### Evidencias de ejecución:

1. Resultado regiones, funciones pandas maximo minimo promedio tiempo total,

```
{'', 'Americas', 'Polar', 'Africa', 'Asia', 'Oceania', 'Europe'}
     TiempoTotal:3.584621 TiempoPromedio:0.597436833333333 TiempoMinimo:0.238549 TiempoMaximo:1.226004
     /usr/local/lib/python3.7/dist-packages/pandas/core/generic.py:2615: UserWarning: The spaces in these column names will not be chang
      method=method,
pd.read_json('archivo.json')
        index
                    City Name
                                                                Languaje
                                                                            Region
                                                                                       Time
                       Anguilla
                                  649df08a448ee3fa90f3746baaf6b0907df42c91 Americas 0.322035
                     Antarctica
                                  649df08a448ee3fa90f3746baaf6b0907df42c91
      2
             2
                        Algeria
                                  af4f4762f9bd3f0f4a10caf5b6e63dc4ce543724
                                                                           Africa 0.645012
                    Afghanistan
             3
                                 cc50b3253c9ec78d83c0178cbd9aff6a66d8ced8
                                                                            Asia 0.530654
             4 American Samoa
                                  649df08a448ee3fa90f3746baaf6b0907df42c91 Oceania 0.327619
                   Åland Islands 04a422d38c95415cece1ac86e1ad2a1030048c03
                                                                           Europe 0.344618
```

#### **Test Unitarios**

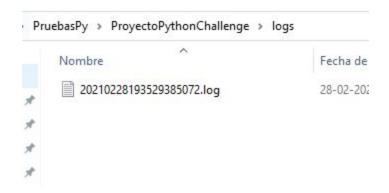
```
if __name__ == "__main__":
    import doctest
    doctest.testmod(verbose=True)

C> Trying:
        regiones= {'', 'Polar', 'Africa', 'Europe', 'Asia', 'Americas', 'Oceania'}
        Expecting nothing
        ok
        Trying:
            datos=creaDataFrame(regiones)
        Expecting nothing
        ok
        Trying:
            Ciudades=len(datos['City Name'].to_list())==6
        Expecting nothing
```

```
Trying:
   print('Hay 6 ciudades', Ciudades)
Expecting:
   Hay 6 ciudades True
Trying:
   regiones = extraeRegiones()
Expecting nothing
Trying:
   respuesta= {'', 'Polar', 'Africa', 'Europe', 'Asia', 'Americas', 'Oceania'}
Expecting nothing
Trying:
   [ True for x in regiones if x in respuesta ]
Expecting:
   [True, True, True, True, True, True]
Trying:
   d = {'Time': [4, 5, 6]}
Expecting nothing
Trying:
   df = pd.DataFrame(data=d)
Expecting nothing
Trying:
   funcionesPandas(df)
Expecting:
   'TiempoTotal:15 TiempoPromedio:5.0 TiempoMinimo:4 TiempoMaximo:6'
Trying:
   v1,v2,v3,v4,v5 = regionPaisIdioma('Americas')
Expecting nothing
Trying:
   print(len(v2)>1)
Expecting:
   True
3 items had no tests:
   __main__
4 tests in __main__.creaDataFrame
```

# **Archivos Generados**

# 



## Archivo de Log.

```
20210228193529385072.log: Bloc de notas
Archivo Edición Formato Ver Ayuda
2021-02-28 19:35:29,385 : DEBUG : Inicio 2021-02-28 19:35:29:385072
2021-02-28 19:35:29,400 : DEBUG : Starting new HTTPS connection (1): restcountries-v1.p.rapidapi.com:443
2021-02-28 19:35:30,250 : DEBUG : https://restcountries-v1.p.rapidapi.com:443 "GET /all HTTP/1.1" 200 35811 2021-02-28 19:35:30,256 : DEBUG : Starting new HTTPS connection (1): restcountries-v1.p.rapidapi.com:443 "GET /all HTTP/1.1" 200 35811 2021-02-28 19:35:30,256 : DEBUG : Starting new HTTPS connection (1): restcountries.eu:443
2021-02-28 19:35:31,137 : DEBUG
                                                                   https://restcountries.eu:443 "GET /rest/v2/region/Polar HTTP/1.1" 200 None
2021-02-28 19:35:31,158 : DEBUG :
                                                                   region:\ Polar, pais: Antarctica, idioma: English, \overline{S}HA1:649df08a448ee 3 fa 90f3746baaf6b0907df42c91, tiempo 0.902046baaf6b0907df42c91, tiempo 0.902046baaf6b0907df406b0907df406b0907df406b0907df406b0907df406
2021-02-28 19:35:31,161 : DEBUG : Starting new HTTPS connection (1): restcountries.eu:443 2021-02-28 19:35:31,692 : DEBUG : https://restcountries.eu:443 "GET /rest/v2/region/Europe HTTP/1.1" 200 None
                                                                   region: Europe, pais:Åland Islands,idioma:Swedish,SHA1:04a422d38c95415cece1ac86e1ad2a1030048c03,tiempo0.662641
2021-02-28 19:35:31,823 : DEBUG :
                                                                   Starting new HTTPS connection (1): restcountries.eu:443
2021-02-28 19:35:31,838 : DEBUG :
2021-02-28 19:35:32,362 : DEBUG :
                                                                   https://restcountries.eu:443 "GET /rest/v2/region/Africa HTTP/1.1" 200 None
2021-02-28 19:35:32,509 : DEBUG
                                                                   region:\ Africa, pais: Algeria, idioma: Arabic, SHA1: af4f4762f9bd3f0f4a10caf5b6e63dc4ce543724, tiempo0.67104
2021-02-28 19:35:32,509 : DEBUG : Starting new HTTPS connection (1): restcountries.eu:443 2021-02-28 19:35:33,064 : DEBUG : https://restcountries.eu:443 "GET /rest/v2/region/Asia HTTP/1.1" 200 None
                                                                  region: Asia,pais:Afghanistan,idioma:Pashto,SHA1:cc50b3253c9ec78d83c0178cbd9aff6a66d8ced8,tiempo0.717417
Starting new HTTPS connection (1): restcountries.eu:443
2021-02-28 19:35:33,227 : DEBUG :
2021-02-28 19:35:33,242 : DEBUG
2021-02-28 19:35:33,643 : DEBUG
                                                                   https://restcountries.eu:443 "GET /rest/v2/region/Oceania HTTP/1.1" 200 None
2021-02-28 19:35:33,666 : DEBUG :
                                                                   region: Oceania,pais:American Samoa,idioma:English,SHA1:649df08a448ee3fa90f3746baaf6b0907df42c91,tiempo0.423107
2021-02-28 19:35:33,666 : DEBUG : Starting new HTTPS connection (1): restcountries.eu:443 2021-02-28 19:35:34,229 : DEBUG : https://restcountries.eu:443 "GET /rest/v2/region/Americas HTTP/1.1" 200 None
2021-02-28 19:35:34,367 : DEBUG : region: Americas,pais:Anguilla,idioma:English,SHA1:649df08a448ee3fa90f3746baaf6b0907df42c91,tiempo0.701352
2021-02-28 19:35:34,445 : DEBUG : Tabla Pandas:
                 City Name
                                                                                                      Languaje
                                                                                                                              Region
              Antarctica 649df08a448ee3fa90f3746baaf6b0907df42c91
                                                                                                                              Polar 0.902046
        Åland Islands 04a422d38c95415cece1ac86e1ad2a1030048c03
                                                                                                                            Europe 0.662641
                  Algeria af4f4762f9bd3f0f4a10caf5b6e63dc4ce543724
                                                                                                                            Africa 0.671040
            Afghanistan cc50b3253c9ec78d83c0178cbd9aff6a66d8ced8
                                                                                                                                Asia 0.717417
     American Samoa 649df08a448ee3fa90f3746baaf6b0907df42c91
                                                                                                                          Oceania 0.423107
                 Anguilla 649df08a448ee3fa90f3746baaf6b0907df42c91 Americas 0.701352
2021-02-28 19:35:34,667 : DEBUG : crea Json: archivo.json
```