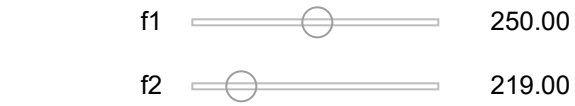
exploring beats frequencies

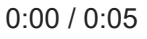
In [1]:
```
# importing libraries
import numpy as np
from ipywidgets import interactive
from IPython.display import Audio, display
```

In [2]:
```
# beat characteristics
def beat_freq(f1=250.0, f2=219.0):
    max_time = 5
    rate = 8000
    times = np.linspace(0, max_time, rate*max_time)
    signal = np.sin(2*np.pi*f1*times) + np.sin(2*np.pi*f2*times)
    print(f1, f2, abs(f1-f2))
    display(Audio(data=signal, rate=rate))
    return signal
```

In [3]:
```
# showing the beats
v = interactive(beat_freq, f1=(200.0,300.0), f2=(200.0,300.0))
display(v)
```




```
250.0 219.0 31.0
```



this code was modified by Fabrício.