

CS 342 - OPERATING SYSTEMS

PROJECT 4

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Sec 2

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burak@burak-virtual-machine:~/Desktop/Project4/Project4/Project4$ ./p1 16384
executing command = dd if=/dev/zero of=vdisk1.bin bs=4094 count=16384
16384+0 records in
16384+0 records out
67076096 bytes (67 MB, 64 MiB) copied, 0,11783 s, 569 MB/s
burak@burak-virtual-machine:~/Desktop/Project4/Project4/Project4$ mkfs.ext4 "vdisk1.bin"
mke2fs 1.44.1 (24-Mar-2018)
Discarding device blocks: done
Creating filesystem with 65504 1k blocks and 16384 inodes
Filesystem UUID: e3eab472-2f2c-4227-bde7-0fd4b8c4dfa5
Superblock backups stored on blocks:
    8193, 24577, 40961, 57345

Allocating group tables: done
Writing inode tables: done
Creating journal (4096 blocks): done
Writing superblocks and filesystem accounting information: done
```

```
burak@burak-virtual-machine:~/Desktop/Project4/Project4/Project4$ dumpe2fs "vdisk1.bin"
dumpe2fs 1.44.1 (24-Mar-2018)
Filesystem volume name: <none>
Last mounted on: <not available>
Filesystem UUID: 2cdb7d83-d1c0-45c9-8eae-05c36b5ab12b
Filesystem magic number: 0xEF53
Filesystem revision #: 1 (dynamic)
Filesystem features: has_journal ext_attr resize_inode dir_index filetype extent 64bit flex_bg sparse_super large_file huge_file dir_nlink extra_isize metadata_csum
Filesystem flags: signed_directory_hash
Default mount options: user_xattr acl
Filesystem state: clean
Errors behavior: Continue
Filesystem OS type: Linux
Inode count: 16384
Block count: 65504
Reserved block count: 3275
Free blocks: 58039
Free inodes: 16373
First block: 1
Block size: 1024
Fragment size: 1024
Group descriptor size: 64
Reserved GDT blocks: 256
Blocks per group: 8192
Fragments per group: 8192
Inodes per group: 2048
Inode blocks per group: 256
Flex block group size: 16
Filesystem created: Wed May 27 23:29:54 2020
Last mount time: n/a
Last write time: Wed May 27 23:29:55 2020
Mount count: 0
Maximum mount count: -1
Last checked: Wed May 27 23:29:54 2020
Check interval: 0 (<none>)
Lifetime writes: 278 kB
Reserved blocks uid: 0 (user root)
Reserved blocks gid: 0 (group root)
First inode: 11
```

```
First inode:      11
Inode size:       128
Journal inode:    8
Default directory hash: half_md4
Directory Hash Seed: bfe8923c-21fe-4d64-8f6e-7e174c4a11d1
Journal backup:   inode blocks
Checksum type:    crc32c
Checksum:         0x07bd914a
Journal features: (none)
Journal size:     4096k
Journal length:   4096
Journal sequence: 0x00000001
Journal start:    0
```

```
Group 0: (Blocks 1-8192) csum 0xa477 [ITABLE_ZEROED]
  Primary superblock at 1, Group descriptors at 2-2
  Reserved GDT blocks at 3-258
  Block bitmap at 259 (+258), csum 0xa3f03370
  Inode bitmap at 267 (+266), csum 0x4a390855
  Inode table at 275-530 (+274)
  5856 free blocks, 2037 free inodes, 2 directories, 2037 unused inodes
  Free blocks: 2337-8192
  Free inodes: 12-2048
```