grades: 48/60 80%

Q1

1

ls -a /usr/bin

2

mv \*.txt /home/user/docs

3

gcc -pthread /home/user/proj -lm -o myprog

gcc -o myprog -lm /home/user/proj/myprog.c

4

svn commit -m “Updated README file”

git commit -m "Updated README file"

5

grep error server.log

6

grep -c hello data.txt

7

ls -at /home/user

find /home/user -type f -mtime -1

8

rm \*.bak

9

mv oldname.txt /home/user/docs/newname.txt

mv /home/user/docs/oldname.txt /home/user/docs/newname.txt

10

mkdir ../mydir

Q2

a

int my\_ptr[5]; int (\*my\_ptr)[5];

b

void (\*my\_ptr)(int);

c

struct func{

int x;

int y;

}my\_ptr\*;

struct mystruct { int x; int y; }; struct mystruct \*my\_ptr;

d

char\* my\_ptr;

e

int\* (double)my\_ptr; int \*\*my\_ptr;

f

void\* my\_ptr;

Q3

16KiB = 16384 B

1 6916

50 541 13800

|  |  |
| --- | --- |
| Virtual Address | Physical Address |
| 7456 | SEGFAULT |
| 23300 | 678660 |
| 833000 | 8877544 |
| 811600 | UNKNOWN |

Q4

a

64T = 2^46 B 46bits

b

n = 16\*1024/8 = 2048 pages

size3 = 2048\*16/1024 = 32 MiB

n3 = 96\*1024/32 = 3072 pages

(1+2+3072)\*16 = 49200 KiB

c

n3 = 256\*1024/32 = 8192 pages

(1+4+8192)\*16 = 131152 KiB

d

(1+2048+2048^2)\*16 = 4196353 KiB = 4GiB

e

n3\_extra = 1024/32 = 32 pages

(1+32)\*16 + 49200 = 49728KiB

Q5

a

abck\*2

abdk\*2

aejk\*2

aefghk\*2

ans: 8

b

7

c

a b c d 4k e f g h j 4k = 17

d

36

Q6

(a)

0001 0001

0000 1001

10

0010

0011

1001

1000

|  |  |  |  |
| --- | --- | --- | --- |
|  | Netmask | Broadcast Address | CIDR |
| A | 255.255.224.0 | 192.168.31.255 | 192.168.0.0/19 |
| B | 255.255.255.240 | 130.102.72.15 | 130.102.72.0/28 |
| C | 255.255.255.0 | 10.1.1.255 | 10.1.1.0/24 |
| D | 255.255.254.0 | 130.102.3.255 | 130.102.0.0/23 |

b

0111 0111

0001 1110

9

0111

1001

|  |  |
| --- | --- |
| a | 8186 |
| e | 8388602 |
| f | 12 |

Q7

a

n = 4\*1024/8 = 512 pointers

(6+512)\*4 = 2072 KiB

b

metadata

c

(6+512\*2 + 512^2\*2)\*4 = 2101272 KiB

q8

1

boggis noddy lutze

2

noddy

3

lutze lobsang boggis

q9

chmod g-x generate

chmod g-r o+r data

chmod g-r, o+r data

2

touch docx ln doc2 docx

ln -s docz docs

q10

int fun

\*b=c-a;

scanf(“%d”, &a[i])

m = fun m has not been initiated

p is not available as it requires a pointer