10. Key phrase extraction from a given text using Azure Language service

Azure Language Service typically refers to a set of cloud-based APIs and tools for natural language processing (NLP) and language understanding.

Azure Text Analytics: This service provides capabilities for sentiment analysis, entity recognition, key phrase extraction, and language detection in text data. It is commonly used for text analysis in customer feedback, social media, and other text-based data sources.

Azure Translator: Azure Translator is a machine translation service that can translate text between various languages. It's used for real-time translation in applications, websites, and more.

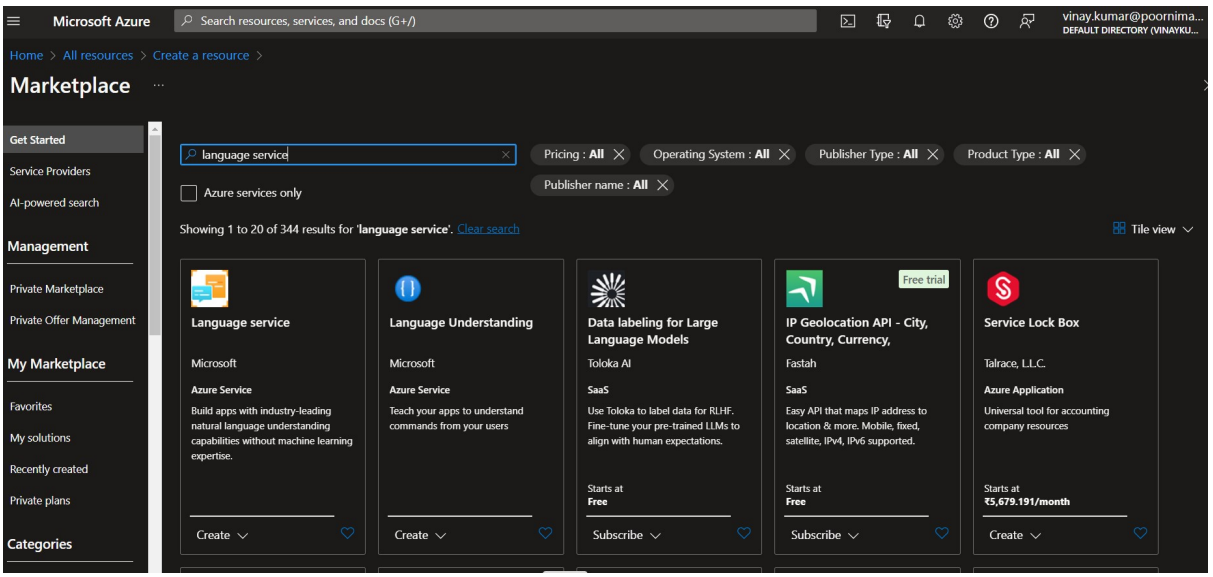
Azure Language Understanding (LUIS): Azure LUIS is a machine learning-based service that allows you to build applications that can understand natural language input. It's often used for chatbots, virtual assistants, and other applications where understanding and processing natural language is important.

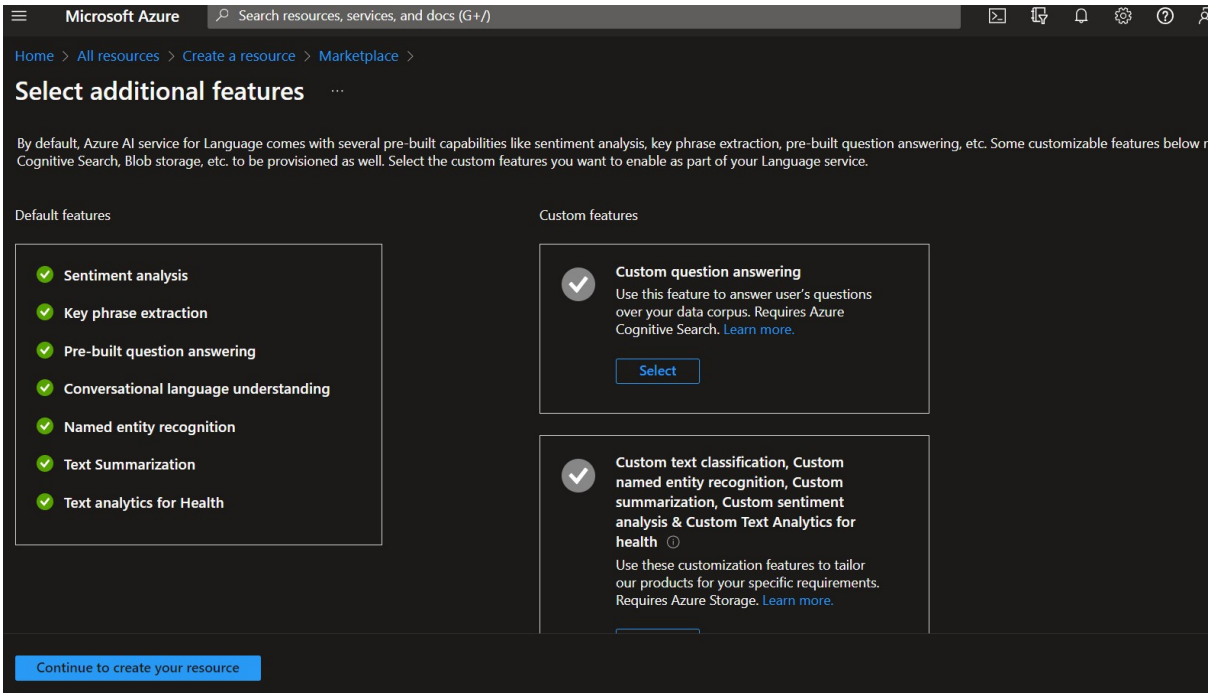
Azure Speech Services: While not a text-based service, Azure Speech Services can be considered a part of the broader language processing ecosystem. It offers speech recognition and text-to-speech capabilities, making it useful for building applications with speech interaction.

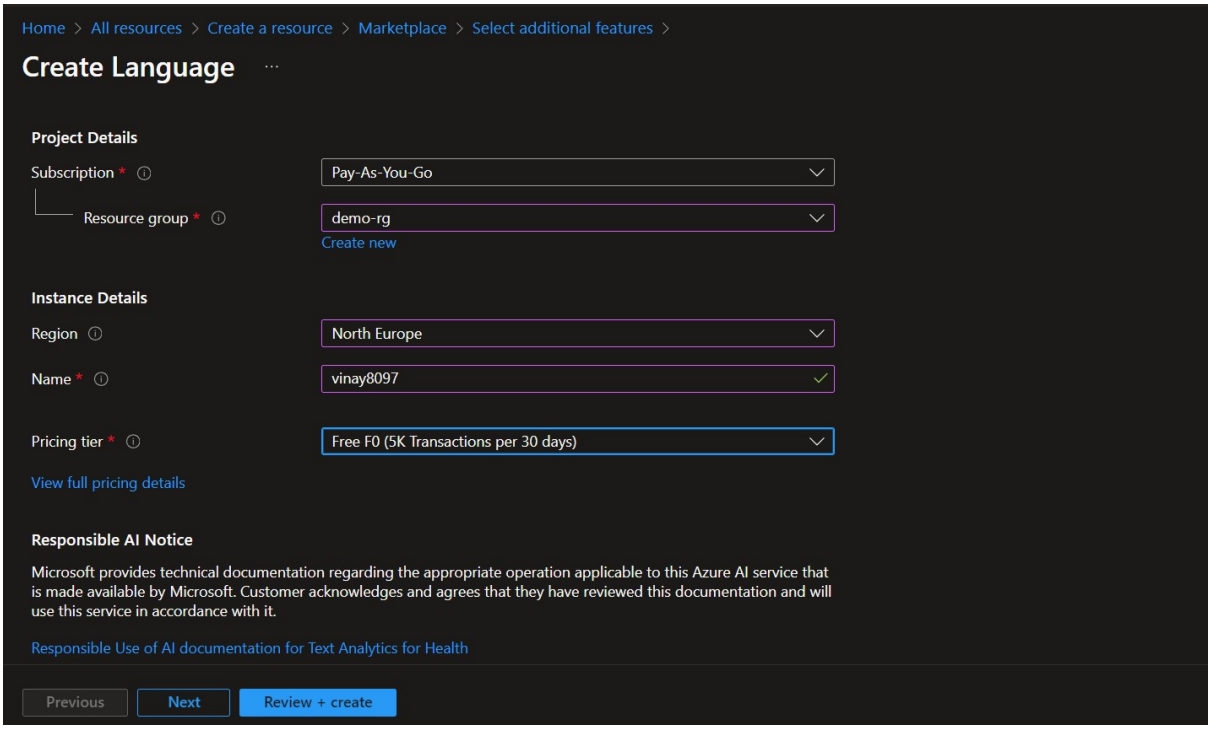
Language Support in Azure Cognitive Search: Azure Cognitive Search can include language processing capabilities to improve search results by handling multilingual content, implementing language-specific analyzers, and supporting phonetic search.

Keyword extraction, also known as keyword identification or keyword analysis, is a natural language processing (NLP) technique used to automatically identify and extract the most important words or phrases from a piece of text, such as a document, webpage, or other textual content. These extracted keywords represent the main topics or themes within the text and can be valuable for various applications, including search engine optimization (SEO), content categorization, information retrieval, and text summarization.

Step 1: Create the Azure Language service.







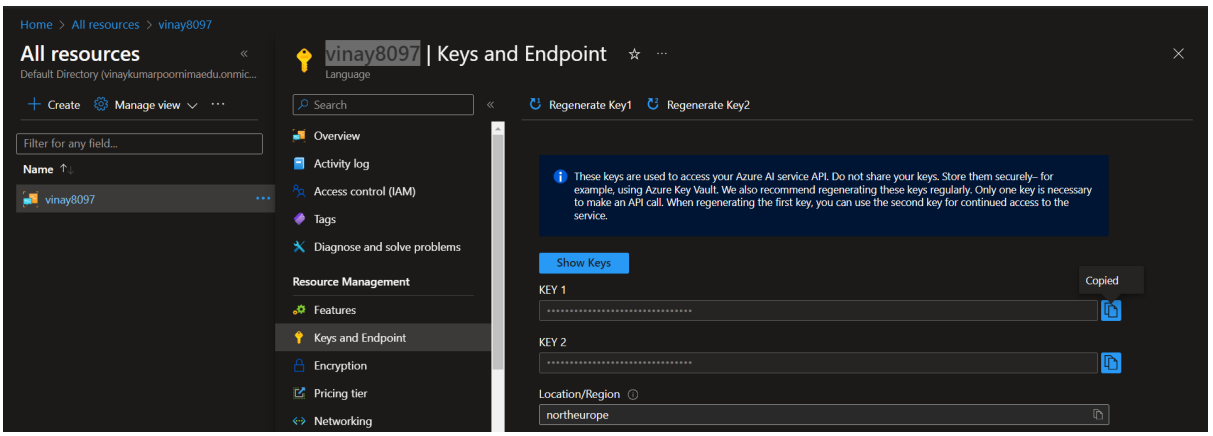
Keep all the remaining settings as default.

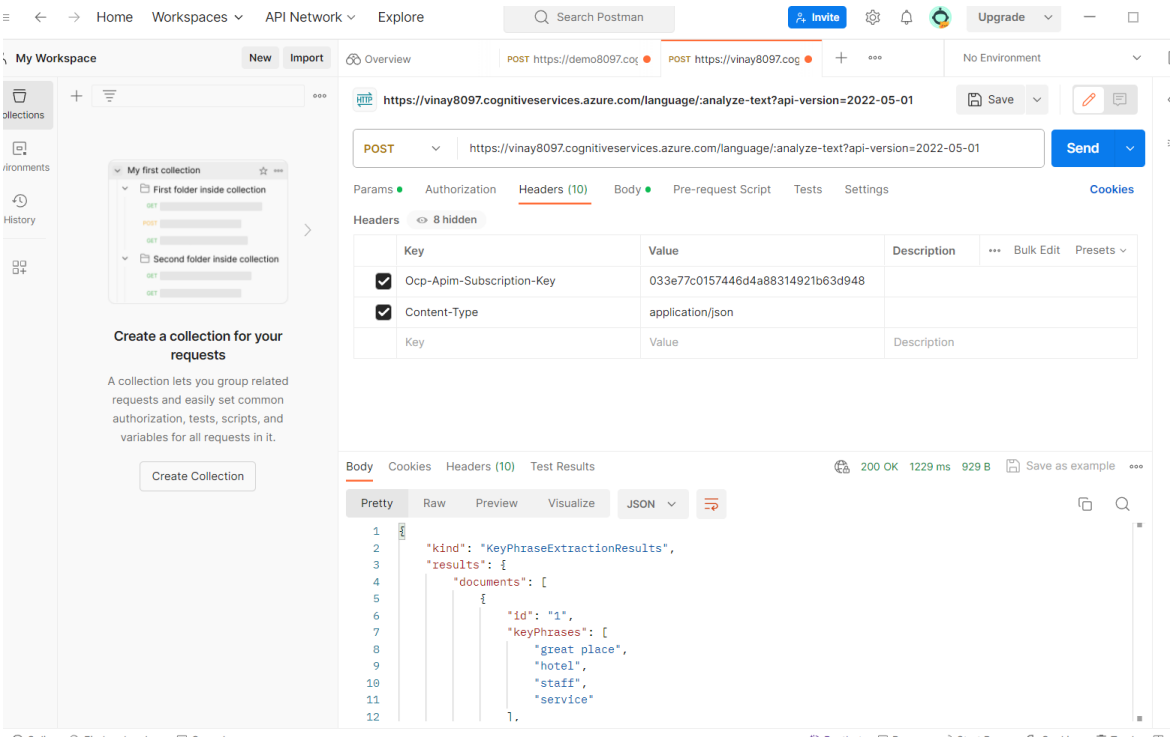
Step 2: Connect the service with the postman tool on your local machine.

We need the endpoint and the key for connection.

Key: Take from the service

Endpoint: https://vinay8097.cognitiveservices.azure.com/language/:analyze-text?api-version=2022-05-01





Step3: Give the input text as json format. The below Json has three documents for which we need to get the key phrases.

```
{
   "kind": "KeyPhraseExtraction",
   "parameters": {
      "modelVersion": "latest"
   },
   "analysisInput": {
      "documents":[
         {
            "id": "1",
            "language": "en",
            "text": "The hotel is a great place. The staff were very friendly. The service was amazing."
            },
         {
            "id": "2",
            "language": "en",
            "text": "We didn't enjoy our stay. the service was not upto the mark."
         },
         {
            "id": "3",
            "language": "en",
            "text": "The hotel is in Chicago. The room had a TV. The hotel has a pool."
         }
      ]
   }
```

}

Step 4: Send the request to the service through the postman tool and check the output


```
{
   "kind": "KeyPhraseExtractionResults",
   "results": {
      "documents": [
         {
            "id": "1",
            "keyPhrases": [
               "great place",
               "hotel",
               "staff",
               "service"
            ],
            "warnings": []
         },
         {
            "id": "2",
            "keyPhrases": [
               "stay",
               "service",
               "mark"
            ],
            "warnings": []
         },
         {
            "id": "3",
            "keyPhrases": [
               "hotel",
               "Chicago",
               "room",
               "TV",
               "pool"
            ],
            "warnings": []
         }
      ],
      "errors": [],
      "modelVersion": "2022-10-01"
   }
}
```