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```
% LAB5 Checks functionality of FIR window design
% Place this file in same directory as your
% rectfilt, hammingfilt and kaiserfilt functions.
```

Part 1: Check filter design

test_lab5a

```
Testing 'rectfilt' with N=21 and wc=0.25: O.K.
Testing 'rectfilt' with N=31 and wc=0.25: O.K.
Testing 'rectfilt' with N=41 and wc=0.25: O.K.
Testing 'rectfilt' with N=21 and wc=0.50: O.K.
Testing 'rectfilt' with N=31 and wc=0.50: O.K.
Testing 'rectfilt' with N=41 and wc=0.50: O.K.
Testing 'rectfilt' with N=21 and wc=0.75: O.K.
Testing 'rectfilt' with N=31 and wc=0.75: O.K.
Testing 'rectfilt' with N=41 and wc=0.75: O.K.

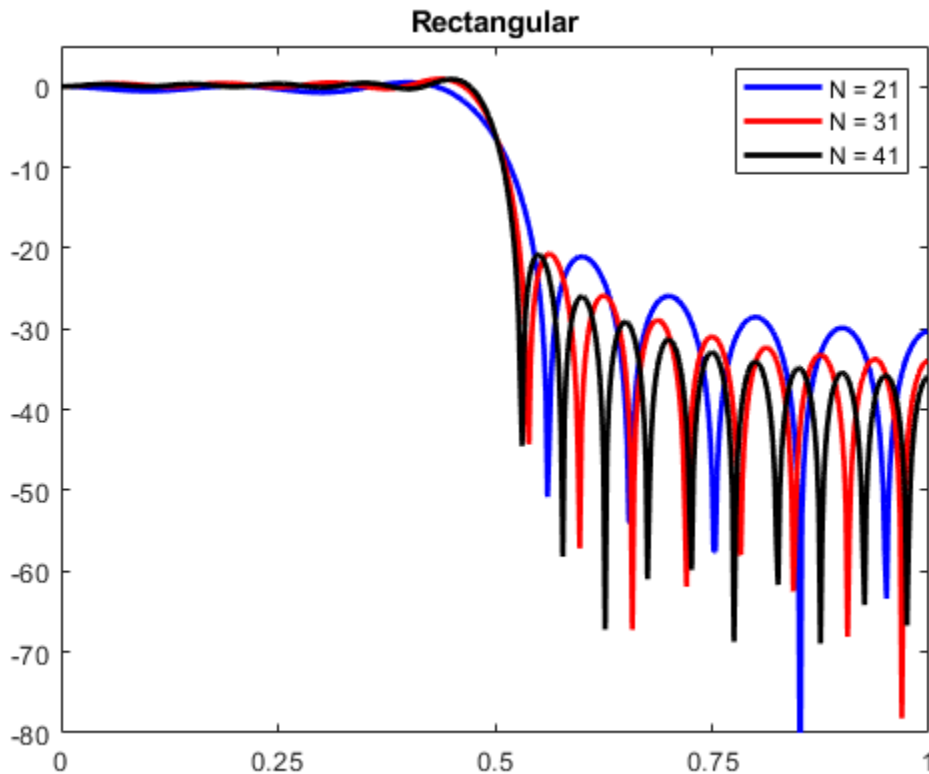
Testing 'hammingfilt' with N=21 and wc=0.25: O.K.
Testing 'hammingfilt' with N=31 and wc=0.25: O.K.
Testing 'hammingfilt' with N=41 and wc=0.25: O.K.
Testing 'hammingfilt' with N=21 and wc=0.50: O.K.
Testing 'hammingfilt' with N=31 and wc=0.50: O.K.
Testing 'hammingfilt' with N=41 and wc=0.50: O.K.
Testing 'hammingfilt' with N=21 and wc=0.75: O.K.
Testing 'hammingfilt' with N=31 and wc=0.75: O.K.
Testing 'hammingfilt' with N=41 and wc=0.75: O.K.

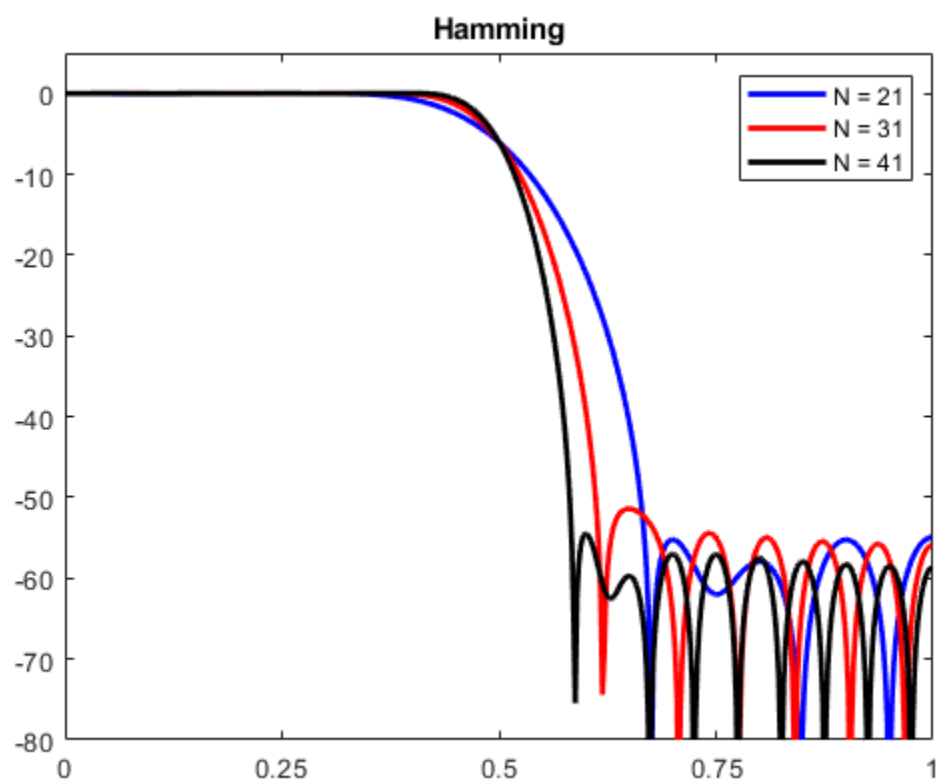
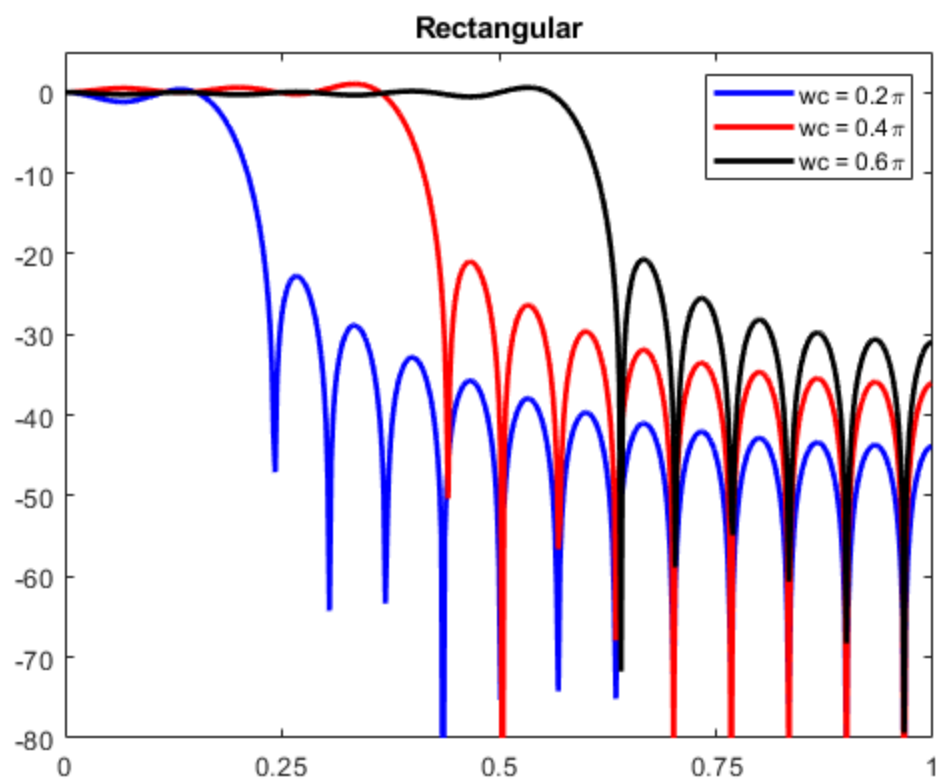
Testing 'kaiserfilt' with deltaOmega=0.1, delta=0.01:
  N (45) is correct, beta (3.39532) is correct
  Checking wc=0.25: O.K.
  Checking wc=0.50: O.K.
  Checking wc=0.75: O.K.
Testing 'kaiserfilt' with deltaOmega=0.1, delta=0.00097:
  N (73) is correct, beta (5.68242) is correct
  Checking wc=0.25: O.K.
  Checking wc=0.50: O.K.
  Checking wc=0.75: O.K.
Testing 'kaiserfilt' with deltaOmega=0.1, delta=9.7e-05:
  N (101) is correct, beta (7.88642) is correct
  Checking wc=0.25: O.K.
  Checking wc=0.50: O.K.
```

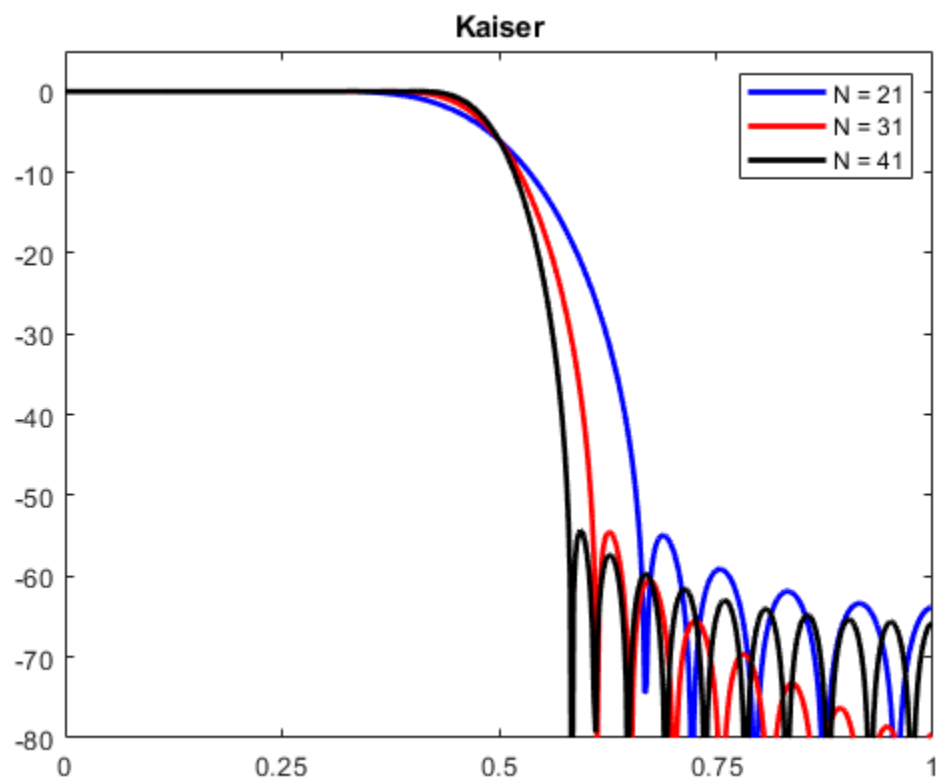
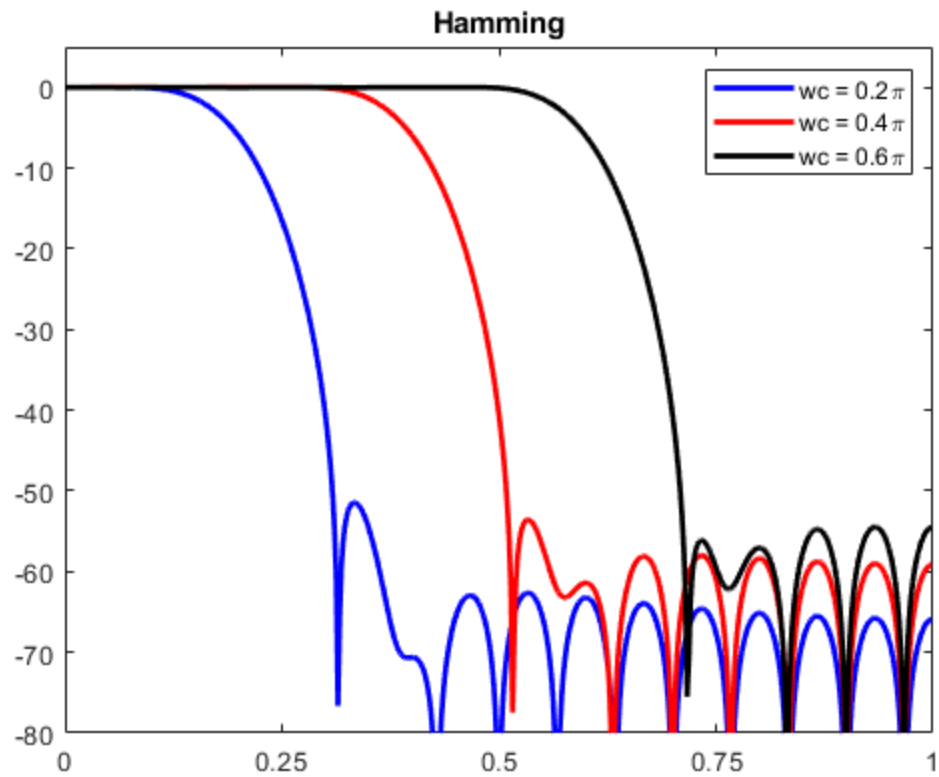
Checking $wc=0.75$: O.K.
Testing 'kaiserfilt' with $\Delta\omega=0.2$, $\Delta=0.01$:
N (23) is correct, β (3.39532) is correct
Checking $wc=0.25$: O.K.
Checking $wc=0.50$: O.K.
Checking $wc=0.75$: O.K.
Testing 'kaiserfilt' with $\Delta\omega=0.2$, $\Delta=0.00097$:
N (37) is correct, β (5.68242) is correct
Checking $wc=0.25$: O.K.
Checking $wc=0.50$: O.K.
Checking $wc=0.75$: O.K.
Testing 'kaiserfilt' with $\Delta\omega=0.2$, $\Delta=9.7e-05$:
N (51) is correct, β (7.88642) is correct
Checking $wc=0.25$: O.K.
Checking $wc=0.50$: O.K.
Checking $wc=0.75$: O.K.

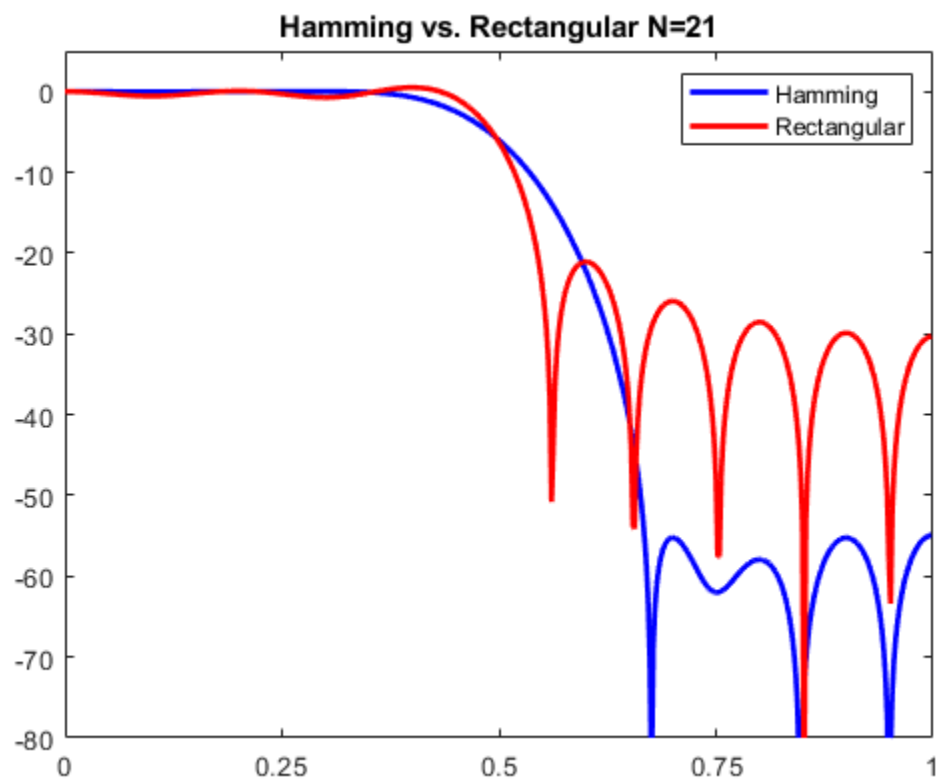
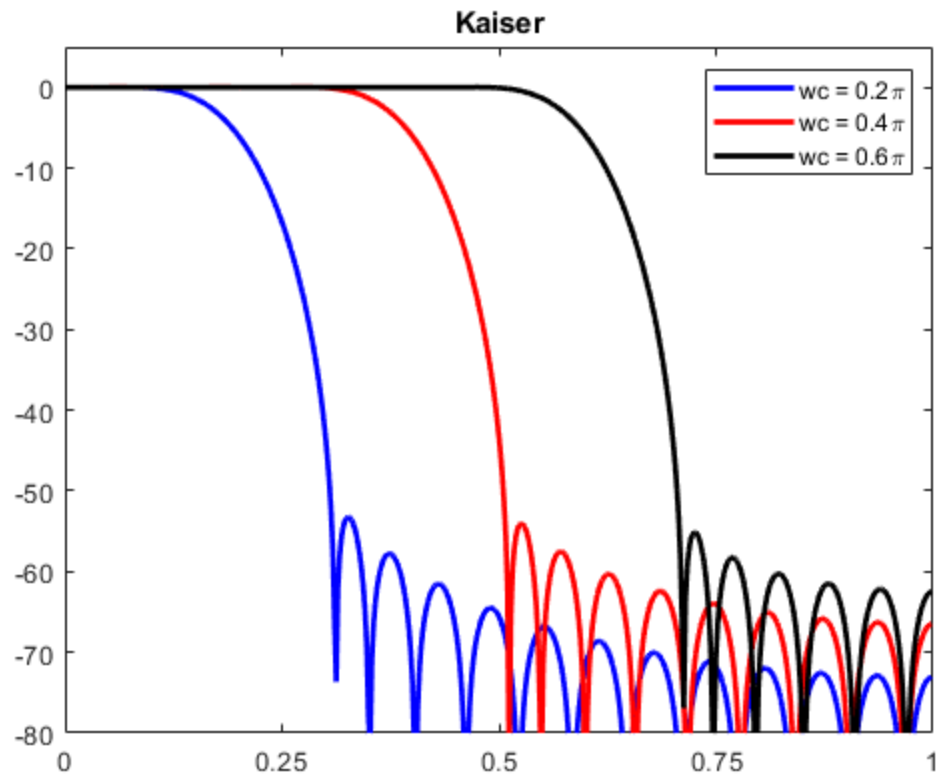
Part II: Comparative behavior of window filters

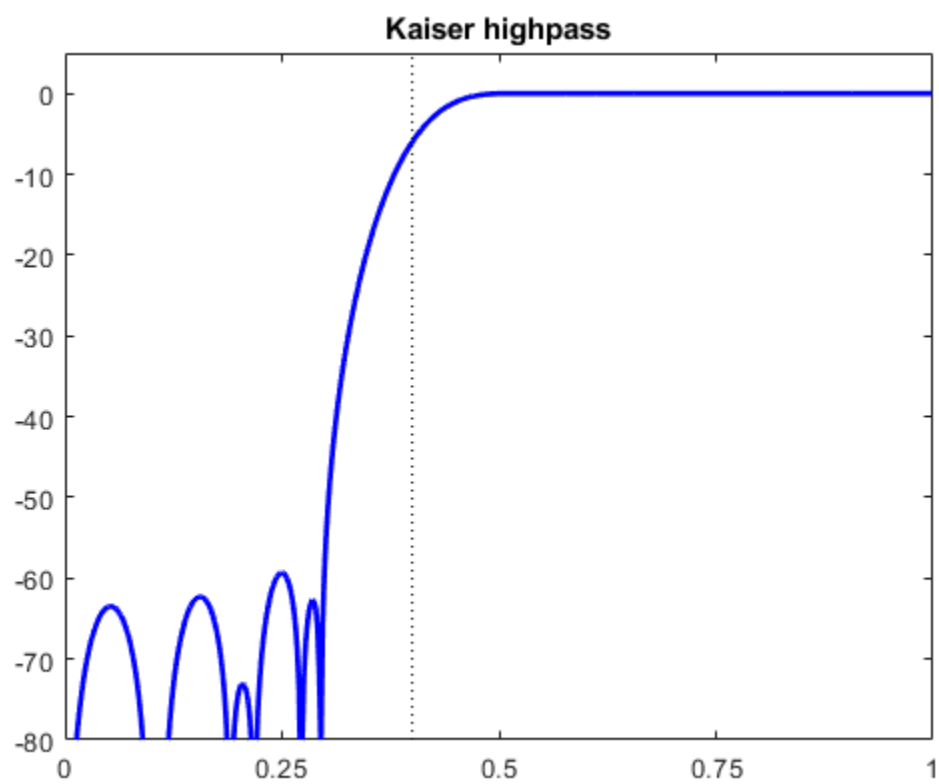
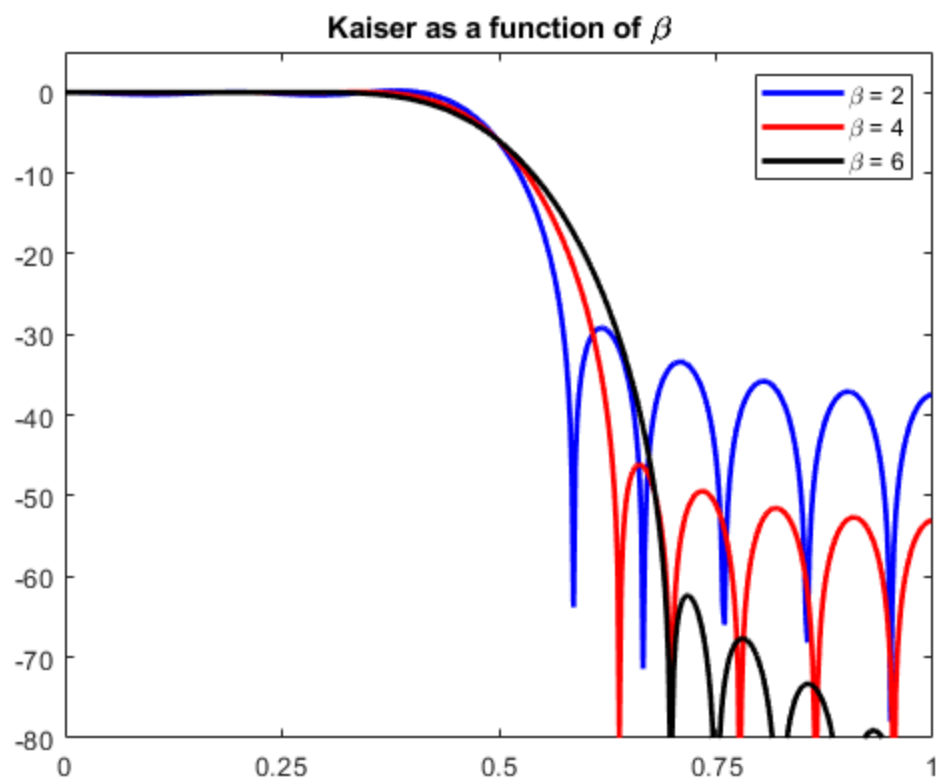
test_lab5b











Part III: Phone tones

test_lab5c

Signal to noise ratio of row tones: 49.5022

Signal to noise ratio of column tones: 42.8118

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