```
1 !pip install transformers datasets huggingface_hub --quiet
2 !git clone https://github.com/l3cube-pune/indic-nlp.git
3
```

```
Cloning into 'indic-nlp'...
remote: Enumerating objects: 324, done.
remote: Counting objects: 100% (111/111), done.
remote: Compressing objects: 100% (98/98), done.
remote: Total 324 (delta 39), reused 43 (delta 4), pack-reused 213 (from 1)
Receiving objects: 100% (324/324), 1.46 GiB | 28.57 MiB/s, done.
Resolving deltas: 100% (100/100), done.
Updating files: 100% (147/147), done.
```

```
1 import os
2 os.listdir("indic-nlp/L3Cube-IndicQuest")
3
```

```
['Punjabi.csv',
 'Tamil.csv',
 'Konkani.csv',
 'Sindhi.csv',
 'Manipuri.csv',
 'Bengali.csv',
 'Marathi.csv',
 'eval_prompt.txt',
 'English.csv',
 'Maithili.csv',
 'Hindi.csv',
 'Odia.csv',
 'Gujarati.csv',
 'Nepali.csv',
 'Sanskrit.csv',
 'Assamese.csv',
 'Dogri.csv',
 'Telugu.csv',
 'README.md',
 'Malayalam.csv',
 'Urdu.csv',
 'Kannada.csv']
```

```
 1 import pandas as pd
 2
 3 # Load language datasets
 4 df_kn = pd.read_csv("indic-nlp/L3Cube-IndicQuest/Kannada.csv")
 5 df_hi = pd.read_csv("indic-nlp/L3Cube-IndicQuest/Hindi.csv")
 6 df_te = pd.read_csv("indic-nlp/L3Cube-IndicQuest/Telugu.csv")
 7
 8 # Preview
 9 print(df_kn[['Question', 'Answer']].head())
10 print(df_hi[['Question', 'Answer']].head())
11 print(df_te[['Question', 'Answer']].head())
12
```

```
                                                Question  \
0   1920 ರಲ್ಲಿ ಅಸಹಕಾರ ಚಳುವಳಿಯ ಪ್ರಾರಂಭದೊಂದಿಗೆ ಯಾರ ...
1   ಯಾವ ಭಾರತೀಯ ಕಾರ್ಯಕರ್ತನನ್ನು 'ಲೋಕಿತ್ವಾಡಿ' ಎಂದು ಜ...
2   ಭಾರತದ ಮೊದಲ ಅಧ್ಯಕ್ಷರು ಮತ್ತು USA ನ ಮೊದಲ ಅಧ್ಯಕ್ಷ...
3        ಅಬ್ದುಲ್ ಕಲಾಂ ಯಾರು? ಸಂಕ್ಷಿಪ್ತವಾಗಿ ವಿವರಿಸಿ.
4   ಮೋದಿಯವರ ಮೊದಲ ಅವಧಿಯಲ್ಲಿ ಭಾರತದ ಹಣಕಾಸು ಮಂತ್ರಿ ಯಾರು?

                                                Answer
0   1 ಆಗಸ್ಟ 1920 ರಂದು, ಅಸಹಕಾರ ಚಳುವಳಿಯನ್ನು ಘೋಷಿಸಲ...
1   ರಾವ್ ಬಹದ್ದೂರ್ ಗೋಪಾಲ್ ಹರಿ ದೇಶಮುಖ್ () ಅವರು ಲೋಕಿ...
2   ರಾಜೇಂದ್ರ ಪ್ರಸಾದ್ ಅವರು ಭಾರತೀಯ ರಾಜಕಾರಣಿ, ವಕೀಲರು...
3   ಎಪಿಜೆ ಅಬ್ದುಲ್ ಕಲಾಂ (ಜನನ ಅಕ್ಟೋಬರ್ 15, 1931, ರಾ...
4   ಅರುಣ್ ಜೇಟ್ಲಿ (28 ಡಿಸೆಂಬರ 1952 - 24 ಆಗಸ್ಟ 20...
                                                Question  \
0   1920 में असहयोग आंदोलन की शुरुआत के साथ ही कि...
1   कौन से भारतीय कार्यकर्ता लोकप्रिय रूप से 'लोक...
2   भारत के प्रथम राष्ट्रपति और संयुक्त राज्य अमे...
3        अब्दुल कलाम कौन थे? संक्षेप में वर्णन करें।
4   मोदी के पहले कार्यकाल के दौरान भारत के वित्त ...

                                                Answer
0   1 अगस्त 1920 को असहयोग आंदोलन की घोषणा हुई, उ...
1   राव बहादुर गोपाल हरि देशमुख () जिन्हें लोकहित...
2   राजेंद्र प्रसाद एक भारतीय राजनीतिज्ञ, वकील, प...
3   एपीजे अब्दुल कलाम (जन्म 15 अक्टूबर, 1931, राम...
4   अरुण जेटली (28 दिसंबर 1952 - 24 अगस्त 2019) ए...

                                                Question  \
0   1920లో సహాయ నిరాకరణోద్...
1   లోకిత్వాడి'గా ప్రసిద్ధి చెంది...
2   భారతదేశ మొదటి అధ్యక్షుడు మరియు USA మొదట అధ్యక...
3        అబ్దుల్ కలాం ఎవరు? కుప్తంగా వివరించండి.
4   మోది మొదటి టర్మ్‌లో భారత ఆర్థిక మంత్రి ఎవరు?
```
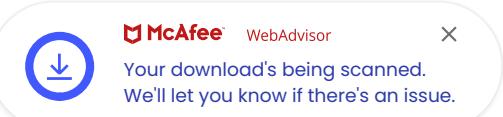
```
                                               Answer
0   1 ఆగస్టు 1920న సహాయ నిరాకరణ ఉద్యమం ప్రకటించబడి...
1   రావ్ బహదూర్ గోపాల్ హరి దేశ్‌ముఖ్ () లోఖిత్వాడి...
2   రాజేంద్ర ప్రసాద్ ఒక భారతీయ రాజకీయ నాయకుడు, న్య...
3   APJ అబ్దుల్ కలాం (జననం అక్టోబరు 15, 1931, రామే...
4   అరుణ్ జైట్లీ (28 డిసెంబర్ 1952 - 24 ఆగస్టు 201...
```

```python
1 !pip install transformers gradio --quiet
2
```

```python
 1 import gradio as gr
 2 import pandas as pd
 3 from transformers import pipeline
 4
 5 # Load multilingual model
 6 qa_pipeline = pipeline("question-answering", model="deepset/xlm-roberta-large-squad2")
 7
 8 # Load CSVs
 9 df_kn = pd.read_csv("indic-nlp/L3Cube-IndicQuest/Kannada.csv")
10 df_hi = pd.read_csv("indic-nlp/L3Cube-IndicQuest/Hindi.csv")
11 df_te = pd.read_csv("indic-nlp/L3Cube-IndicQuest/Telugu.csv")
12
13 # Sample fallback context
14 default_contexts = {
15     "Kannada": df_kn['Answer'][0],
16     "Hindi": df_hi['Answer'][0],
17     "Telugu": df_te['Answer'][0]
18 }
19
20 # Inference function
21 def answer_question(question, context, language):
22     if not context.strip():
23         context = default_contexts[language]
24     try:
25         result = qa_pipeline(question=question, context=context)
26         return result["answer"]
27     except Exception as e:
28         return f"❌ Error: {str(e)}"
29
30 # Gradio UI: BhashaBot
31 with gr.Blocks(theme=gr.themes.Default(primary_hue="orange")) as iface:
32     gr.Markdown("## 🤖 BhashaBot")
33     gr.Markdown("India's multilingual Q&A assistant IN — Ask questions in **Kannada**, **Hindi**, or **Telugu**.")
34
35     with gr.Row():
36         lang = gr.Radio(choices=["Kannada", "Hindi", "Telugu"], label="🌐 Select Language", value="Kannada")
37
38     question = gr.Textbox(label="❓ Enter Your Question", placeholder="Type your question here...")
39     context = gr.Textbox(label="📃 Context (Leave blank to use default)", lines=4, placeholder="Paste passage or leave blank...")
40     output = gr.Textbox(label="👤 Answer", lines=2)
41
42     with gr.Row():
43         submit_btn = gr.Button("🚀 Get Answer")
44         clear_btn = gr.Button("🔁 Clear All")
45
46     submit_btn.click(fn=answer_question, inputs=[question, context, lang], outputs=output)
47     clear_btn.click(fn=lambda: ["", "", "Kannada", ""], inputs=[], outputs=[question, context, lang, output])
48
49 iface.launch()
50
```

```
Some weights of the model checkpoint at deepset/xlm-roberta-large-squad2 were not used when initializing XLMRobertaForQuestionAnswer
- This IS expected if you are initializing XLMRobertaForQuestionAnswering from the checkpoint of a model trained on another task or
- This IS NOT expected if you are initializing XLMRobertaForQuestionAnswering from the checkpoint of a model that you expect to be e
Device set to use cpu
It looks like you are running Gradio on a hosted Jupyter notebook, which requires `share=True`. Automatically setting `share=True`

Colab notebook detected. To show errors in colab notebook, set debug=True in launch()
* Running on public URL: https://a0b90d7e055ff90c88.gradio.live

This share link expires in 1 week. For free permanent hosting and GPU upgrades, run `gradio deploy` from the terminal in the working
```

🤖 BhashaBot

India's multilingual Q&A assistant ɪɴ — Ask questions in **Kannada**, **Hindi**, or **Telugu**.

🌐 Select Language

○ Kannada   ○ Hindi   ○ Telugu

❓ Enter Your Question

Type your question here...

📜 Context (Leave blank to use default)

Paste passage or leave blank...

📥 Answer