

CS314 Operating System

Spring 2024

Exercise Question on April 23-C, 2024

In the following snapshot (a larger version of the same FAT is attached in APPENDIX) of the FAT, identify any anomaly (anything not right). (a) For each anomaly you found, briefly identify what is wrong (even just a couple of key words are fine). (b) How many correct (valid) file exists (assume that the table is the only table)?

Assume:

FFFF = a cluster not used

FFF0 = the last cluster in a file

Any other number = a pointer to the next cluster

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|------|------|------|------|------|------|------|------|------|------|------|---|---|---|---|---|---|
| 0000 | 006E | FFFF | FFFF | FFFF | FFFF | 0050 | FFFF | 00AA | FFF0 | | | | | | | |
| 0010 | FFFF | FFFF | 0086 | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | | | | | | | |
| 0020 | FFFF | FFFF | FFFF | 00A8 | FFFF | FFFF | 00B4 | FFFF | FFFF | | | | | | | |
| 0030 | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | | | | | | | |
| 0040 | FFFF | FFFF | 00DE | FFFF | FFFF | FFFF | FFFF | 00F0 | FFFF | | | | | | | |
| 0050 | 00A2 | FFFF | FFFF | 0000 | FFFF | FFFF | FFFF | FFFF | FFFF | | | | | | | |
| 0060 | FFFF | 002A | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | 00A2 | | | | | | |
| 0070 | FFFF | FFFF | 0090 | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | | | | | | |
| 0080 | FFFF | FFFF | FFFF | 00DA | FFFF | 00FE | FFFF | FFFF | FFFF | | | | | | | |
| 0090 | 0026 | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | | | | | | | |
| 00A0 | FFFF | 00EA | FFFF | FFFF | FFFF | FFF0 | 00E6 | FFFF | 0008 | | | | | | | |
| 00B0 | FFFF | FFFF | 008A | FFFF | 0074 | FFFF | FFFF | FFFF | FFFF | | | | | | | |
| 00C0 | FFFF | FFFF | FFFF | FFF0 | FFFF | FFFF | FFFF | FFFF | FFFF | | | | | | | |
| 00D0 | FFFF | 0056 | FFFF | FFFF | FFFF | FFFF | 0049 | FFFF | 000E | | | | | | | |
| 00E0 | FFFF | FFFF | FFFF | 0032 | FFFF | FFF0 | FFFF | FFFF | FFFF | | | | | | | |
| 00F0 | 0044 | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | FFFF | 0062 | | | | | | |