

```
from google.colab import drive
drive.mount('/content/drive')
```

↗ Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).

```
!pip install rasa twilio
```

```
Requirement already satisfied: sanic-jwt<2.0.0,>=1.0.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (1.0.0)
Requirement already satisfied: sanic-routing<0.8.0,>=0.7.2 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.7.2)
Requirement already satisfied: scikit-learn<1.2,>=0.22 in /usr/local/lib/python3.10/dist-packages (from rasa) (1.1.3)
Requirement already satisfied: scipy<1.11.0,>=1.10.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (1.10.1)
Requirement already satisfied: sentry-sdk<1.15.0,>=0.17.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (1.14.0)
Requirement already satisfied: setuptools>=65.5.1 in /usr/local/lib/python3.10/dist-packages (from rasa) (75.1.0)
Requirement already satisfied: sklearn-crfsuite<0.4,>=0.3 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.3.6)
Requirement already satisfied: slack-sdk<4.0.0,>=3.19.2 in /usr/local/lib/python3.10/dist-packages (from rasa) (3.33.1)
Requirement already satisfied: structlog<24.0.0,>=23.1.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (23.3.0)
Requirement already satisfied: structlog-sentry<3.0.0,>=2.0.2 in /usr/local/lib/python3.10/dist-packages (from rasa) (2.1.0)
Requirement already satisfied: tarsafe<0.5.5,>=0.0.3 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.0.4)
Requirement already satisfied: tensorflow==2.12.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (2.12.0)
Requirement already satisfied: tensorflow-io-gcs-filesystem==0.32 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.32.0)
Requirement already satisfied: tensorflow-text==2.12.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (2.12.0)
Requirement already satisfied: tensorflow_hub<0.14.0,>=0.13.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.13.0)
Requirement already satisfied: terminaltables<3.2.0,>=3.1.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (3.1.10)
Requirement already satisfied: tqdm<5.0,>=4.31 in /usr/local/lib/python3.10/dist-packages (from rasa) (4.66.5)
Requirement already satisfied: typing-extensions<5.0.0,>=4.1.1 in /usr/local/lib/python3.10/dist-packages (from rasa) (4.12.2)
Requirement already satisfied: typing-utils<0.2.0,>=0.1.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.1.0)
Requirement already satisfied: ujson<6.0,>=1.35 in /usr/local/lib/python3.10/dist-packages (from rasa) (5.10.0)
Requirement already satisfied: webexteamssdk<1.7.0,>=1.1.1 in /usr/local/lib/python3.10/dist-packages (from rasa) (1.6.1)
Requirement already satisfied: websockets<11.0,>=10.0 in /usr/local/lib/python3.10/dist-packages (from rasa) (10.4)
Requirement already satisfied: wheel>=0.38.1 in /usr/local/lib/python3.10/dist-packages (from rasa) (0.44.0)
Requirement already satisfied: click>=7.0 in /usr/local/lib/python3.10/dist-packages (from rasa==2022.10.2->rasa) (8.1.7)
Requirement already satisfied: fspec>=0.6.0 in /usr/local/lib/python3.10/dist-packages (from rasa==2022.10.2->rasa) (2024.6.1)
Requirement already satisfied: partd>=0.3.10 in /usr/local/lib/python3.10/dist-packages (from rasa==2022.10.2->rasa) (1.4.2)
Requirement already satisfied: toolz>=0.8.2 in /usr/local/lib/python3.10/dist-packages (from rasa==2022.10.2->rasa) (0.12.1)
Requirement already satisfied: astunparse>=1.6.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (1.6.0)
Requirement already satisfied: flatbuffers>=2.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (24.3.0)
Requirement already satisfied: gast<0.4.0,>=0.2.1 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (0.4.0)
Requirement already satisfied: google-pasta>=0.1.1 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (0.1.1)
Requirement already satisfied: grpcio<2.0,>=1.24.3 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (1.62.0)
Requirement already satisfied: h5py>=2.9.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (3.11.0)
Requirement already satisfied: jax>=0.3.15 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (0.4.30)
Requirement already satisfied: keras<2.13,>=2.12.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (2.12.0)
Requirement already satisfied: libclang>=13.0.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (18.1.0)
Requirement already satisfied: opt-einsum>=2.3.2 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (3.4.0)
Requirement already satisfied: six>=1.12.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (1.16.0)
Requirement already satisfied: tensorboard<2.13,>=2.12 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (2.12.0)
Requirement already satisfied: tensorflow-estimator<2.13,>=2.12.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (2.12.0)
Requirement already satisfied: termcolor>=1.1.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (2.5.0)
Requirement already satisfied: wrapt<1.15,>=1.11.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.12.0->rasa) (1.15.0)
Requirement already satisfied: aiohttp-retry>=2.8.3 in /usr/local/lib/python3.10/dist-packages (from twilio) (2.8.3)
Requirement already satisfied: aiormq>=6.4.0 in /usr/local/lib/python3.10/dist-packages (from aio-pika<8.2.4,>=6.7.1->rasa) (6.4.0)
Requirement already satisfied: yarl in /usr/local/lib/python3.10/dist-packages (from aio-pika<8.2.4,>=6.7.1->rasa) (1.15.4)
Requirement already satisfied: Babel>=2.8.0 in /usr/local/lib/python3.10/dist-packages (from aiogram<2.26->rasa) (2.16.0)
Requirement already satisfied: aiosignal>=1.1.2 in /usr/local/lib/python3.10/dist-packages (from aiohttp<3.10,>=3.9.0->rasa) (1.3.1)
Requirement already satisfied: frozenlist>=1.1.1 in /usr/local/lib/python3.10/dist-packages (from aiohttp<3.10,>=3.9.0->rasa) (1.4.0)
Requirement already satisfied: multidict<7.0,>=4.5 in /usr/local/lib/python3.10/dist-packages (from aiohttp<3.10,>=3.9.0->rasa) (6.0.2)
Requirement already satisfied: async-timeout<5.0,>=4.0 in /usr/local/lib/python3.10/dist-packages (from aiohttp<3.10,>=3.9.0->rasa) (4.0.3)
Requirement already satisfied: tzlocal!=3.*,>=2.0 in /usr/local/lib/python3.10/dist-packages (from apscheduler<3.10,>=3.6->rasa) (2.0.1)
Requirement already satisfied: botocore<1.36.0,>=1.35.46 in /usr/local/lib/python3.10/dist-packages (from boto3<2.0.0,>=1.26.136->rasa) (1.35.46)
Requirement already satisfied: jmespath<2.0.0,>=0.7.1 in /usr/local/lib/python3.10/dist-packages (from boto3<2.0.0,>=1.26.136->rasa) (1.0.1)
Requirement already satisfied: s3transfer<0.11.0,>=0.10.0 in /usr/local/lib/python3.10/dist-packages (from boto3<2.0.0,>=1.26.136->rasa) (0.10.0)
Requirement already satisfied: msgpack>=0.5.2 in /usr/local/lib/python3.10/dist-packages (from CacheControl<0.13.0,>=0.12.9->rasa) (1.0.8)
Requirement already satisfied: humanfriendly>=9.1 in /usr/local/lib/python3.10/dist-packages (from coloredlogs<16,>=10->rasa) (10.0)
Requirement already satisfied: cffi>=1.12 in /usr/local/lib/python3.10/dist-packages (from cryptography>=41.0.7->rasa) (1.17.1)
Requirement already satisfied: cachetools<6.0,>=2.0.0 in /usr/local/lib/python3.10/dist-packages (from google-auth<3->rasa) (5.5.1)
```

```
import os
```

```
# Define the project structure
```

```
Teabot = "msg_chatbot"
```

```
directories = [
```

```
    Teabot,
    f"{Teabot}/data",
    f"{Teabot}/actions"
```

```
]
```

```
# Create the directories
```

```
for directory in directories:
```

```
    os.makedirs(directory, exist_ok=True)
```

```
print("Project structure created successfully!")
```

↗ Project structure created successfully!

Start coding or [generate](#) with AI.

New content for actions.py

```
new_actions_py = """
```

```
from typing import Any, Text, Dict, List
from rasa_sdk import Action, Tracker
from rasa_sdk.executor import CollectingDispatcher
from rasa_sdk.events import SlotSet
from twilio.rest import Client
```

```
# Twilio account credentials - fill in with your own details
TWILIO_ACCOUNT_SID = "AC13c9e61eb6844947d13cdb428f88af15"
TWILIO_AUTH_TOKEN = "89b8e334c80a37316817dcc64f83c35f"
TWILIO_PHONE_NUMBER = "+14134183058"
```

```
# Action to check student status
class ActionCheckStudentStatus(Action):
    def name(self) -> Text:
        return "action_check_student_status"

    def run(self, dispatcher: CollectingDispatcher,
            tracker: Tracker,
            domain: Dict[Text, Any]) -> List[Dict[Text, Any]]:

        student_name = tracker.get_slot("student_name")
        if student_name:
            message = f"The status of {student_name} is currently absent."
        else:
            message = "I didn't receive the student's name. Please provide it."

        dispatcher.utter_message(text=message)
        return []
```

```
# Action to send announcement message
class ActionSendAnnouncement(Action):
    def name(self) -> Text:
        return "action_send_announcement"

    def run(self, dispatcher: CollectingDispatcher,
            tracker: Tracker,
            domain: Dict[Text, Any]) -> List[Dict[Text, Any]]:

        dispatcher.utter_message(text="Announcement: There is a meeting scheduled for tomorrow at 10 AM.")
        return []
```

```
# Action to provide cultural event info
class ActionProvideEventInfo(Action):
    def name(self) -> Text:
        return "action_provide_event_info"

    def run(self, dispatcher: CollectingDispatcher,
            tracker: Tracker,
            domain: Dict[Text, Any]) -> List[Dict[Text, Any]]:

        dispatcher.utter_message(text="The upcoming cultural event is on Saturday. Don't miss it!")
        return []
```

```
# Action to send a message using Twilio
class ActionSendMessage(Action):
    def name(self) -> Text:
        return "action_send_message"

    def run(self, dispatcher: CollectingDispatcher,
            tracker: Tracker,
            domain: Dict[Text, Any]) -> List[Dict[Text, Any]]:

        student_name = tracker.get_slot("student_name")
        phone_number = tracker.get_slot("phone_number")

        # Predefined message format for student absence
        if student_name and phone_number:
            message_body = f"Dear Parent, this is to inform you that {student_name} was absent today."

            # Send message via Twilio
            client = Client(TWILIO_ACCOUNT_SID, TWILIO_AUTH_TOKEN)
            try:
                message = client.messages.create(
                    body=message_body,
```

```


        from_=TWILIO_PHONE_NUMBER,
        to=phone_number
    )
    dispatcher.utter_message(text=f"Message sent to {phone_number} regarding {student_name}'s absence.")
except Exception as e:
    dispatcher.utter_message(text=f"Failed to send message due to: {str(e)}")
else:
    dispatcher.utter_message(text="I need both the student's name and phone number to send the message.")

return []

"""
# Write the new content to actions.py
with open('/content/msg_chatbot/actions/actions.py', 'w') as file:
    file.write(new_actions_py)

print("actions.py updated successfully!")

```

 actions.py updated successfully!

```

# Create domain.yml
domain_yaml = """

version: "3.1"

intents:
  - greet
  - notify_absent
  - notify_announcement
  - inquire_student_status
  - inquire_cultural_event
  - send_announcement

entities:
  - student_name
  - phone_number

slots:
  student_name:
    type: text
    influence_conversation: false
    mappings:
      - type: from_entity
        entity: student_name
  phone_number:
    type: text
    influence_conversation: false
    mappings:
      - type: from_entity
        entity: phone_number

responses:
  utter_greet:
    - text: "Hello teacher! How can I assist you today?"
  utter_absent_notify:
    - text: "Noted, {student_name} is absent. A message has been sent to the institution."
  utter_announcement_notify:
    - text: "Your announcement has been sent."
  utter_cultural_event:
    - text: "Here is the information for the upcoming cultural event."

actions:
  - action_send_sms
  - action_check_student_status
  - action_send_announcement
  - action_provide_event_info
  - action_notify_absence # Add this line

session_config:
  session_expiration_time: 60
  carry_over_slots_to_new_session: true

"""

# Write the domain.yml file
with open(f"/content/msg_chatbot/domain.yml", 'w') as f:
    f.write(domain_yaml)

```

```

# Create nlu.yml
nlu_yaml = """
version: "3.1"

nlu:
- intent: greet
  examples: |
    - hello
    - hi
    - hey there

- intent: notify_absent
  examples: |
    - Notify about [John Doe](student_name)'s absence
    - [Alice Smith](student_name) is absent
    - I want to report [Michael Johnson](student_name) absent

- intent: notify_announcement
  examples: |
    - I want to send an announcement
    - Please notify the class about the meeting
    - Announce that the class is canceled

- intent: inquire_student_status
  examples: |
    - What is [John Doe](student_name)'s status?
    - Can you check the status of [Alice Smith](student_name)?

- intent: inquire_cultural_event
  examples: |
    - Tell me about the upcoming cultural event
    - What cultural events are happening soon?

- intent: send_announcement
  examples: |
    - Please send an announcement about the event
    - Notify everyone about the lecture tomorrow

"""

# Write the nlu.yml file
with open("/content/msg_chatbot/data/nlu.yml", 'w') as f:
    f.write(nlu_yaml)

# Create stories.yml
stories_yaml = """
version: "3.1"

stories:
- story: greet and ask about student status
  steps:
    - intent: greet
    - action: utter_greet
    - intent: inquire_student_status
    - action: action_check_student_status

- story: send announcement
  steps:
    - intent: greet
    - action: utter_greet
    - intent: send_announcement
    - action: action_send_announcement

- story: notify student absence
  steps:
    - intent: notify_absent
    - action: utter_absent_notify

- story: inquire about cultural event
  steps:
    - intent: inquire_cultural_event
    - action: action_provide_event_info
    - intent: greet
    - action: utter_greet

"""

# Write the stories.yml file
with open("/content/msg_chatbot/data/stories.yml", 'w') as f:
    f.write(stories_yaml)

```

```
from google.colab import files
```

```
files.download('/content/msg_chatbot/domain.yml')
files.download('/content/msg_chatbot/data/nlu.yml')
files.download('/content/msg_chatbot/data/stories.yml')
files.download('/content/msg_chatbot/actions/actions.py')
!zip -r msg_chatbot.zip /content/msg_chatbot
files.download('msg_chatbot.zip')
```

```

adding: content/msg_chatbot/ (stored 0%)
adding: content/msg_chatbot/data/ (stored 0%)
adding: content/msg_chatbot/data/stories.yml (deflated 58%)
adding: content/msg_chatbot/data/nlu.yml (deflated 56%)
adding: content/msg_chatbot/actions/ (stored 0%)
adding: content/msg_chatbot/actions/actions.py (deflated 68%)

```

```
!pip uninstall rasa -y
!pip install rasa[full]
```

```

Found existing installation: rasa 3.6.20
Uninstalling rasa-3.6.20:
  Successfully uninstalled rasa-3.6.20
Collecting rasa[full]
  Using cached rasa-3.6.20-py3-none-any.whl.metadata (28 kB)
Requirement already satisfied: CacheControl<0.13.0,>=0.12.9 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (0.12.14)
Requirement already satisfied: PyJWT<3.0.0,>=2.0.0 in /usr/local/lib/python3.10/dist-packages (from PyJWT[crypto]<3.0.0,>=2.0.0->
Requirement already satisfied: SQLAlchemy<1.5.0,>=1.4.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.4.54)
Requirement already satisfied: absl-py<1.5,>=0.9 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.4.0)
Requirement already satisfied: aio-pika<8.2.4,>=6.7.1 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (8.2.3)
Requirement already satisfied: aiogram<2.26 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.15)
Requirement already satisfied: aiohttp<3.10,>=3.9.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (3.9.5)
Requirement already satisfied: apscheduler<3.10,>=3.6 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (3.9.1.post1)
Requirement already satisfied: attrs<22.2,>=19.3 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (22.1.0)
Requirement already satisfied: boto3<2.0.0,>=1.26.136 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.35.45)
Requirement already satisfied: certifi<2023.7.22 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2024.8.30)
Requirement already satisfied: cloudpickle<2.3,>=1.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.2.1)
Requirement already satisfied: colorclass<2.3,>=2.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.2.2)
Requirement already satisfied: coloredlogs<16,>=10 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (15.0.1)
Requirement already satisfied: colorhash<1.3.0,>=1.0.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.2.1)
Requirement already satisfied: confluent-kafka<3.0.0,>=1.9.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.6.0)
Requirement already satisfied: cryptography<=41.0.7 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (43.0.1)
Requirement already satisfied: dask<=2022.10.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2022.10.2)
Requirement already satisfied: dnspython<=2.3.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.3.0)
Requirement already satisfied: fcmessenger<6.1.0,>=6.0.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (6.0.0)
Requirement already satisfied: google-auth<3 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.27.0)
Requirement already satisfied: joblib<1.3.0,>=0.15.1 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.2.0)
Requirement already satisfied: jsonpickle<3.1,>=1.3 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (3.0.4)
Requirement already satisfied: jsonschema<4.18,>=3.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (4.17.3)
Requirement already satisfied: matplotlib<3.6,>=3.1 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (3.5.3)
Requirement already satisfied: mattermostwrapper<2.3,>=2.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.2)
Requirement already satisfied: networkx<2.7,>=2.4 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.6.3)
Requirement already satisfied: numpy<1.25.0,>=1.19.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.23.5)
Requirement already satisfied: packaging<21.0,>=20.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (20.9)
Requirement already satisfied: pluggy<2.0.0,>=1.0.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.5.0)
Requirement already satisfied: portalocker<3.0.0,>=2.7.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.10.1)
Requirement already satisfied: prompt-toolkit<3.0.29,>=3.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (3.0.28)
Requirement already satisfied: protobuf<4.23.4,>=4.23.3 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (4.23.3)
Requirement already satisfied: psycpg2-binary<2.10.0,>=2.8.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.9.1)
Requirement already satisfied: pydantic<1.10.10 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.10.9)
Requirement already satisfied: pydot<1.5,>=1.4 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.4.2)
Requirement already satisfied: pykwalify<1.9,>=1.7 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.8.0)
Requirement already satisfied: pymongo<4.4,>=3.8 in /usr/local/lib/python3.10/dist-packages (from pymongo[srv,tls]<4.4,>=3.8->ras
Requirement already satisfied: python-dateutil<2.9,>=2.8 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.8.2)
Requirement already satisfied: python-engineio<=5.0.0,<6,>=4 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (4.10.1)
Requirement already satisfied: python-socketio<6,>=4.4 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (5.11.4)
Requirement already satisfied: pytz<2023.0,>=2019.1 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2022.7.1)
Requirement already satisfied: pyyaml<=6.0 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (6.0.2)
Requirement already satisfied: questionnaire<1.11.0,>=1.5.1 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.10.0)
Requirement already satisfied: randomname<0.2.0,>=0.1.5 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (0.1.5)
Requirement already satisfied: rasa-sdk<3.7.0,>=3.6.2 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (3.6.2)
Requirement already satisfied: redis<5.0,>=4.5.3 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (4.6.0)
Requirement already satisfied: regex<2022.11,>=2020.6 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2022.10.31)
Requirement already satisfied: requests<3.0,>=2.23 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (2.32.3)
Requirement already satisfied: rocketchat_API<1.31.0,>=0.6.31 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (1.30.
Requirement already satisfied: ruamel.yaml<0.17.22,>=0.16.5 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (0.17.21)
Requirement already satisfied: sanic<21.13,>=21.12 in /usr/local/lib/python3.10/dist-packages (from rasa[full]) (21.12.2)

```

```

import warnings
warnings.filterwarnings("ignore")
import os
os.environ['SQLALCHEMY_WARN_20'] = '1'
os.environ['SQLALCHEMY_SILENCE_UBER_WARNING'] = '1'

```

```
# Change to the rasa_chatbot directory
%cd /content/msg_chatbot
```

```
↗ /content/msg_chatbot
```


```
# Train the model
!rasa train
```

```
↗ /usr/local/lib/python3.10/dist-packages/rasa/core/tracker_store.py:1044: MovedIn20Warning: The ``declarative_base()`` function is
Base: DeclarativeMeta = declarative_base()
/usr/local/lib/python3.10/dist-packages/rasa/shared/utils/validation.py:134: DeprecationWarning: pkg_resources is deprecated as a
import pkg_resources
/usr/local/lib/python3.10/dist-packages/pkg_resources/__init__.py:3154: DeprecationWarning: Deprecated call to `pkg_resources.de
Implementing implicit namespace packages (as specified in PEP 420) is preferred to `pkg_resources.declare_namespace`. See https://rasa.com/docs/rasa/rules
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Starting to train component 'RegexFeaturizer'.
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Finished training component 'RegexFeaturizer'.
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Starting to train component 'LexicalSyntacticFeaturizer'.
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Finished training component 'LexicalSyntacticFeaturizer'.
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Starting to train component 'CountVectorsFeaturizer'.
2024-10-23 06:28:49 INFO rasa.nlu.featurizers.sparse_featurizer.count_vectors_featurizer - 48 vocabulary items were created
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Finished training component 'CountVectorsFeaturizer'.
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Starting to train component 'CountVectorsFeaturizer'.
2024-10-23 06:28:49 INFO rasa.nlu.featurizers.sparse_featurizer.count_vectors_featurizer - 517 vocabulary items were created
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Finished training component 'CountVectorsFeaturizer'.
2024-10-23 06:28:49 INFO rasa.engine.training.hooks - Starting to train component 'DIETClassifier'.
Epochs: 100% 100/100 [00:57<00:00, 1.75it/s, t_loss=1.31, i_acc=1, e_f1=1]
2024-10-23 06:29:47 INFO rasa.engine.training.hooks - Finished training component 'DIETClassifier'.
2024-10-23 06:29:47 INFO rasa.engine.training.hooks - Starting to train component 'EntitySynonymMapper'.
2024-10-23 06:29:47 INFO rasa.engine.training.hooks - Finished training component 'EntitySynonymMapper'.
2024-10-23 06:29:47 INFO rasa.engine.training.hooks - Starting to train component 'ResponseSelector'.
/usr/local/lib/python3.10/dist-packages/rasa/utils/train_utils.py:530: UserWarning: constrain_similarities is set to `False`. It
rasa.shared.utils.io.raise_warning(
2024-10-23 06:29:47 INFO rasa.engine.training.hooks - Finished training component 'ResponseSelector'.
Processed story blocks: 100% 4/4 [00:00<00:00, 2645.00it/s, # trackers=1]
```

```
!tail -n 10 rasa_log.txt
```

```
↗ /usr/local/lib/python3.10/dist-packages/tensorflow/lite/python/util.py:52: DeprecationWarning: jax.xla_computation is deprecated. P
from jax import xla_computation as _xla_computation
2024-10-22 12:24:32 INFO numexpr.utils - NumExpr defaulting to 2 threads.
2024-10-22 12:24:33 INFO root - Starting Rasa server on http://0.0.0.0:5005
2024-10-22 12:24:34 INFO rasa.core.processor - Loading model models/20241022-122141-adjacent-pepper.tar.gz...
/usr/local/lib/python3.10/dist-packages/rasa/utils/train_utils.py:530: UserWarning: constrain_similarities is set to `False`. It is
rasa.shared.utils.io.raise_warning(
/usr/local/lib/python3.10/dist-packages/rasa/shared/utils/io.py:99: UserWarning: 'evaluate_every_number_of_epochs=20' is greater th
2024-10-22 12:25:49 INFO root - Rasa server is up and running.
No chat connector configured, falling back to the REST input channel. To connect your bot to another channel, read the docs here: https://rasa.com/docs/rasa
```

```
!pip install nest_asyncio
import nest_asyncio
nest_asyncio.apply()
```

 Requirement already satisfied: nest_asyncio in /usr/local/lib/python3.10/dist-packages (1.6.0)

```
import nest_asyncio
import asyncio
from rasa.core.agent import Agent

# Allow nesting of asyncio event loops
nest_asyncio.apply()

async def talk_to_bot(agent, message):
    response = await agent.handle_text(message)
    return response

async def main():
    # Load the trained Rasa model
    agent = Agent.load("/content/msg_chatbot/models/20241022-155106-slim-buffer.tar.gz") # Replace with your model path

    conversation = []

    # Step 1: Greet the teacher
    response = await talk_to_bot(agent, "Hello")
    conversation.append(("Teacher", "Hello"))
    if response and isinstance(response, list) and len(response) > 0:
        conversation.append(("Bot", response[0].get("text", "No response from bot.")))
    else:
        conversation.append(("Bot", "No response from bot."))

    # Step 2: Notify about absence
    response = await talk_to_bot(agent, "Notify about a student's absence")
    conversation.append(("Teacher", "Notify about a student's absence"))
    if response and isinstance(response, list) and len(response) > 0:
        conversation.append(("Bot", response[0].get("text", "No response from bot.")))
    else:
        conversation.append(("Bot", "No response from bot."))

    # Step 3: Provide student's name
    response = await talk_to_bot(agent, "yashwanth")
    conversation.append(("Teacher", "yashwanth"))
    if response and isinstance(response, list) and len(response) > 0:
        conversation.append(("Bot", response[0].get("text", "No response from bot.")))
    else:
        conversation.append(("Bot", "No response from bot."))

    # Step 4: Provide phone number
    response = await talk_to_bot(agent, "9876543210")
    conversation.append(("Teacher", "9876543210"))
    if response and isinstance(response, list) and len(response) > 0:
        conversation.append(("Bot", response[0].get("text", "No response from bot.")))
    else:
        conversation.append(("Bot", "No response from bot."))

    # Step 5: Confirm the notification message
    response = await talk_to_bot(agent, "Just let them know he is absent today.")
    conversation.append(("Teacher", "Just let them know he is absent today."))
    if response and isinstance(response, list) and len(response) > 0:
        conversation.append(("Bot", response[0].get("text", "No response from bot.")))
    else:
        conversation.append(("Bot", "No response from bot."))

    return conversation

# Run the main function and get the conversation output
loop = asyncio.get_event_loop()
conversation_output = loop.run_until_complete(main())

# Print the conversation
for speaker, text in conversation_output:
    print(f"{speaker}: {text}")
```

```

2024-10-22 15:52:32 [debug] ] processor.actions.policy_prediction prediction_events=[]
2024-10-22 15:52:32 [debug] ] processor.actions.log action_name=action_session_start rasa_events=[<rasa.shared.core.ev
2024-10-22 15:52:32 [debug] ] processor.slots.log slot_values= student_name: None
phone_number: None
session_started_metadata: None
2024-10-22 15:52:32 [debug] ] processor.message.parse parse_data_entities=[] parse_data_intent={'name': 'greet', 'confid
2024-10-22 15:52:32 [debug] ] processor.extract.slots action_extract_slot=action_extract_slots len_extraction_events=0 r
2024-10-22 15:52:32 [debug] ] memoization.predict.actions tracker_states=[{}], {'user': {'intent': 'greet'}, 'prev_action': {
2024-10-22 15:52:32 [debug] ] rule_policy.actions.find current_states=
[state 1] user text: Hello | previous action name: action_listen
2024-10-22 15:52:32 [debug] ] rule_policy.actions.find current_states=
[state 1] user intent: greet | previous action name: action_listen
2024-10-22 15:52:32 [debug] ] processor.actions.policy_prediction prediction_events=[<rasa.shared.core.events.DefinePrevUserUtt
2024-10-22 15:52:32 [debug] ] processor.actions.log action_name=utter_greet rasa_events=[BotUttered('Hello teacher! Ho
2024-10-22 15:52:32 [debug] ] memoization.predict.actions tracker_states=[{}], {'user': {'intent': 'greet'}, 'prev_action': {
2024-10-22 15:52:32 [debug] ] rule_policy.actions.find current_states=
[state 1] user intent: greet | previous action name: action_listen
[state 2] user intent: greet | previous action name: utter_greet
2024-10-22 15:52:32 [debug] ] processor.actions.policy_prediction prediction_events=[]
2024-10-22 15:52:32 [debug] ] processor.actions.log action_name=action_listen rasa_events=[]
2024-10-22 15:52:32 [debug] ] processor.message.parse parse_data_entities=[] parse_data_intent={'name': 'notify_absent',
2024-10-22 15:52:32 [debug] ] processor.extract.slots action_extract_slot=action_extract_slots len_extraction_events=0 r
2024-10-22 15:52:32 [debug] ] memoization.predict.actions tracker_states=[{}], {'user': {'intent': 'greet'}, 'prev_action': {
2024-10-22 15:52:32 [debug] ] rule_policy.actions.find current_states=
[state 1] user intent: greet | previous action name: action_listen
[state 2] user intent: greet | previous action name: utter_greet
[state 3] user intent: notify_absent | previous action name: action_listen
ERROR:rasa.core.processor:Encountered an exception while running action 'action_notify_absence'.Bot will continue, but the action
Traceback (most recent call last):
  File "/usr/local/lib/python3.10/dist-packages/rasa/core/processor.py", line 982, in _run_action
    events = await action.run()
  File "/usr/local/lib/python3.10/dist-packages/rasa/core/actions/action.py", line 758, in run
    raise RasaException(
rasa.shared.exceptions.RasaException: Failed to execute custom action 'action_notify_absence' because no endpoint is configured t
2024-10-22 15:52:32 [debug] ] processor.actions.policy_prediction prediction_events=[<rasa.shared.core.events.DefinePrevUserUtt
2024-10-22 15:52:32 [debug] ] processor.actions.log action_name=action_notify_absence rasa_events=[]
2024-10-22 15:52:32 [debug] ] processor.slots.log slot_values= student_name: None
phone_number: None
session_started_metadata: None
2024-10-22 15:52:32 [debug] ] memoization.predict.actions tracker_states=[{}], {'user': {'intent': 'greet'}, 'prev_action': {
2024-10-22 15:52:32 [debug] ] rule_policy.actions.find current_states=
[state 1] user intent: greet | previous action name: action_listen
[state 2] user intent: greet | previous action name: utter_greet
[state 3] user intent: notify_absent | previous action name: action_listen
[state 4] user intent: notify_absent | previous action name: action_notify_absence
2024-10-22 15:52:32 [debug] ] processor.actions.policy_prediction prediction_events=[]
2024-10-22 15:52:32 [debug] ] processor.actions.log action_name=utter_absent_notify rasa_events=[BotUttered('Noted, No
2024-10-22 15:52:32 [debug] ] memoization.predict.actions tracker_states=[{}], {'user': {'intent': 'greet'}, 'prev_action': {
2024-10-22 15:52:32 [debug] ] rule_policy.actions.find current_states=
[state 1] user intent: greet | previous action name: action_listen
[state 2] user intent: greet | previous action name: utter_greet
[state 3] user intent: notify_absent | previous action name: action_listen
[state 4] user intent: notify_absent | previous action name: action_notify_absence

```

!rasa shell




```

    conn = await self._connector.connect()
File "/usr/local/lib/python3.10/dist-packages/aiohttp/connector.py", line 544, in connect
    proto = await self._create_connection(req, traces, timeout)
File "/usr/local/lib/python3.10/dist-packages/aiohttp/connector.py", line 944, in _create_connection
    _, proto = await self._create_direct_connection(req, traces, timeout)
File "/usr/local/lib/python3.10/dist-packages/aiohttp/connector.py", line 1257, in _create_direct_connection
    raise last_exc
File "/usr/local/lib/python3.10/dist-packages/aiohttp/connector.py", line 1226, in _create_direct_connection
    transp, proto = await self._wrap_create_connection(
File "/usr/local/lib/python3.10/dist-packages/aiohttp/connector.py", line 1033, in _wrap_create_connection
    raise client_error(req.connection_key, exc) from exc
aiohttp.client_exceptions.ClientConnectorError: Cannot connect to host localhost:5055 ssl:default [Connection refused]

```

During handling of the above exception, another exception occurred:

Traceback (most recent call last):

```

File "/usr/local/lib/python3.10/dist-packages/rasa/core/processor.py", line 982, in _run_action
    events = await action.run()
File "/usr/local/lib/python3.10/dist-packages/rasa/core/actions/action.py", line 821, in run
    raise RasaException(
rasa.shared.exceptions.RasaException: Failed to execute custom action 'action_notify_absence'. Couldn't connect to the server at
Noted, None is absent. A message has been sent from the institution.
WARNING: your terminal doesn't support cursor position requests (CPR).

```

WARNING: your terminal doesn't support cursor position requests (CPR).

Cancelled by user

2024-10-22 15:09:25 INFO root - Killing Sanic server now.



Teacher: Hello

Bot: Hello teacher! How can I assist you today?

Teacher: Notify about a student's absence

Bot: Please provide the student's name.

Teacher: yashwanth

Bot: Thank you! What is the student's phone number?

Teacher: 1234567890

Bot: Notifying that yashwanth is absent. A message has been sent to the institution.

Bot: Message sent successfully to 1234567890.