

Programming Homework – JPEG Decoder

Basic Requirement:

1. Implement a JPEG baseline (sequential DCT-based) decoder [1].
2. Correctly decode the assigned .jpg images [2] into .bmp files.
3. Submitted package must include: (1) source codes, (2) windows executables, and (3) usage documents (including a short description about your program);
4. All files should be compressed as a single zip file and name it as ITCT_JPEG_complete-student-id.zip, e.g., ITCT_JPEG_R01922092.zip

Bonus:

1. Implement a JPEG baseline encoder.
2. Support other JPEG modes, e.g., progressive mode.
3. Provide a friendly graphical user interface.
4. Any practical improvement.

Note:

1. Slow decoding time will get some penalties.
2. The usage document should describe how to run your programs clearly.
3. Please include all the dlls you need to run your program.
4. Virus-infected package will get stiff penalty.
5. Do not include any obj or language-dependent files in the submitted package. The ones with unreasonable file-size will get some penalties.

Reference:

- [1] JPEG International Standard (T.81E).
- [2] The four JPEG images: “monalisa.jpg”, “teatime.jpg”, “gig-sn01.jpg”, and “gig-sn08.jpg”.