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clc;
clear all;
fp=fopen('comb_filter_clean_sp01.wav');
fseek(fp,22400,-1);
a=fread(fp,1024);
a=a-128;
subplot(2,1,1);
plot(a);
title('plot of voiced part of the signal');
xlabel('sample number');
ylabel('amplitude');
a1=window(@hamming,2048);
subplot(212);
plot(a1);
title('plot of hamming window signal');
xlabel('sample number');
ylabel('aplitude');
for i=1:1024
    a11(i)=a(i)*a(i);
end;
figure;
subplot(211);
plot(a11);
title('plot of windowed voiced part of the signal');
xlabel('sample number');
ylabel('amplitude');
b=abs(fft(a11));
f=22100/1024:22100/1024:22100;
subplot(212);
plot(f,b);
title('plot of FFT of window signal');
xlabel('frequency');
ylabel('amplitude');
c=log(b);
figure;
for i=1:512
    d(i)=c(i);
end
f=22100/1024:22100/1024:11050;
subplot(211);
plot(f,d);
title('log spectrum of windowed voiced speech signal');
xlabel('frequency in Hz');
ylabel('amplitudein db');
e=abs(ifft(c));
subplot(212);
plot(e);
title('cepstrum of voiced speech signal');
xlabel('frequency');
ylabel('aplitude in db');
for i=1:40

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        h(i)=0;
end
for i=41:983
    h(i)=e(i);
end
for i=984:1024
    h(i)=0;
end
figure;
subplot(211);
plot(h);
title('ceptrum of voiced ,after windowing');
xlabel('frequency');
ylabel('amplitude in db');
g=abs(fft(h));
for i=1:512;
    k(i)=g(i);
end
f=22100/1024:22100/1024:11050;
subplot(212);
plot(f,k);
title('voice speech cepstral windowed');
xlabel('frequency');
ylabel('amplitude in db');
disp(k);

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Columns 1 through 7

10.4102	0.4156	0.5072	0.7139	1.0042	0.7659	0.7514
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Columns 8 through 14

0.5426	1.1849	0.8792	0.5570	0.7233	0.3923	0.0108
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Columns 15 through 21

0.1289	0.4317	0.6952	0.9890	0.3285	0.3733	0.1618
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Columns 22 through 28

0.1313	0.5592	0.1572	0.1663	0.1681	0.2689	0.5076
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Columns 29 through 35

0.5042	0.3947	0.3908	0.4997	0.3227	0.0854	0.0763
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Columns 36 through 42

0.2460	0.7077	0.3340	0.7386	0.1516	0.5043	0.1622
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Columns 43 through 49

0.5044	0.2910	0.1162	0.1401	0.1041	0.0750	0.0991
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Columns 50 through 56

0.0437	0.2770	0.0053	0.2447	0.4093	0.2658	0.0706
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Columns 57 through 63

0.2146	0.7194	0.1685	0.4135	0.4209	0.0937	0.2690
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Columns 64 through 70

0.1552	0.3026	0.7198	0.1795	0.0802	0.1579	0.0831
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Columns 71 through 77

0.1870	0.1180	0.1848	0.2404	0.5367	0.4122	0.3148
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Columns 78 through 84

0.7167	0.0434	0.0933	0.4457	0.3046	0.3328	0.3276
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Columns 85 through 91

0.0959	0.2082	0.2630	0.4937	0.1028	0.0525	0.2082
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Columns 92 through 98

0.2204	0.4049	0.6101	0.0779	0.3558	0.0864	0.1744
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Columns 99 through 105

0.3871	0.1440	0.7936	0.3044	0.4756	0.0497	0.4325
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Columns 106 through 112

0.1928	0.2129	0.1609	0.3672	0.3072	0.1057	0.4093
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Columns 113 through 119

0.3449	0.0843	0.1549	0.0062	0.3972	0.2928	0.2179
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Columns 120 through 126

0.1066	0.4586	0.5425	0.1394	0.1164	0.1697	0.4775
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Columns 127 through 133

0.5141	0.5242	0.4922	0.3768	0.0678	0.0674	0.4818
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Columns 134 through 140

0.1647	0.2902	0.0985	0.9112	0.6925	0.1248	0.1618
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Columns 141 through 147

0.5641	0.1622	0.3773	0.3441	0.2439	0.1160	0.3536
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Columns 148 through 154

0.6096	0.1120	0.3677	0.0969	0.4342	0.0609	0.4240
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Columns 155 through 161

0.1461	0.0483	0.5240	0.1677	0.1411	0.2105	0.1156
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Columns 162 through 168

0.1291	0.2228	0.3419	0.6360	0.2762	0.1998	0.1077
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Columns 169 through 175

0.3706	0.2477	0.1432	0.0867	0.6981	0.5779	0.5432
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Columns 176 through 182

0.7145	0.4435	0.0688	0.2337	0.1276	0.1619	0.1040
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Columns 183 through 189

0.3519	0.1863	0.8106	0.1903	0.1979	0.1760	0.2036
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Columns 190 through 196

0.3604	0.2456	0.3512	0.6793	0.5824	0.3145	0.4751
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Columns 197 through 203

0.3474	0.0948	0.4625	0.1692	0.5783	0.3174	0.0913
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Columns 204 through 210

0.8311	0.4086	0.2741	0.6001	0.0510	0.0776	0.3858
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Columns 211 through 217

0.3122	0.2501	0.1007	0.5226	0.0911	0.2999	0.1221
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Columns 218 through 224

0.0583	0.3287	0.1173	0.1102	0.1204	0.1357	0.5278
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Columns 225 through 231

0.1219	0.5081	0.3903	0.4365	0.2571	0.5924	0.1058
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Columns 232 through 238

0.3950	0.0359	0.0790	0.2862	0.4849	0.1595	0.3552
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Columns 239 through 245

0.4876	0.2708	0.3657	0.1362	0.2281	0.1190	0.0202
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Columns 246 through 252

0.4873	0.2454	0.7321	0.0920	0.1722	0.1243	0.5138
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Columns 253 through 259

0.4471	0.1162	0.1648	0.3089	0.2098	0.3316	0.1549
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Columns 260 through 266

0.0766	0.2578	0.5108	0.1004	0.1160	0.0785	0.6643
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Columns 267 through 273

0.2491	0.5227	0.0134	0.0813	0.2213	0.0527	0.3353
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Columns 274 through 280

0.2217	0.5363	0.4446	0.1125	0.5423	0.2465	0.1130
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Columns 281 through 287

0.0462	0.3798	0.0689	0.6833	0.2453	0.4746	0.2777
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Columns 288 through 294

0.4251	0.1087	0.5161	0.0815	0.2184	0.1321	0.0857
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Columns 295 through 301

0.2933	0.0577	0.1275	0.1680	0.1384	0.5344	0.0993
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Columns 302 through 308

0.2278	0.2471	0.4275	0.1312	0.0559	0.5202	0.3791
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Columns 309 through 315

0.3830	0.7702	0.0763	0.3192	0.5010	0.0956	0.5460
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Columns 316 through 322

0.1014	0.3642	0.4470	0.3573	0.5623	0.7026	0.3859
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Columns 323 through 329

0.3024	0.4637	0.3154	0.1661	0.2651	0.2096	0.4158
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Columns 330 through 336

0.1423	0.4647	0.1060	0.1998	0.0214	0.1899	0.0770
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Columns 337 through 343

0.4802	0.7326	0.5684	0.4982	0.6944	0.0876	0.0865
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Columns 344 through 350

0.2210	0.3523	0.0923	0.1862	0.2525	0.5760	0.4390
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Columns 351 through 357

0.2628	0.0796	0.0872	0.2387	0.1204	0.2152	0.5324
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Columns 358 through 364

0.0684	0.2038	0.4134	0.0622	0.3917	0.0650	0.3885
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Columns 365 through 371

0.0799	0.6784	0.3122	0.1365	0.3571	0.3186	0.2923
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Columns 372 through 378

0.1921	0.6156	0.0372	0.1063	0.7375	1.0530	0.0999
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Columns 379 through 385

0.2762	0.1750	0.4678	0.1504	0.0927	0.3857	0.5514
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Columns 386 through 392

0.5987	0.5051	0.6095	0.1199	0.0789	0.1712	0.6681
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Columns 393 through 399

0.2806	0.0724	0.1271	0.3009	0.1408	0.0312	0.1664
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Columns 400 through 406

0.0677	0.3390	0.4359	0.1314	0.2785	0.3332	0.1005
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Columns 407 through 413

0.3325	0.1036	0.4690	0.0811	0.5055	0.3135	0.8609
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Columns 414 through 420

0.0630	0.3892	0.1667	0.0957	0.4390	0.0701	0.6065
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Columns 421 through 427

0.4662	0.2592	0.2419	0.1531	0.0696	0.5161	0.3047
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Columns 428 through 434

0.1620	0.0787	0.2376	0.3872	0.2379	0.3451	0.0891
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Columns 435 through 441

0.0887	0.6800	0.3000	0.3810	0.4300	0.1897	0.2411
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Columns 442 through 448

0.0819	0.2628	0.1413	0.2032	0.0954	0.1068	0.7489
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Columns 449 through 455

0.2025	0.0499	0.1801	0.1338	0.4450	0.4623	0.1399
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Columns 456 through 462

0.8974	0.2531	0.0692	0.1209	0.3920	0.2226	0.0053
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Columns 463 through 469

0.2994	0.1316	0.0967	0.1433	0.1450	0.1658	0.1579
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Columns 470 through 476

0.3067	0.5312	0.1719	0.4579	0.1281	0.6476	0.3953
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Columns 477 through 483

0.7326	0.2157	0.0707	0.0781	0.3612	0.4951	0.2662
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Columns 484 through 490

0.3913	0.5352	0.4406	0.2619	0.2017	0.2179	0.1559
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Columns 491 through 497

0.5195	0.1196	0.1437	0.2804	0.3214	0.9737	0.5972
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Columns 498 through 504

0.4088	0.1481	0.0574	0.3981	0.6149	0.5542	0.8152
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Columns 505 through 511

1.0660	0.4897	0.5469	0.6761	0.8477	0.5024	0.3402
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Column 512

0.5627





