FAQ-based automated Question-Answering can be made to work on IVR systems, to service less-literate populations who prefer to use voice as an interaction modality.

**KAB Dataset**
- A collection of audio files of 90 answers and 516 questions
- A typical Question:

  I am speaking from Madhubani District, Bihar. It has been almost five years since we got married. But as of now I am not able to have a child. So, what should I do?

  relevant part

Three types of Transcripts:
- Manual Transcripts
- Using Amazon Transcribe with/without custom vocab
- Using Google SpeechToText API

- Some of the incorrectly transcribed words* in Hindi.
- सेक्स (sex) -> टेस्ट (Test), सेट (Set)
- यून संबंध (Youn Sambendh) -> जो समन (Joe Sumon)
- माहावरी (Mahavari) -> वहाँ भारी (Vaham Bhari)
- एचवाइडी एईड्स (HIV AIDS) -> ए भी युए (Ek Bhi Eed)

*Words in red were transcribed correctly after listing them in a custom dictionary

**Methodology**
- FAQs organized as a set of (Q, A) pairs.
- New user query(q) is matched against this set to find appropriate answer.
- Matching is based on finding sentence similarity.
- Two methods used for sentence similarity:
  - Jaccard Similarity: based on Jaccard index
  - BERT Multilingual: pretrained BERT model by Google

**Results**

<table>
<thead>
<tr>
<th>Models Used</th>
<th>Exact Match</th>
<th>Approx. Match</th>
</tr>
</thead>
<tbody>
<tr>
<td>BERT</td>
<td>0.143</td>
<td>0.121</td>
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<td>Jaccard Sim.</td>
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<tr>
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<td>0.643</td>
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<tr>
<td>Jaccard Sim.</td>
<td>0.543</td>
<td>0.633</td>
</tr>
</tbody>
</table>

**Conclusions**
- Not able to perform well, indicating the need for manually transcribed data
- Uses manual transcripts, works better, but unrealistic since query data cannot be manually transcribed
- Even better as it eliminates superfluous information from both the questions and answers
- Results further improve when the search space is restricted, implies an upfront IVR-based choice for the broad theme
- Performance in real-world scenario, as user query cannot be manually transcribed on the go