

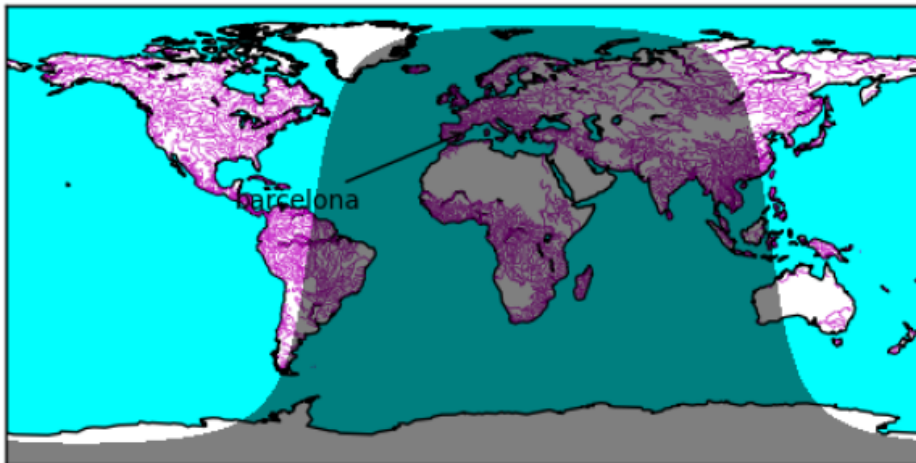
PRACTICAL 11

- To plot data on a map using google map API

```
from mpl_toolkits.basemap import Basemap
import matplotlib.pyplot as plt
from datetime import datetime

map = Basemap(projection='cyl')
map.drawmapboundary(fill_color='aqua')
map.fillcontinents(color='white', lake_color='aqua')
x1, y1 = map(2, 41)
x2, y2 = (-90, 10)
map.drawcoastlines()
map.drawrivers(color='m')
currentdate = datetime(2023, 9, 1, 22, 0)
plt.annotate('barcelona', xy=(x1, y1), xycoords='data', xytext=(x2, y2),
textcoords='data', arrowprops=dict(arrowstyle='->'))
map.nightshade(currentdate)
plt.show()
```

Output :



PRACTICAL 12

- To create simple captcha generator.

```
from captcha.image import ImageCaptcha
image= ImageCaptcha(width= 280,height = 90)
captcha_text = 'SY45IT'
data = image.generate(captcha_text)
image.write(captcha_text,'CAPTCHA.png')
from captcha.audio import AudioCaptcha
audio = AudioCaptcha()
captcha_text = '6245'
data = audio.generate(captcha_text)
audio_file="syit"+captcha_text+'.wav'
audio.write(captcha_text,audio_file)
```

Output :

