CSCI3150 Assignment 4

1.

1. The file will have the biggest size with SFS for occupying all the available data block i.e. the blocks that the 2 direct pointers point to and the blocks that all the pointers pointed by the single indirect point to.

the size of a data block is 4K bytes

Size = by 2 direct pointers + by all pointers in the indirect pointer

= 2 \* 4K + 1024 \* 4K

= 4104K bytes

≈ 4 MB

1. (i) 17, 33, 47, 51, 102

(ii) 33, 47, 51, 102, 104, 131, 142

(iii) 33, 47, 51, 102, 104, 131, 142, 155, 167, 188

(iv) 16, 33, 47, 51, 102, 104, 131, 142

2.

Content of data block 4:

|  |  |
| --- | --- |
| . | 4 |
| .. | 0 |
| dir2 | 2 |

Content of data block 5:

|  |  |
| --- | --- |
| . | 5 |
| .. | 0 |
| dir1 | 1 |
| dir8 | 8 |
| dir9 | 9 |

Content of data block 6:

|  |  |
| --- | --- |
| . | 6 |
| .. | 10 |
| rfile5 | 17 |

Content of data block 10:

|  |  |
| --- | --- |
| . | 10 |
| .. | 0 |
| dir6 | 6 |
| dir3 | 3 |
| dir12 | 12 |

Content of data block 12:

|  |  |
| --- | --- |
| . | 12 |
| .. | 10 |
| rfile2 | 14 |
| rfile3 | 15 |
| rfile6 | 18 |

1. inode 0 -> data block 0 -> inode 10 -> data block 10 -> inode 12 -> data block 12 -> inode 15