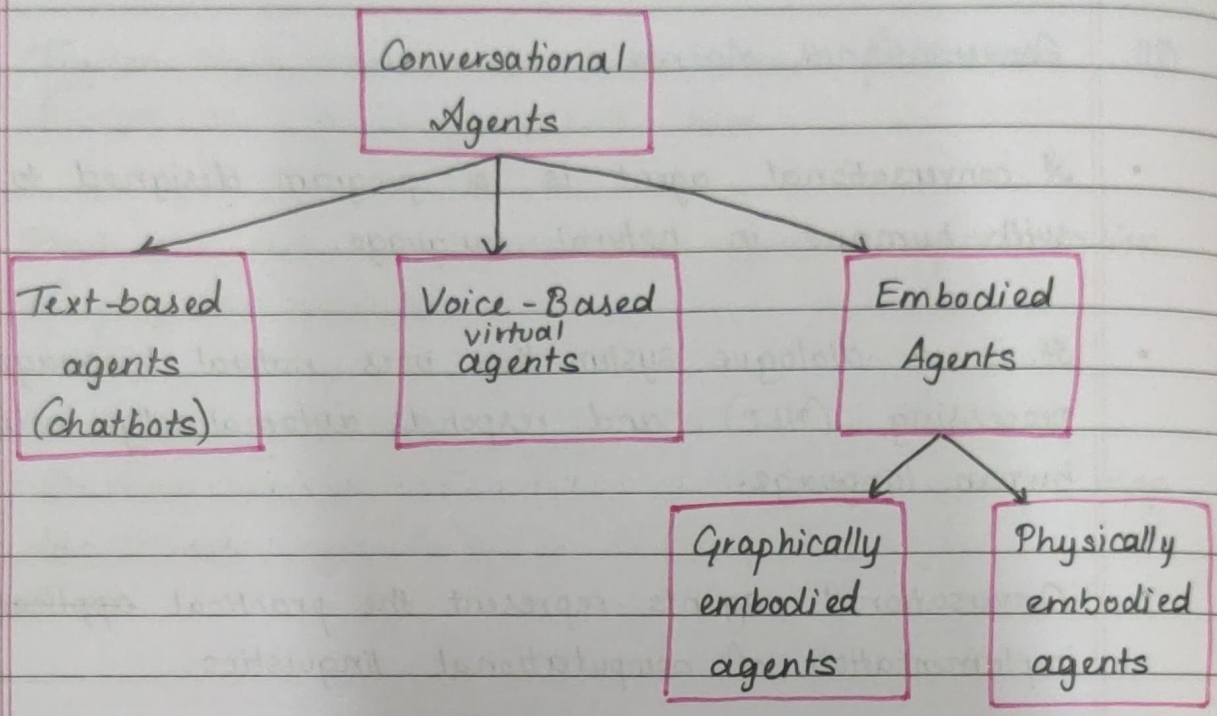
Q11. Conversational Agents

- A conversational agent is a program designed to converse with humans in natural language.
- It is a dialogue system that uses natural language processing (NLP) and responds automatically using human language.
- Conversational agents represent the practical ~~applicati~~ implementation of computational linguistics.
- They are deployed as chatbots or virtual / AI assistants.
- It simulates human-to-human conversation and understands context and meaning just as humans do.
- It uses NLP, ML, speech recognition, text to speech synthesis and dialogue management to ~~acti~~ interact with people through various mediums.
- It can talk to people on phones, computers and other devices, and allows them to perform functions (for example, ordering food) through voice, text or chat.



★ Use Cases of Conversational Agents -

Conversational agents are often deployed via mobile apps, desktop applications, web pages or other interfaces
You can use them to automate tasks like -

• Customer service -

→ Businesses can use conversational agents to answer questions quickly and efficiently without hiring additional staff or paying agency fees to an outsourced call center.

→ Chatbots can handle routine tasks like resetting passwords or booking flight tickets which is quite common in enterprise chatbots.

→ It can also answer basic product questions that do not require human judgement, making it ideal for low cost services like online banking where customers may not want to wait for a real person to get back to them.

- Information retrieval -

→ You can ~~ask~~ offer information about products or services through a chat interface instead of having the user search through articles in your website.

→ The customer could ask for the price of an item for instance and you could provide that information in real time.

→ You can provide a customer with information like how to use your product, or point them towards an item they are looking to purchase.
It can also answer more nuanced queries like how many days it would take to recieve a product etc.

- Revenue optimization -

→ Conversational agents can optimize revenue by suggesting products to customers who havent purchased them yet.

→ They can collect first party data and be connected to CRM (customer relationship management) or email marketing software to send cart abandonment ~~detail~~ emails.

→ It can also prompt users within the app/ browser window to encourage a purchase.

★ Examples of Conversational Agents →

1. Iris: Conversational agent for data science tasks -

→ This conversational agent can help users accomplish complex data science tasks like plotting a histogram from a dataset or conducting statistical analysis for those datasets.

→ Using this agent, data scientists can complete predictive ~~or~~ modeling tasks 2.6 times faster, decreasing the analysis time dramatically.

2. Woebot: Mental Health App -

→ Woebot is a mental health conversational agent that helps you monitor your mood and manage your mental health.

→ It uses NLP, Psychological expertise and excellent copywriting to form a human like conversation, making it easier for individuals to interact with it.

→ It works on the principles of Cognitive Behavioural Therapy (CBT), a therapeutic approach to challenge recurring problematic thoughts.

→ It can help anyone, irrespective of age, and a recent study confirmed its ability to reduce anxiety and depression in those who use it.

3. Roof.ai : Real estate conversational AI chatbot -

→ It is a conversational agent that helps real estate marketers automate interactions with leads and lead score assignment.

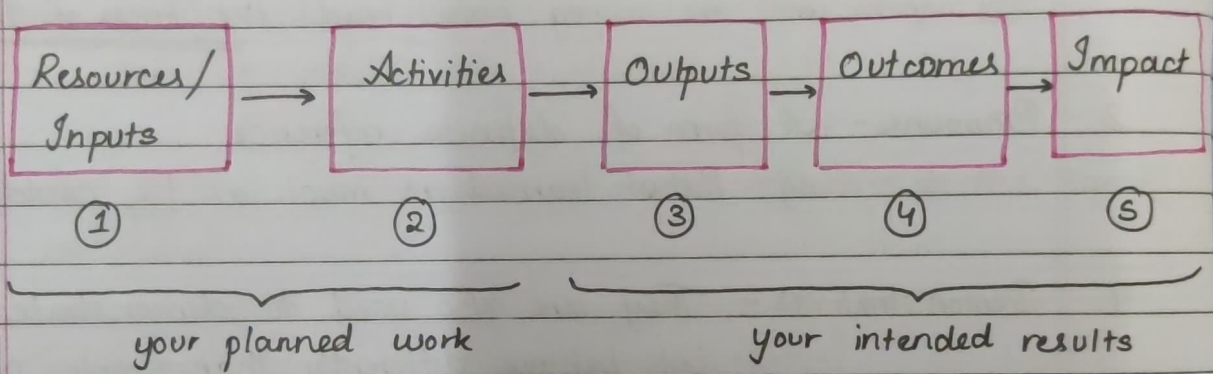
→ Using Facebook as it's prime channel, the bot interacts with ~~for~~ potential leads and prompt them with questions that can help them qualify the lead

→ Once it assigns the lead's score, it passes the conversation to the real estate agent who can take it forward.

Unit - 5

Q10. Logic Models

- A logic model is a systematic and visual way to present and share your understanding of the relationships between the resources with which you have to operate your program, the activities you plan and the changes or results that you hope to achieve.



★ YOUR PLANNED WORK →
describes what resources you think you need to implement your program and what you intend to do

1. Resources include the human, financial, organizational and community resources that a program has available to do work.

2. Program activities include what the program does with those resources.
Activities are the processes, events and actions that are an intentional part of the program implementation.

★ YOUR INTEDED RESULTS →
Includes all of the program's desired results (outputs, outcomes and impacts)

3. Outputs are the direct products of the program activities.

4. Outcomes are the specific changes in the program participant's behaviour, knowledge, skills etc.
Short term outcomes should be attainable within 1 to 3 years, while long term outcomes should be attainable in a 4 to 6 year time frame.

5. Impact is the fundamental intended or unintended changes occuring in organizations or communities as a result of program activities within 7 to 10 years.

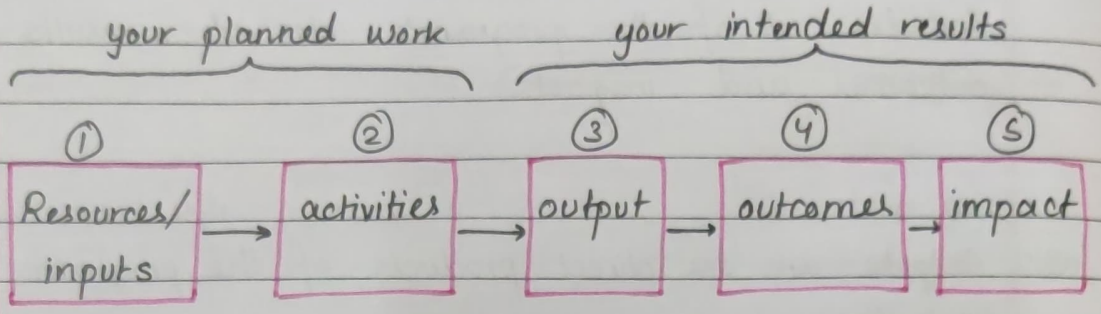
• Logic models can also be called program theory as they describe how the program works and to what end.

★ How to read a logic model →

→ When "read" from left to right, logic models describe program basics over time from planning through results.

→ Reading a logic model means following the chain of reasoning or "if...then..." statements that connect the program's parts.

→ The figure below shows how to read a logic model →



Certain resources are needed to operate your program.	If you have them, then you can use them to accomplish your planned activities.	If you accomplish your planned activities, you will hopefully deliver the output you intended to.	If you accomplish your planned activities to the extent you intended, your participants will benifit in certain ways.	If these benefits to participants are achieved, then certain changes in the organization/community are expected to occur.

- The purpose of a logic model is to provide stakeholders with a road map describing the sequence of related events connecting the need for the planned program with the program's desired results.

★ An Example →

→ We are proposing an inexpensive family trip from South Carolina to Iowa to visit relatives during December school holidays. This trip is the "program"

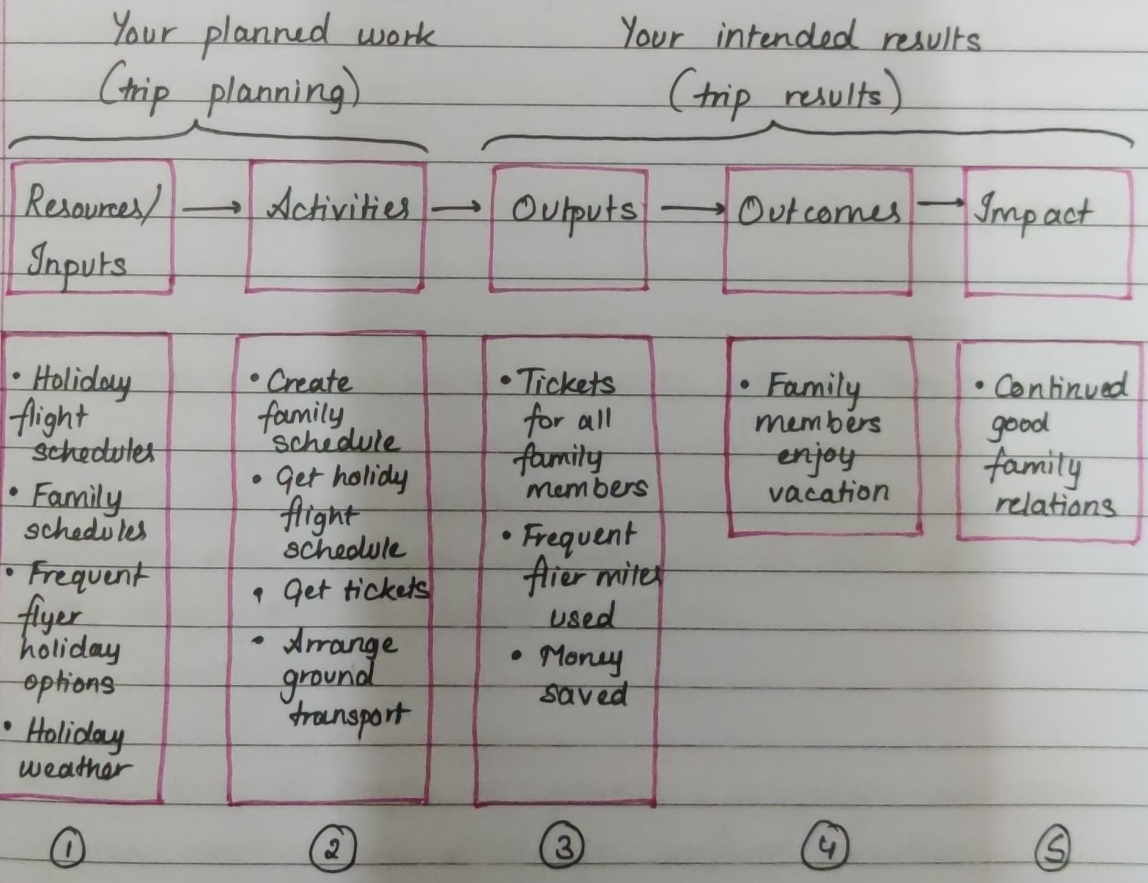
→ Basic assumptions about the program are →

- We want to visit relatives between 10/12/00 to 6/1/01 while the children are out of school.

- We will fly from South Carolina to Iowa because it takes less time than driving and because frequent flier (FF) miles are available.

- Using frequent flier miles will reduce travel costs.

- ~~The first determine the~~ This is what our trip planning "program" would look like as a logic model-



- Using a simple logic model as a trip planning tool produced tangible benefits.

- It helped us gather information to influence our decisions about resources and allowed us to meet our stated goals.

- Typical logic models use tables and flow chart formats like those presented here.
- Most use text and arrows or a graphic representation of program activities.
- A logical model does not have to be linear
  It may appear as a simple image or concept map, to describe more complex program concepts.