# PHASE 2

PROJECT 3:CREATE A CHATBOT IN PYTHON

# STEPS TO CREATE CHATBOT IN PYTHON

# Conduct User Interface:

Begin by conducting user research to understand your target audience's needs, preferences, and pain points.

• Gather insights through,

✓Surveys: Create surveys to collect quantitative data about user preference and demographics.

✓Interviews: Conduct one to one or group interviews to gather qualitative insight from users.

✓Observation: Observe user behavior and interaction in relevant code

• Key Questions to answer,

✓What are the user's expectations for a chatbot?

✓What kind of guidance and assistance do users need?

✓What are the most common questions that users ask?

# Chatbot Objectives:

Chatterbot is a library in python which generates responses to user input.

It uses a number of machine learning algorithms to produce a variety of responses.

Chatbot are designed to give people an automated way to communicate with your company.

They may answer basic question, make product recommendations and provide customer support.

# Conversational design:

Once I have a good understanding of the user's needs, I will design the chatbot conversation flow.

This will involve defining the different paths that the conversation can take, depending on the user's input.

I will use the design thinking approach to design the chatbots conversation flow.

✓Empathize: I will put myself in the shoes of the users and try to understand their needs and pain points.

✓Define: I will define the goals of the chatbot and users desired outcomes.

✓Ideate: I will generate a variety of ideas for how to design the chatbots conversation flow.

✓Prototype: I will create a prototype of the chatbots conversation flow and test it with users.

✓Test: I will test the chatbots conversation flow with users and make improvements based on their feedback.

# Functionalities:

1.Medication Reminders

2.Blood Sugar Tracking and Emergency Information

3.Dietary Assistance

4.Support and Motivation

5.Privacy and Data security

# User Interface(UI):

The point of human-computer interaction in a device.

This develop a user interface for interacting with the chatbot.

This can be a web application , a mobile app,or a command – line interface.

# Natural Language Processing (NLP):

Natural language processing (NLP) is a branch of artificial intelligence(AI) that enables computers to comprehend, generate, and manipulate human language. Natural language processing has the ability to interrogate the data with natural language text or voice.

# Feedback Mechanism:

A **feedback mechanism** is a physiological regulation system in a living body that works to return the body to its normal internal state, or commonly known as [homeostasis](https://www.biologyonline.com/dictionary/homeostasis). In nature, feedback mechanisms can be found in a variety of environments and animal types. In a living system, the feedback mechanism takes the shape of a loop, which aids in maintaining homeostasis.

**Positive feedback mechanism examples**:

✓ blood clotting

✓ childbirth

✓ menstrual cycle

✓ fruit ripening

**Negative feedback mechanism example:**

✓ regulating blood glucose level

✓ regulating temperature

# Testing and deployment:

Once the chatbot is implemented I will test the chatbot. During testing, the chatbot undergoes rigorous evaluation, including unit testing to validate individual components, functional testing to assess its performance in various user scenarios, and integration testing to confirm seamless communication with external systems.