```
1 "C:\Users\squal\Dropbox\Engenharia Informatica\Projetos\PYTHON\
  TI\Ficha 2\venv\Scripts\python.exe" "C:/Users/squal/Dropbox/
  Engenharia Informatica/Projetos/PYTHON/TI/Ficha 2/main.py"
2 Escolha o ficheiro a ler:
3 1 - "lena.bmp"
4 2 - "binaria.bmp"
5 3 - "ct1.bmp"
6 4 - "texto.txt"
7 5 - "saxriff.wav"
8 OPCÃO: 5
9 NOME DO FICHEIRO: "saxriff.wav"
10 -----
11 EX 1 a 3
12 Entropia: 3.530988733765133
13 -----
14 EX 4
15 Média ponderada: 3.5842902494331064
16 Variância ponderada: 7.718196741152084
17 -----
18 EX 5
19 Entropia pares: 2.889865638498082
20 -----
21 EX 6a
22 QUERY: Exemplo --- TARGET: Exemplo
23 infoMutua: [2.12192809 1.92192809 1.64643934 2.17095059 1.
  97095059 1.77095059
24 2.04643934 2.12192809 2.32192809 2.52192809 2.24643934 2.
  24643934
25 2.24643934 2.24643934 2.44643934 2.44643934 2.52192809 2.
  72192809
26 2.52192809 2.32192809 2.32192809 2.12192809 2.32192809 2.
  32192809
27 2.12192809 2.04643934 2.04643934 2.04643934 2.04643934 2.
  04643934
28 2.32192809 2.32192809 2.04643934 2.12192809 2.12192809 1.
  84643934
29 1.77095059 1.84643934 2.04643934 2.04643934 2.32192809]
31 EX 6b
32 QUERY: saxwriff.wav --- TARGET: "target01 - repeat.wav"
33 infoMutua: [2.80268259 0.06181664 0.07931035 0.06122012 1.
  1882457 0.0607802
34 0.0780626 0.06106886 0.85728982]
35
36 QUERY: saxwriff.wav --- TARGET: "target02 - repeatNoise.wav"
37 infoMutua: [0.26467708 0.07161242 0.09859545 0.06061021 0.
  47268055 0.06207255
```

```
38 0.06725942 0.07897082 0.15764094]
39
40 -----
41 EX 6c
42 QUERY: saxwriff.wav --- TARGET: "Song01.wav"
43 infoMutua: [0.13490135 0.12766097 0.12770258 0.13634246 0.
  12575958 0.12330544]
44 Inf mútua máxima: 0.13634246162998204
45 Inf mútua ordem decrescente: [0.13634246 0.13490135 0.12770258
  0.12766097 0.12575958 0.123305447
46
47 QUERY: saxwriff.wav --- TARGET: "Song02.wav"
48 infoMutua: [0.18076635 0.17331289 0.1733224 0.18903791 0.
  18515381]
49 Inf mútua máxima: 0.1890379083600219
50 Inf mútua ordem decrescente: [0.18903791 0.18515381 0.18076635
   0.1733224 0.17331289]
51
52 QUERY: saxwriff.wav --- TARGET: "Song03.wav"
53 infoMutua: [0.14042369 0.15474701 0.14484992 0.1511972 0.
  16756787 0.14163347
54 0.132850957
55 Inf mútua máxima: 0.16756787439474838
56 Inf mútua ordem decrescente: [0.16756787 0.15474701 0.1511972
  0.14484992 0.14163347 0.14042369
57 0.13285095]
58
59 QUERY: saxwriff.wav --- TARGET: "Song04.wav"
60 infoMutua: [0.18979138 0.1905872 0.18972897 0.19027646 0.
  1898101 0.18962823]
61 Inf mútua máxima: 0.19058719990804274
62 Inf mútua ordem decrescente: [0.1905872 0.19027646 0.1898101
  0.18979138 0.18972897 0.18962823]
63
64 QUERY: saxwriff.wav --- TARGET: "Song05.wav"
65 infoMutua: [0.53224241]
66 Inf mútua máxima: 0.53224240610459
67 Inf mútua ordem decrescente: [0.53224241]
68
69 QUERY: saxwriff.wav --- TARGET: "Song06.wav"
70 infoMutua: [3.53098873]
71 Inf mútua máxima: 3.530988733765134
72 Inf mútua ordem decrescente: [3.53098873]
73
74 QUERY: saxwriff.wav --- TARGET: "Song07.wav"
75 infoMutua: [3.53098873]
76 Inf mútua máxima: 3.530988733765134
```

77 Inf mútua ordem decrescente: [3.53098873]
78
79
80 Process finished with exit code 0
81