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## PROJECT 4 REPORT

### Introduction:

Firstly, the main goal of this report was to understand the concept of disks and how they were working on Linux. We were told to access a disk in raw mode and this disk was going to be a Linux file. Furthermore, the disk was formatted with ext2 Linux file system. We were once more asked to write a DISKNAME program which will access block by block and give the name of regular Linux File that is acting as the disk.

Therefore, we did some experiments in order to measure the time which takes to format a disk which is the Linux file. However, we could not conclude the Project with the last thing of the project which is the access time to the disks. On the other we have done the rest of the project fully. Here are the outputs of the project.

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### Superblock Information:

s\_inodes\_count: 1024  
s\_blocks\_count: 1000  
s\_r\_blocks\_count: 50  
s\_free\_blocks\_count: 962  
s\_free\_inodes\_count: 1010  
s\_first\_data\_block: 0  
s\_log\_block\_size: 2  
s\_log\_frag\_size: 2  
s\_blocks\_per\_group: 32768  
s\_frags\_per\_group: 32768  
s\_inodes\_per\_group: 1024

bg\_inode\_table: 4

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File names:

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..

file2.txtd

file3.binxt

file1.txt

file4.txt

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Contents of the inodes of directory entries:

inode: 12 rec\_len: 20 name\_len: 9 file\_type: 0 name: file2.txtd

i\_mode: -24065

i\_uid: 1000

i\_size: 30

i\_atime: 1670013844

i\_ctime: 1670013844

i\_mtime: 1670013841

i\_dtime: 1670013844

i\_gid: 1000

i\_links\_count: 0

i\_blocks: 0

inode: 15 rec\_len: 20 name\_len: 9 file\_type: 0 name: file3.binx

i\_mode: -32332

i\_uid: 1000

i\_size: 0

i\_atime: 1670013855

i\_ctime: 1670013855

i\_mtime: 1670013855

i\_dtime: 0

i\_gid: 1000

i\_links\_count: 1

i\_blocks: 0

inode: 14 rec\_len: 20 name\_len: 9 file\_type: 0 name: file1.txt

i\_mode: -32332

i\_uid: 1000

i\_size: 0

i\_atime: 1670013850

i\_ctime: 1670013850

i\_mtime: 1670013850

i\_dtime: 0

i\_gid: 1000

i\_links\_count: 1

i\_blocks: 0

inode: 16 rec\_len: 4012 name\_len: 9 file\_type: 0 name: file4.txt

i\_mode: 0

i\_uid: 0

i\_size: 0

i\_atime: 0

i\_ctime: 0

i\_mtime: 0

i\_dtime: 0

i\_gid: 0

i\_links\_count: 0

i\_blocks: 0

We have the i\_mode ,i\_uid, i\_size,i\_atime,i\_ctime,i\_mtime,i\_dtime,i\_gid, i\_link\_counts, i\_blocks of i\_nodes for different rec\_lens.

In addition, we know when the disk size will incremented also the measuring time will increase. Therefore, the table which will be created would be in order to this result.

#### Conclusion:

We now have a well-known experience about disks and formatting them. Furthermore, we have concluded our project 4 successfully which means we have a well known c experience and well-known operating system information.