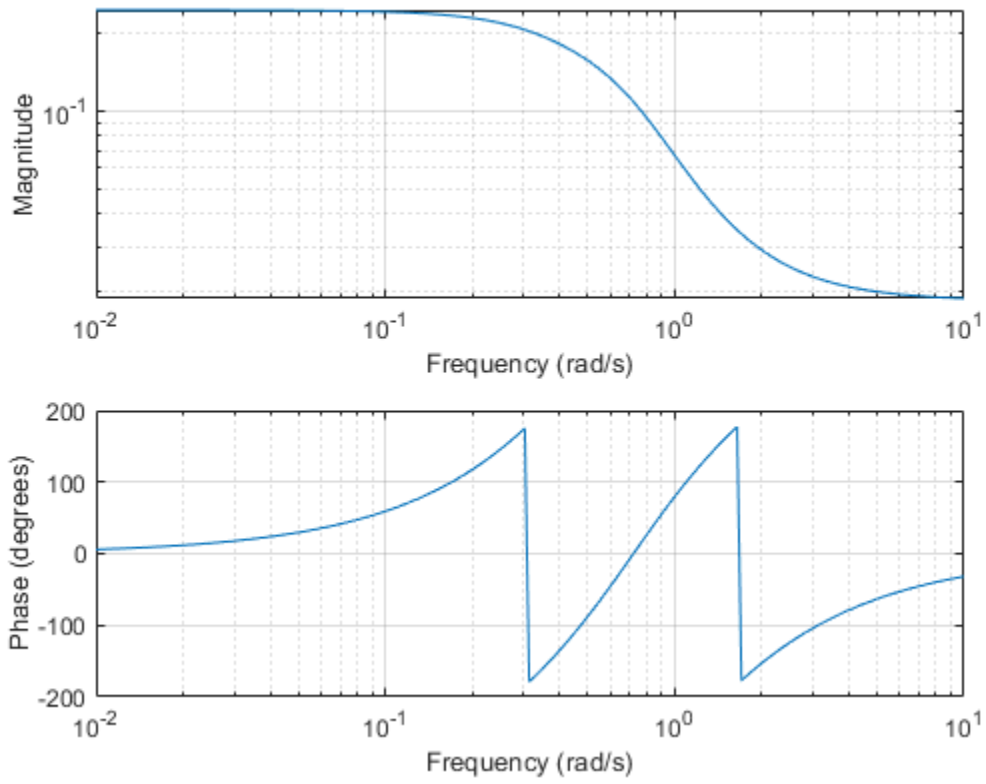
```
clear; clc;
sample = 1000; %Hz
nyquist = sample / 2; %Hz
cutoff = 150; %Hz
Wn = cutoff / nyquist;
[b, a] = butter(4, Wn);
fprintf('Cutoff Frequency, %.0f Hz, is %.2f of nyquist, %.0f Hz.
\n',cutoff, Wn,nyquist);
fprintf('Filter is 4th order\n');
fprintf('B coefficients:\n');
fprintf('%.9f ',b);
fprintf('\nA coefficients:\n');
fprintf('%.9f ',a);
fprintf('\n');
freqs(b, a);
```

```
Cutoff Frequency, 150 Hz, is 0.30 of nyquist, 500 Hz.
Filter is 4th order
B coefficients:
0.018563011 0.074252043 0.111378064 0.074252043 0.018563011
A coefficients:
1.000000000 -1.570398851 1.275613325 -0.484403368 0.076197065
```



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