from ibm\_watsonx\_ai.foundation\_models import Model

from ibm\_watsonx\_ai import Credentials, IAMTokenManager

# Set your IBM Cloud credentials

API\_KEY = "your\_ibm\_cloud\_api\_key"

PROJECT\_ID = "your\_watsonx\_project\_id"

REGION = "us-south" # or "eu-de", depending on your region

# Authenticate

credentials = Credentials(api\_key=API\_KEY, url=f"https://{REGION}.ml.cloud.ibm.com")

token\_manager = IAMTokenManager(credentials=credentials)

access\_token = token\_manager.get\_token()

# Granite LLM model ID (e.g., "granite-13b-chat-v2" or latest)

model\_id = "granite-13b-chat-v2"

# Initialize model

model = Model(

model\_id=model\_id,

credentials=credentials,

project\_id=PROJECT\_ID

)

# Smart city prompt example

def smart\_city\_query(prompt):

response = model.generate(prompt=prompt, temperature=0.5, max\_new\_tokens=200)

return response['generated\_text']

# Sample user query

user\_prompt = (

"You are a smart city assistant. Suggest 3 ways to reduce energy consumption "

"in residential areas using IoT and AI."

)

response = smart\_city\_query(user\_prompt)

print("\nSmart City Assistant Response:\n", response)