Table of Contents

zad1

```
% n = 10;
% m = 2;
% Wn = 0.2;
% [b,a] = maxflat(n,m,Wn);
% fvtool(b,a)
```

```
[b,a] = maxflat(4,1,0.3)
fvtool(b,a)

[b,a] = maxflat(4,'sym',0.3)
fvtool(b,a)
```

```
Error using evalmxdom>instrumentAndRun (line 109)
Error: Invalid expression. Check for missing multiplication operator,
 missing or unbalanced delimiters, or other syntax error. To construct
 matrices, use brackets instead of parentheses.

Error in evalmxdom (line 21)
[data,text,laste] =
 instrumentAndRun(file,cellBoundaries,imageDir,imagePrefix,options);

Error in publish

Error in mdbpublish (line 55)
outputPath = publish(file, options);
```

zad2

```
% Je#›li biegun "znak x" znajdzie siÄ™
% poza ko#,em w##wczas mamy filtr niestabilny. Je#›li biegun
% bÄ™dzie w kole w##wczas mamy filtr stabilny.
```

```
b = [1 -0.5]; a = [1 -2];
act_flag1 = isstable(b,a)
```

```
zplane(b,a)
```

zad3

```
b = [1 -0.1]; a = [-1 -0.1]
act_flag1 = isstable(b,a)
zplane(b,a)
```

zad4

```
b = [0.9 -0.8]; a = [-0.9 -0.8]
act_flag1 = isstable(b,a)
zplane(b,a)
```

zad5

```
b = [0.9 -0.8 1 1]; a = [-0.9 -0.8 -1]
act_flag1 = isstable(b,a)
zplane(b,a)
```

zad6

```
m = [0 0 1 1 1 0 1 1 0 0];
f = [0 0.1 0.2 0.3 0.4 0.5 0.7 0.8 0.9 1];

[b,a] = yulewalk(10,f,m);

act_flag1 = isstable(b,a)
zplane(b,a)
```

zad7

```
[b,a] = maxflat(4,1,0.3);

% act_flag1 = isstable(b,a)
% zplane(b,a)

% wynik flag = 0


load chirp
t = (0:length(y)-1)/Fs;
% 1.6 sekundy
xfft=abs(fft(y));
xfft=xfft/13129;

x1=1:1:6564;

% bar(x1(1:6564), xfft(1:6564));
% axis([0,6564, 0,0.01]) ;
```

```
% plot(t,y);
% fvtool(b,a)

outsignal = filter(b,a,y);

figure()
plot(t, outsignal);

xfft=abs(fft(outsignal));
xfft=xfft/13129;
x1=1:1:6564;

figure()
bar(x1(1:6564), xfft(1:6564));
axis([0,6564, 0,0.01]) ;
```

zad8

```
m = [0 0 0 0 0 1 1 1 1 1];
f = [0 0.1 0.2 0.3 0.4 0.5 0.7 0.8 0.9 1];
[b,a] = yulewalk(10,f,m);

% act_flag1 = isstable(b,a)
% zplane(b,a)

% wynik flag = 0


load chirp
t = (0:length(y)-1)/Fs;
% 1.6 sekundy
xfft=abs(fft(y));
xfft=xfft/13129;

x1=1:1:6564;

% bar(x1(1:6564), xfft(1:6564));
% axis([0,6564, 0,0.01]) ;

% plot(t,y);
% fvtool(b,a)

outsignal = filter(b,a,y);

figure()
plot(t, outsignal);

xfft=abs(fft(outsignal));
xfft=xfft/13129;
x1=1:1:6564;

figure()
```

```
bar(x1(1:6564), xfft(1:6564));
axis([0,6564, 0,0.01]) ;
```

zad9

```
b = [0.9 -0.8 1 1]; a = [-0.9 -0.8 -1];
% niestabilny

% act_flag1 = isstable(b,a)
% zplane(b,a)

% wynik flag = 0


load chirp
t = (0:length(y)-1)/Fs;
% 1.6 sekundy
xfft=abs(fft(y));
xfft=xfft/13129;

x1=1:1:6564;

% bar(x1(1:6564), xfft(1:6564));
% axis([0,6564, 0,0.01]) ;

% plot(t,y);
% fvtool(b,a)

outsignal = filter(b,a,y);

figure()
plot(t, outsignal);

xfft=abs(fft(outsignal));
xfft=xfft/13129;
x1=1:1:6564;

figure()
bar(x1(1:6564), xfft(1:6564));
axis([0,6564, 0,0.01]) ;
```

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