A tutorial to scrape the location ID of any city in BBC Weather.

This code snippet takes city name as input and it hits the BBC Weahter API with a request for location ID. This location ID is used as input in the next part of the code to scrape weather forecast for the city using this location ID.

Web scraping might not be legal always. It is a good idea to check the terms of the website you plan to scrape before proceeding. Also, if your code requests a url from a server multiple times, it is a good practice to either cache your requests, or insert a timed delay between consecutive requests.

In [ ]:

```python
import os

import requests              # to get the webpage
import json                  # to convert API to json format

from urllib.parse import urlencode
import numpy as np
import pandas as pd
import re                    # regular expression operators
```

In [ ]:

```python
test_city = "New York"
location_url = 'https://locator-service.api.bbci.co.uk/locations?' + urlencode({
    'api_key': 'AGbFAKx58hyjQScCXIYrxuEwJh2W2cmv',
    's': test_city,
    'stack': 'aws',
    'locale': 'en',
    'filter': 'international',
    'place-types': 'settlement,airport,district',
    'order': 'importance',
    'a': 'true',
    'format': 'json'
})
location_url
```

Out[ ]:

'https://locator-service.api.bbci.co.uk/locations?api_key=AGbFAKx58hyjQScCXIYrxuEwJh2W2cmv&s=New+York&stack=aws&locale=en&filter=international&place-types=settlement%2Cairport%2Cdistrict&order=importance&a=true&format=json'

In [ ]:

```python
result = requests.get(location_url).json()
result
```

Out[ ]:

```
{'response': {'results': {'results': [{'container': 'United States',
    'containerId': 6252001,
    'country': 'US',
    'id': '5128581',
    'language': 'en',
    'latitude': 40.71427,
    'longitude': -74.00597,
    'name': 'New York',
    'placeType': 'settlement',
    'timezone': 'America/New_York'},
   {'container': 'Lincolnshire',
    'containerId': 2644486,
    'country': 'GB',
    'id': '2641508',
    'language': 'en'
```

```
       language : en ,
       'latitude': 53.07897,
       'longitude': -0.14008,
       'name': 'New York',
       'placeType': 'settlement',
       'timezone': 'Europe/London',
       'topicId': 'cr0mejz7n26t'}],
    'totalResults': 2}}}
```

In [ ]:

```python
# Print location id
result['response']['results']['results'][0]['id']
```

Out[ ]:

```
'5128581'
```

Creating a function to output location id by taking any city name as input.

In [ ]:

```python
def getlocid(city):
    city = city.lower() # convert city name to lowercase to standardize format
    # Convert into an API call using URL encoding
    location_url = 'https://locator-service.api.bbci.co.uk/locations?' + urlencode({
        'api_key': 'AGbFAKx58hyjQScCXIYrxuEwJh2W2cmv',
        's': city,
        'stack': 'aws',
        'locale': 'en',
        'filter': 'international',
        'place-types': 'settlement,airport,district',
        'order': 'importance',
        'a': 'true',
        'format': 'json'
    })
    result = requests.get(location_url).json()
    locid = result['response']['results']['results'][0]['id']
    return locid
```

In [ ]:

```python
getlocid('Toronto')
```

Out[ ]:

```
'6167865'
```

In [ ]: