

EEL5737 Assignemnt 1
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Question 1.

The questions has been answered by running the dump file given in the assignment.

A. Which directories are present in the root directory?

There exists three directories in the root. These are: foo, bar and data.

```
Printing Inode: 0  
  
Name: . Type: 2  
  
Name: data Type: 2  
  
Name: foo Type: 2  
  
Name: bar Type: 2  
  
Name: file1.txt Type: 1  
  
Name: file2.txt Type: 1  
  
Name: file3.txt Type: 1  
  
Name: file4.txt Type: 1
```

Figure 1: Root Directory

B. How many data blocks are in use for inode 4?

Two data blocks are present for inode 4, block numbers are [14,15] I have written the below function for printing Inode details:

```
def printInode(self,i):  
    logging.debug('Inode Number: ' + str(i))  
    InodeNumbervar = InodeNumber(RawBlocks, i)  
    InodeNumbervar.InodeNumberToInode()  
    InodeNumbervar.inode.Print()
```

```

DEBUG:root:
  Inode Number: 4
DEBUG:root:InodeNumberToInode: 4
DEBUG:root:Get: 4
DEBUG:root:InodeNumberToInode : inode_number 4 raw_block_number: 4 slice start: 64 end: 80
DEBUG:root:tempinode: 000000f30001000100000000e0000000f
INFO:root:Inode size : 243
INFO:root:Inode type : 1
INFO:root:Inode refcnt : 1
INFO:root:Block numbers:
INFO:root:14,15,

```

Figure 2: Inode 4

C. In which directory is file9.txt located, and what are its contents?

file9.txt is located in directory ./foo/bar. I node number for the directory is 12. I have manually travelled all the directories, found the file to be inside foo directory, then inside bar directory. After finding the inode for bar directory, used the function printDirectory to get the directory details. After finding the inode number of file9.txt, used that to call read function to view contents.

```

Printing Inode: 12

Name: . Type: 2 Inode Number: 12

Name: .. Type: 2 Inode Number: 2

Name: file9.txt Type: 1 Inode Number: 13

Name:  Type: 2 Inode Number: 0

Name:  Type: 2 Inode Number: 0

Name:  Type: 2 Inode Number: 0

Name:  Type: 2 Inode Number: 0

Name:  Type: 2 Inode Number: 0

[cwd=12]:cat file9.txt
Contents of file9.txt

```

Figure 3: file9.txt

All the codes that has been written is included in code submission.