule trigger node, Form submission trigger.

**2.Processing chain (middle) :** processing start from here . What we can do: Data Transformation nodes, logic & condition nodes, API calls, validation & filtering etc.

**3.End point (Exit):** Final actions happen here like sending an email, saving data, notifying etc.

## Day 3

**Working code / workflow :**

**Work flow-**

First step trigger node add and second step processing chain and add any one API and third step is end point mean generated output. This is workflow of create ai agent.

**Short explanation of:**

**1.API Used --** AI agents use APIs to connect with apps, websites, or external services so they can *do real tasks*, not just generate text.

An API works like a messenger between the AI agent and another service.

**Why use -** Search the web

Fetch live data (weather, news, jobs, prices)

Read or write databases

Send emails / messages

**2. Prompt designed**

**Prompt Design** means writing clear and structured instructions for an AI so it understands exactly what you want.

You are an expert teacher.

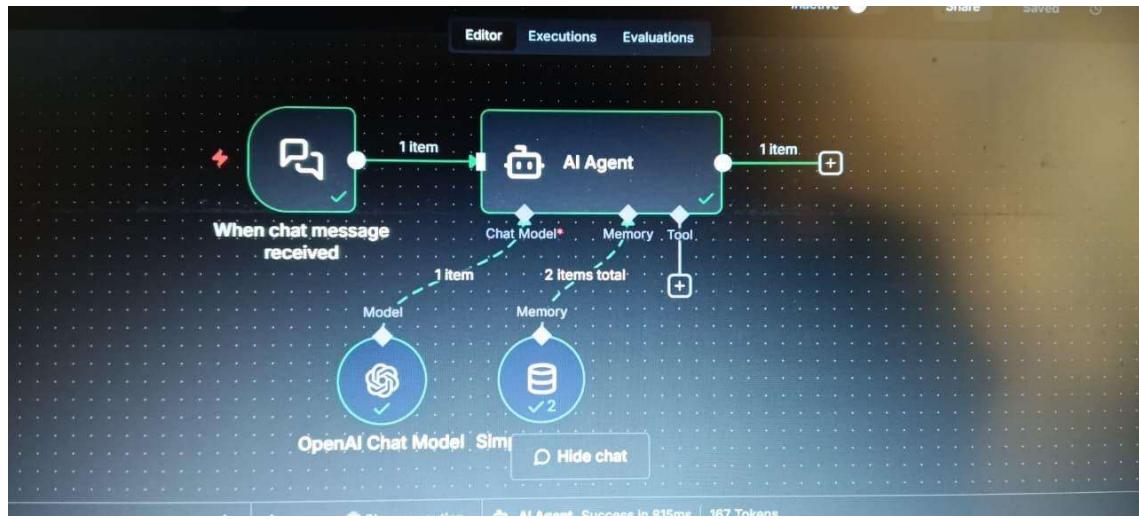
Explain AI Agents in simple words using 5 bullet points.

Make the explanation easy for beginners.

**3. Flow of the agent:**

**Agent Flow =** Understand → Plan → Use Tools → Process → Output

**My simple AI Agent—**



### First step—

**Chat box** – we are give any prompt in chat box. Than it will start and executed .

**Example- what is the capital of India.**

### Second step --

**AI Agent** -- AI agents use APIs to connect with apps, websites, or external services so they can *do real tasks*, not just generate text.

**Open AI(API)**—Here I am use open ai tool and it is search exact answer and give me .

**Prompt- what is the capital of India.**

**Answer- Delhi is the capital of India.**

### Third step—

**Simple Memory** – It is saved automatically previous data in memory. This the main work of it.

## Day 4--

### Add Memory + Error Handling-

**Add conversation memory-** Here I am use simple memory tool. It is a very harmful for memory and it is do update one by one memory . it the best part of human and ai agent what is done in previous . so it can easy used. This is the main point of memory .

**Error Handling**—It's important to know when your workflow fail. The Error workflow is executed by the workflow when it fails. Can be configured per workflow from the setting tab.

The Error Node allows you to raise an error if any items of a workflow get to it.

This will stop the execution of the workflow and trigger the error workflow.

The Error Trigger is executed when an error happens and it contains information about said error .

- . Workflow name & ID
- . Execution ID
- . Name of node with error
- . Link to execution history.

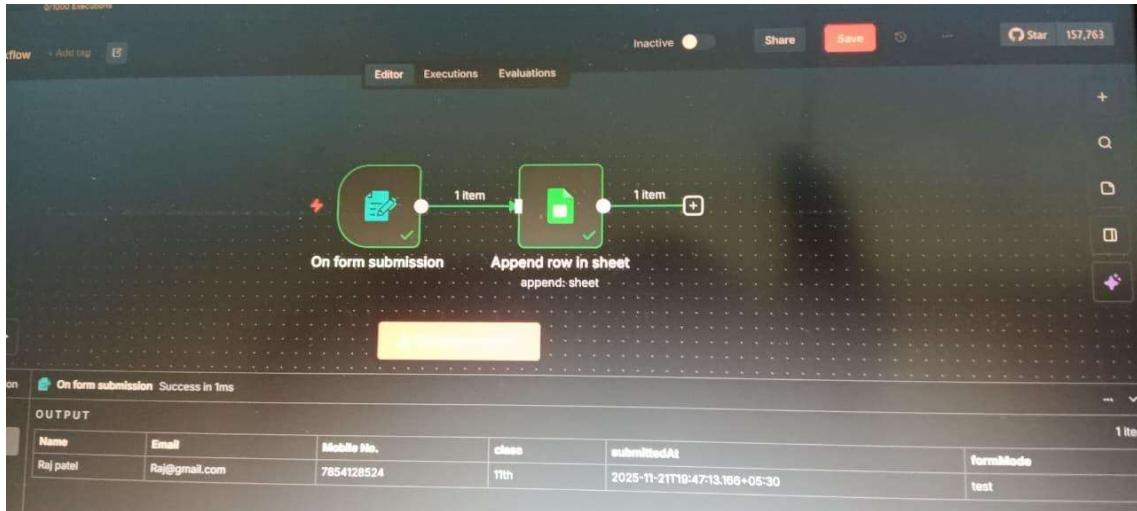
## Day 5

### Here I am using one External Tool – Google Sheet

For save information in sheet.  
how to work this explain step by step.

I am using here one information submission form . it is work like you fill your information like- name , email, mobile, class . than fill all information in form

and click to submit button . than automatic save on google sheet . it's work like that .



## Day 6

### Simple project

**Google Sheets** – Here I am using student data in google sheet. It is a good for fetching data any student . this the most important part of google sheet tool.

**Why you are choose this tool** – I am using this tool because you have any data set in google sheet and how to get data set in google data set. So I use with practical you get easily data any student . this is the use of my ai agent .

#### How you implemented it –

##### First step-

Here I am use of chat box.

##### Second step-

Here I am use of Ai agent .

##### Third Step-

Here I am use open AI (API) Model. It is a work of search valuable answer give me.

#### Forth step –

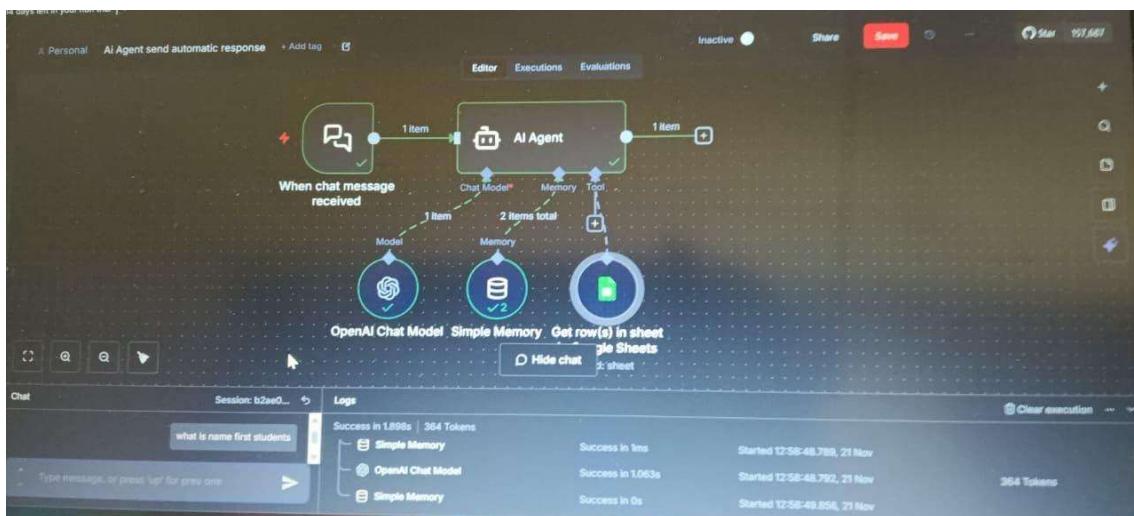
Here I am use one simple memory tool . it's like work previous data and you can easily get.

#### Fifth step—

Here I am use google sheet tool.

#### Key challenges—

When I am use google sheet so not easily work here I am faced very most important key challenge. How to get data from google sheets. than I will for setting and add google sheet access . than it is easily work. Than I will go to chat box and I give one prompt . than I am getting data easily.



## Day 7

### Presentation day

What you learned this week.

#### LLM(Large Language Model)-

A Large Language Model (LLM) is an AI system that understands and generates human-like text by learning patterns from huge amounts of data, helping answer questions and perform tasks.

LLM next token prediction of any sentence.

Ex—

- . Sentence of structure
- . Grammer
- . Meaning
- . Next Word prediction

#### Prompt Engineering Basic-

Prompt engineering is the technique of creating clear, detailed instructions to guide AI models. By giving proper context, examples, and desired output format, you can control how the AI responds. Good prompts help produce accurate, useful, and high-quality results from the model.

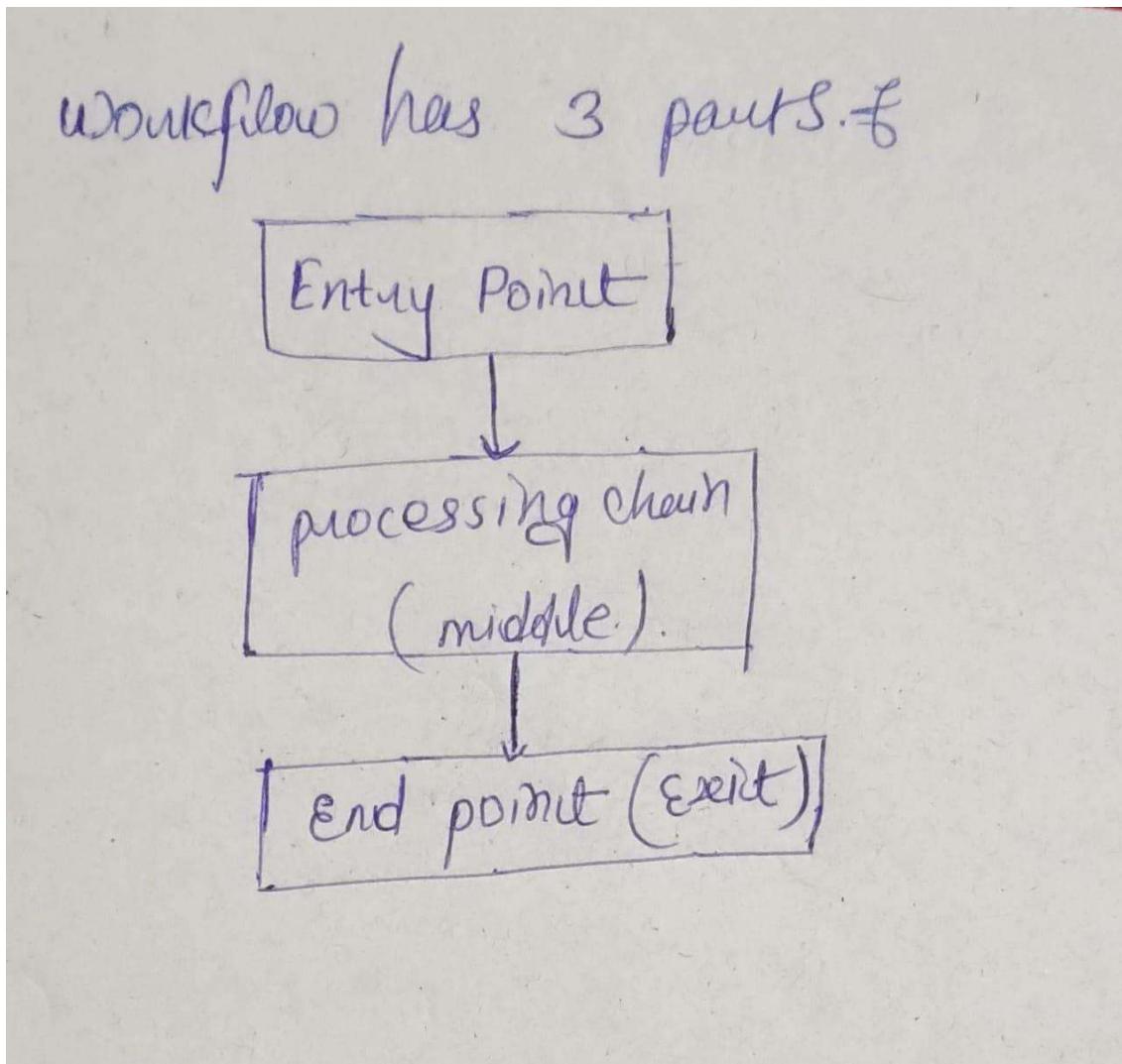
#### Ai Agents (ReAct, tool use, planning)-

AI Agents are advanced systems that use Large Language Models to think, decide, and take actions. They follow methods like **ReAct**, which combines reasoning and actions step-by-step. They also use **tools** such as search, APIs, or calculators to get real data. With **planning**, agents break a big task into smaller steps and complete them automatically, helping users solve complex problems efficiently.

## Framework n8n-

n8n is a no-code automation framework that connects apps, APIs, and tools to automate tasks. Using drag-and-drop nodes, you can build workflows for Gmail, Google Sheets, webhooks, AI actions, and data processing—all without writing any code.

## What is work flow create Ai agent –



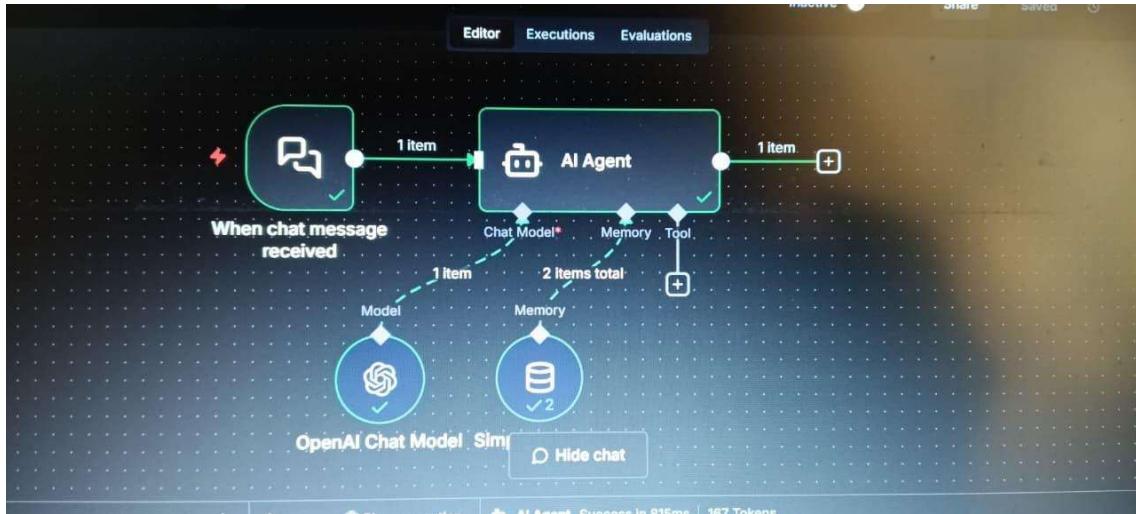
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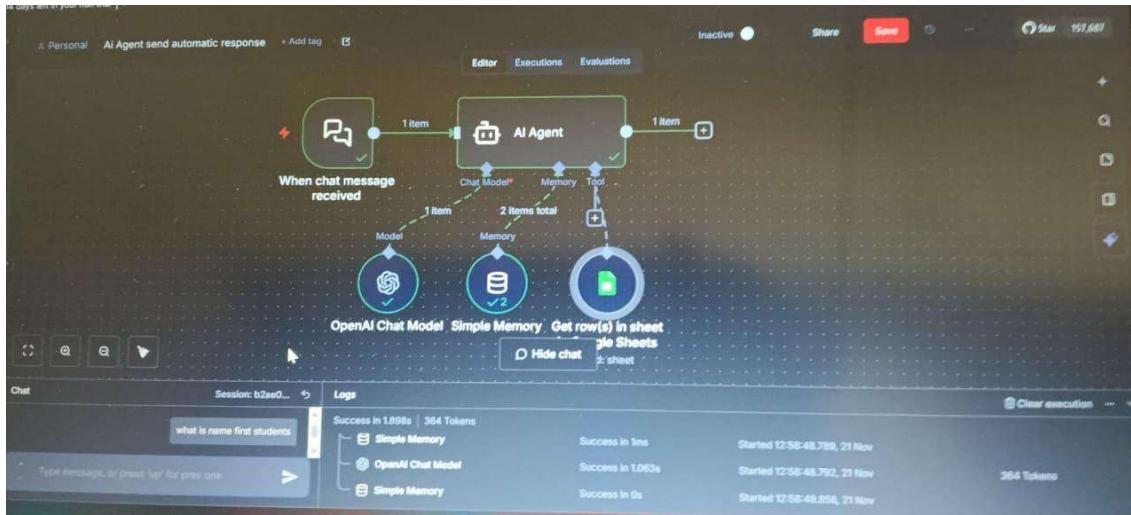
### Build simple ai agent --



### Why use memory—

Why here I am use simple memory because save automatic and we are get previous data easily . what you are search previous . other wise It's forget every thing.

### How to build a mini Agent



## **How you implemented it –**

### **First step-**

Here I am use of chat box.

### **Second step-**

Here I am use of Ai agent(ReAct , Tools, Planning) . AI Agents are advanced systems that use Large Language Models to think, decide, and take actions.

### **Third Step-**

Here I am use open AI (API) Model. It is a work of search valuable answer give me.

### **Forth step –**

Here I am use one simple memory tool . it's like work previous data and you can easily get.

### **Fifth step—**

Here I am use google sheet tool. Here student information and how to get information . I will see.

### **Key challenges—**

When I am use google sheet so not easily work here I am faced very most important key challenge. How to get data from google sheets. than I will for setting and add google sheet access . than it is easily work. Than I will go to chat box and I give one prompt . than I am getting data easily.

**Thank You !**