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```

```
import gradio as gr
import torch
from transformers import AutoTokenizer, AutoModelForCausalLM
# Load model & tokenizer
model_name = "ibm-granite/granite-3.2-2b-instruct"
tokenizer = AutoTokenizer.from_pretrained(model_name)
model = AutoModelForCausalLM.from_pretrained(
    model name,
    torch dtype=torch.float16 if torch.cuda.is available() else torch.float32,
    device map="auto" if torch.cuda.is available() else None
)
# Ensure pad token exists
if tokenizer.pad token is None:
    tokenizer.pad token = tokenizer.eos token
# Function to generate response
def generate_response(prompt, max_length=512):
    inputs = tokenizer(prompt, return_tensors="pt", truncation=True, max_length=512)
    if torch.cuda.is_available():
        inputs = {k: v.to(model.device) for k, v in inputs.items()}
    with torch.no grad():
        outputs = model.generate(
            **inputs.
            max_length=max_length,
            temperature=0.7,
            do sample=True,
            pad_token_id=tokenizer.eos_token_id
        response = tokenizer.decode(outputs[0], skip_special_tokens=True)
        response = response.replace(prompt, "").strip()
        return response
# Concept explanation
def concept_explanation(concept):
    prompt = f"Explain the concept of {concept} in detail with example."
    return generate response(prompt, max length=800)
# Quiz generator
def quiz_generator(concept):
    prompt = f"Generate 5 quiz questions about {concept} with different question types (mul
    return generate response(prompt, max length=1200)
# Build Gradio app
with gr.Blocks() as app:
    gr.Markdown("# | Educational AI Assistant")
    with gr.Tabs():
        with gr.TabItem("Concept Explanation"):
```

```
concept_input = gr.Textbox(label="Enter a Concept", placeholder="e.g., Machine
            explain_btn = gr.Button("Explain")
            explanation output = gr.Textbox(label="Explanation", lines=10)
            explain_btn.click(concept_explanation, inputs=concept_input, outputs=explanation)
        with gr.TabItem("Quiz Generator"):
            quiz_input = gr.Textbox(label="Enter a Topic", placeholder="e.g., Machine Learn
            quiz_btn = gr.Button("Generate Quiz")
            quiz_output = gr.Textbox(label="Quiz Questions & Answers", lines=15)
            quiz btn.click(quiz generator, inputs=quiz input, outputs=quiz output)
app.launch(share=True)
```



Loading checkpoint shards: 100%

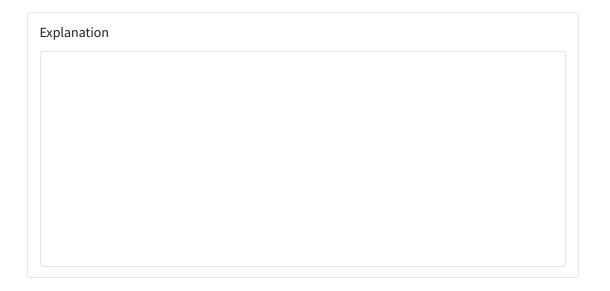
2/2 [00:15<00:00, 6.50s/it]

Colab notebook detected. To show errors in colab notebook, set debug=True in lau * Running on public URL: https://lf18c4c64855f2bce5.gradio.live

This share link expires in 1 week. For free permanent hosting and GPU upgrades,

```
Enter a Concept
 e.g., Machine Learning
```

Explain



Use via API 🍼 · Built with Gradio 😣 · Settings 🤹