We are going to use Wikipedia API as the "*another service*".

How we would use the service in our bot:

Input: A keyword for searching (given by user)

Method: Using Wikipedia API to perform the search and get the most related page, then extract the introduction part of the Wikipedia page.
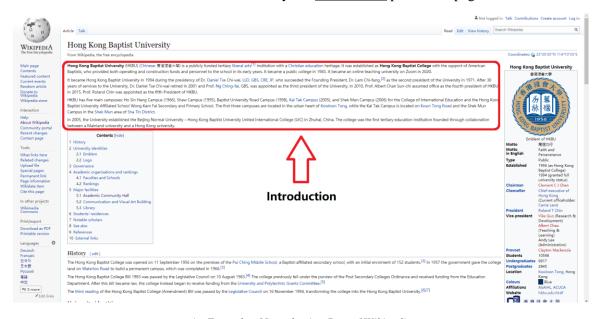
Output: Send back the corresponding introduction and the URL of the webpage (just in case users want more detailed information) to the user.

Here are the Wikipedia APIs we used:

https://www.mediawiki.org/wiki/Extension:TextExtracts#API

https://www.mediawiki.org/wiki/API:Search#API_documentation

The first API (TextExtracts) is used for extracting data from a particular Wikipedia page. We could use the "exintro" attribute to extract only the introduction part of the page.

An Example of Introduction Part of Wikipedia

Meanwhile, the Wikipedia pages could be identified by the attribute called "titles", so we need to know the "titles" in order to use the TextExtracts API. But we only have the keyword given by users which is not 100% accurate. That why we need the second API (Search). We could use the given keyword to get the corresponding "titles".

Sample Code:

```python
import requests
def searchWiki(keyword):

    S = requests.Session()

    URL = "https://en.wikipedia.org/w/api.php"
    ######## Search API #######
    PARAMS = {
        "action": "query",
        "format": "json",
        "list": "search",
        "srsearch": keyword
    }

    R = S.get(url=URL, params=PARAMS)
    searchResult = R.json()
    isEmptyResult = (searchResult['query']['searchinfo']['totalhits'] == 0)
    if (isEmptyResult == True): # got empty search result
        return "There were no results matching the query. Please try other keywords"
    titles = searchResult['query']['search'][0]['title']
    pageId = searchResult['query']['search'][0]['pageid']      # get page ID
    theUrl = "https://en.wikipedia.org/?curid=" + str(pageId) # construct the URL with page ID
    # using the first result (the most related one)
    ######## Search API #######

    ######## TextExtracts API #######
    PARAMS = {
        "action": "query",
        "prop": "extracts",
        "format": "json",
        "exintro": True,  # only the introduction part
        "titles": titles, # use the titles we got during the searching
        "explaintext": True,
        #exsentences": 1
    }

    R = S.get(url=URL, params=PARAMS)
    DATA = R.json()
    D = list(DATA['query']['pages'].values())
    introductionPart = D[0]['extract']
    ######## TextExtracts API #######

    return (introductionPart, theUrl)
```

Sample Usage:

```
In [119]: searchWiki("HKBU")

Out[119]: ('Hong Kong Baptist University (HKBU) (Chinese: 香港浸會大學) is a publicly funded tertiary liberal arts institution with a Christian educat
ion heritage. It was established as Hong Kong Baptist College with the support of American Baptists, who provided both operating and constru
ction funds and personnel to the school in its early years. It became a public college in 1983. It became an online teaching university on Z
oom in 2020.\nIt became Hong Kong Baptist University in 1994 during the presidency of Dr. Daniel Tse Chi-wai, LLD, GBS, CBE, JP, who succeed
ed the Founding President, Dr. Lam Chi-fung, as the second president of the University in 1971. After 30 years of services to the Universit
y, Dr. Daniel Tse Chi-wai retired in 2001 and Prof. Ng Ching-fai, GBS, was appointed as the third president of the University. In 2010, Pro
f. Albert Chan Sun-chi assumed office as the fourth president of HKBU. In 2015, Prof. Roland Chin was appointed as the fifth President of HK
BU.  \nHKBU has five main campuses: Ho Sin Hang Campus (1966), Shaw Campus (1995), Baptist University Road Campus (1998), Kai Tak Campus (20
05), and Shek Mun Campus (2006) for the College of International Education and the Hong Kong Baptist University Affiliated School Wong Kam F
ai Secondary and Primary School. The first three campuses are located in the urban heart of Kowloon Tong, while the Kai Tak Campus is locate
d on Kwun Tong Road and the Shek Mun Campus in the Shek Mun area of Sha Tin District.\nIn 2005, the University established the Beijing Norma
l University - Hong Kong Baptist University United International College (UIC) in Zhuhai, China. The college was the first tertiary educati
on institution founded through collaboration between a Mainland university and a Hong Kong university.',
 'https://en.wikipedia.org/?curid=269269')

In [120]: searchWiki("Hong Kong Baptist University")

Out[120]: ('Hong Kong Baptist University (HKBU) (Chinese: 香港浸會大學) is a publicly funded tertiary liberal arts institution with a Christian educat
ion heritage. It was established as Hong Kong Baptist College with the support of American Baptists, who provided both operating and constru
ction funds and personnel to the school in its early years. It became a public college in 1983. It became an online teaching university on Z
oom in 2020.\nIt became Hong Kong Baptist University in 1994 during the presidency of Dr. Daniel Tse Chi-wai, LLD, GBS, CBE, JP, who succeed
ed the Founding President, Dr. Lam Chi-fung, as the second president of the University in 1971. After 30 years of services to the Universit
y, Dr. Daniel Tse Chi-wai retired in 2001 and Prof. Ng Ching-fai, GBS, was appointed as the third president of the University. In 2010, Pro
f. Albert Chan Sun-chi assumed office as the fourth president of HKBU. In 2015, Prof. Roland Chin was appointed as the fifth President of HK
BU.  \nHKBU has five main campuses: Ho Sin Hang Campus (1966), Shaw Campus (1995), Baptist University Road Campus (1998), Kai Tak Campus (20
05), and Shek Mun Campus (2006) for the College of International Education and the Hong Kong Baptist University Affiliated School Wong Kam F
ai Secondary and Primary School. The first three campuses are located in the urban heart of Kowloon Tong, while the Kai Tak Campus is locate
d on Kwun Tong Road and the Shek Mun Campus in the Shek Mun area of Sha Tin District.\nIn 2005, the University established the Beijing Norma
l University - Hong Kong Baptist University United International College (UIC) in Zhuhai, China. The college was the first tertiary educati
on institution founded through collaboration between a Mainland university and a Hong Kong university.',
 'https://en.wikipedia.org/?curid=269269')

In [121]: searchWiki("HK baptist")

Out[121]: ('Hong Kong Baptist University (HKBU) (Chinese: 香港浸會大學) is a publicly funded tertiary liberal arts institution with a Christian educat
ion heritage. It was established as Hong Kong Baptist College with the support of American Baptists, who provided both operating and constru
ction funds and personnel to the school in its early years. It became a public college in 1983. It became an online teaching university on Z
oom in 2020.\nIt became Hong Kong Baptist University in 1994 during the presidency of Dr. Daniel Tse Chi-wai, LLD, GBS, CBE, JP, who succeed
ed the Founding President, Dr. Lam Chi-fung, as the second president of the University in 1971. After 30 years of services to the Universit
y, Dr. Daniel Tse Chi-wai retired in 2001 and Prof. Ng Ching-fai, GBS, was appointed as the third president of the University. In 2010, Pro
f. Albert Chan Sun-chi assumed office as the fourth president of HKBU. In 2015, Prof. Roland Chin was appointed as the fifth President of HK
BU.  \nHKBU has five main campuses: Ho Sin Hang Campus (1966), Shaw Campus (1995), Baptist University Road Campus (1998), Kai Tak Campus (20
05), and Shek Mun Campus (2006) for the College of International Education and the Hong Kong Baptist University Affiliated School Wong Kam F
ai Secondary and Primary School. The first three campuses are located in the urban heart of Kowloon Tong, while the Kai Tak Campus is locate
d on Kwun Tong Road and the Shek Mun Campus in the Shek Mun area of Sha Tin District.\nIn 2005, the University established the Beijing Norma
l University - Hong Kong Baptist University United International College (UIC) in Zhuhai, China. The college was the first tertiary educati
on institution founded through collaboration between a Mainland university and a Hong Kong university.',
 'https://en.wikipedia.org/?curid=269269')
```

It shows that no matter we are using the abbreviation ("HKBU") or the full name ("Hong Kong Baptist University") or even using some "uncompleted" keyword ("HK baptist"), we could get the same correct result in this case.

But sometimes we are not that lucky. The search result could be empty. For example, if the keyword is missing the last "t" of "baptist", we would get no result so that we have to return an error message to inform users.

```
In [110]: searchWiki("HK baptis")

Out[110]: 'There were no results matching the query. Please try other keywords'
```

P.S. It would also return the corresponding URL (using "pageid" to construct).

```
In [118]: searchWiki("HK baptist")[1]

Out[118]: 'https://en.wikipedia.org/?curid=269269'
```

(Click to give it a try: https://en.wikipedia.org/?curid=269269)