



Name: Anil Pavuluru

Login: anpavulu

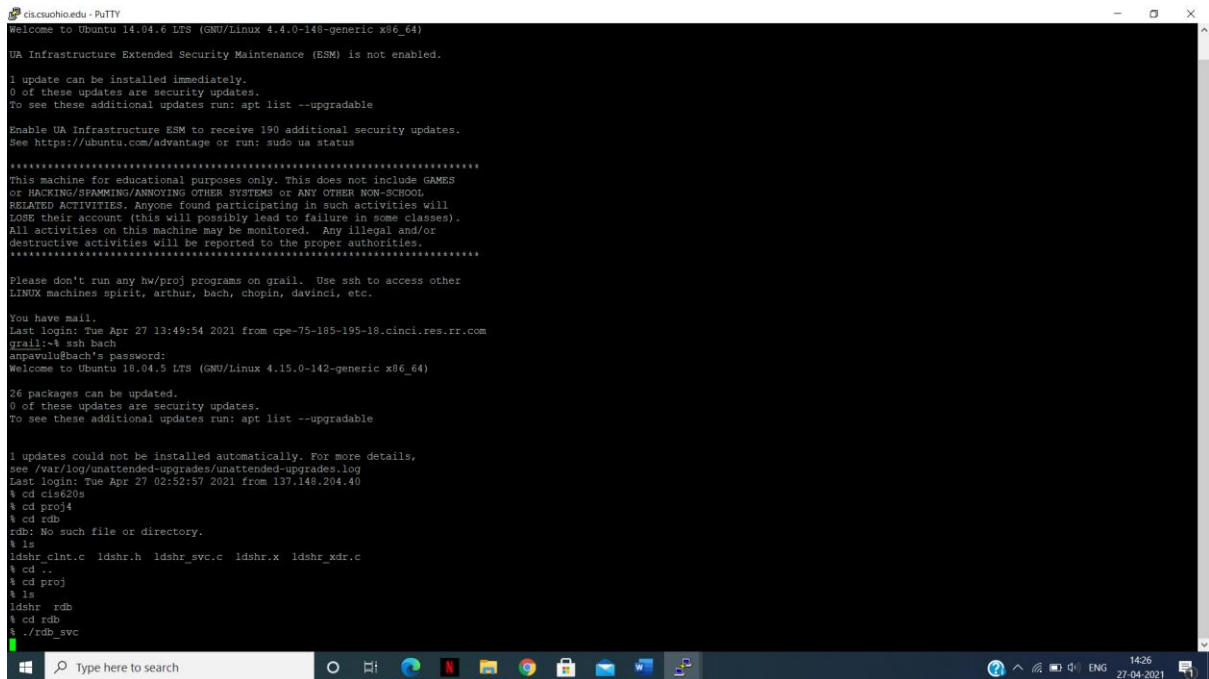
PROJECT STATUS: NOT WORKING

Extract the tar file rdb under the working directory of proj4

Run rpcgen to check the specification and if valid generate the four source code files that will be needed for client and server rdb.x generates rdb.h,rdb.xdr,rdb_clnt.c,rdb_svc.c

Run the server first bach% ./rdb_svc

Rdb_svc_proc.c rdb_svc.c rdb_xdv.c →rdb_svc



```
ciscucho.edu - PuTTY
Welcome to Ubuntu 14.04.6 LTS (GNU/Linux 4.4.0-148-generic x86_64)

UA Infrastructure Extended Security Maintenance (ESM) is not enabled.
1 update can be installed immediately.
0 of these updates are security updates.
To see these additional updates run: apt list --upgradable

Enable UA Infrastructure ESM to receive 190 additional security updates.
See https://ubuntu.com/advantage or run: sudo ua status

*****
This machine for educational purposes only. This does not include GAMES
or HACKING/SPAMMING/ANNOYING OTHER SYSTEMS or ANY OTHER NON-SCHOOL
RELATED ACTIVITIES. Anyone found participating in such activities will
LOSE their account (this will possibly lead to failure in some classes).
All activities on this machine may be monitored. Any illegal and/or
destructive activities will be reported to the proper authorities.
*****

Please don't run any hw/proj programs on grail. Use ssh to access other
LINUX machines spirit, arthur, bach, chopin, davinci, etc.

You have mail.
Last login: Tue Apr 27 13:49:54 2021 from cpe-75-185-195-18.cinci.res.rr.com
grail:~# ssh bach
snayvulu@bach's password:
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 4.15.0-142-generic x86_64)

26 packages can be updated.
0 of these updates are security updates.
To see these additional updates run: apt list --upgradable

1 updates could not be installed automatically. For more details,
see /var/log/unattended-upgrades/unattended-upgrades.log
Last login: Tue Apr 27 02:52:57 2021 from 137.148.204.40
% cd cis620s
% cd proj4
% cd rdb
rdb: No such file or directory.
% ls
ldshr_clnt.c ldshr.h ldshr_svc.c ldshr.x ldshr_xdr.c
% cd ..
% cd proj
% ls
ldshr rdb
% cd rdb
% ./rdb_svc
```

And next we run the client

Arthur% ./rdb bach 2 HUA

Bach server run 2 means last name as key and HUA

```
ciscuohio.edu - PuTTY
login as: anpavulu
anpavulu@ciscuohio.edu's password:
Welcome to Ubuntu 14.04.6 LTS (GNU/Linux 4.4.0-148-generic x86_64)

UA Infrastructure Extended Security Maintenance (ESM) is not enabled.
1 update can be installed immediately.
0 of these updates are security updates.
To see these additional updates run: apt list --upgradable

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*****

Please don't run any hw/proj programs on grail. Use ssh to access other
LINUX machines spirit, arthur, bach, chopin, davinci, etc.

You have mail.
Last login: Tue Apr 27 14:23:59 2021 from cpe-75-185-195-18.cinci.res.rr.com
grail:~$ ssh arthur
anpavulu@arthur's password:
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 4.15.0-142-generic x86_64)

103 packages can be updated.
0 updates are security updates.

Last login: Tue Apr 27 02:53:40 2021 from 137.148.204.40
% cd cis620s
% cd proj
% cd rdb
% ./rdb bach 2 HUA
first middle last phone location
MULAN B HUA 4777 UC486
% 
```

ldshr.x (added two methods double find_max() and double update_1st()) creating step file of four source code as like rdb here ldshr.h, ldshr.xdr, ldshr_clnt.c, ldshr_svc.c

Run the server first bach% ./ldshr_svc

ldshr_svc_proc.c ldshr_svc.c ldshr_xdv.c → ldshr_svc

```
ciscuohio.edu - PuTTY

Please don't run any hw/proj programs on grail. Use ssh to access other
LINUX machines spirit, arthur, bach, chopin, davinci, etc.

You have mail.
Last login: Tue Apr 27 13:49:54 2021 from cpe-75-185-195-18.cinci.res.rr.com
grail:~$ ssh bach
anpavulu@bach's password:
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 4.15.0-142-generic x86_64)

26 packages can be updated.
0 of these updates are security updates.
To see these additional updates run: apt list --upgradable

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see /var/log/unattended-upgrades/unattended-upgrades.log
Last login: Tue Apr 27 02:52:57 2021 from 137.148.204.40
% cd cis620s
% cd proj4
% cd rdb
rdb: No such file or directory.
% ls
ldshr_clnt.c ldshr.h ldshr_svc.c ldshr.x ldshr_xdr.c
% cd ..
% cd proj
% ls
ldshr_rdb
% cd rdb
% ./rdb_svc
~c
% cd ldshr
ldshr: No such file or directory.
% cd ..
% cd ldshr
% ls
findmax.cu ldshr.c ldshr_shared.h ldshr_svc_proc.c ldshr.x makefile personnel.dat
% make
gcc -c -o ldshr.o -DDEBUG ldshr.c
gcc -DDEBUG -c -o ldshr_clnt.o ldshr_clnt.c
gcc -DDEBUG -c -o ldshr_xdr.o ldshr_xdr.c
gcc -DDEBUG -o ldshr ldshr.o ldshr_clnt.o ldshr_xdr.o \
gcc -c -o ldshr_svc_proc.o -DDEBUG ldshr_svc_proc.c
gcc -DDEBUG -c -o ldshr_svc.o ldshr_svc.c
gcc -DDEBUG -o ldshr_svc ldshr_svc_proc.o ldshr_svc.o \
ldshr_xdr.o
% ./ldshr_svc
```

And next we run the client

Arthur% ./ldshr bach 2 HUA

Bach server run 2 means last name as key and HUA

Arthur% ./ldshr bach 1 MULAN

Bach server run 1 means first name as key and MULAN

Arthur% ./ldshr bach 3 4777

Bach server run 3 means phone as key and 4777

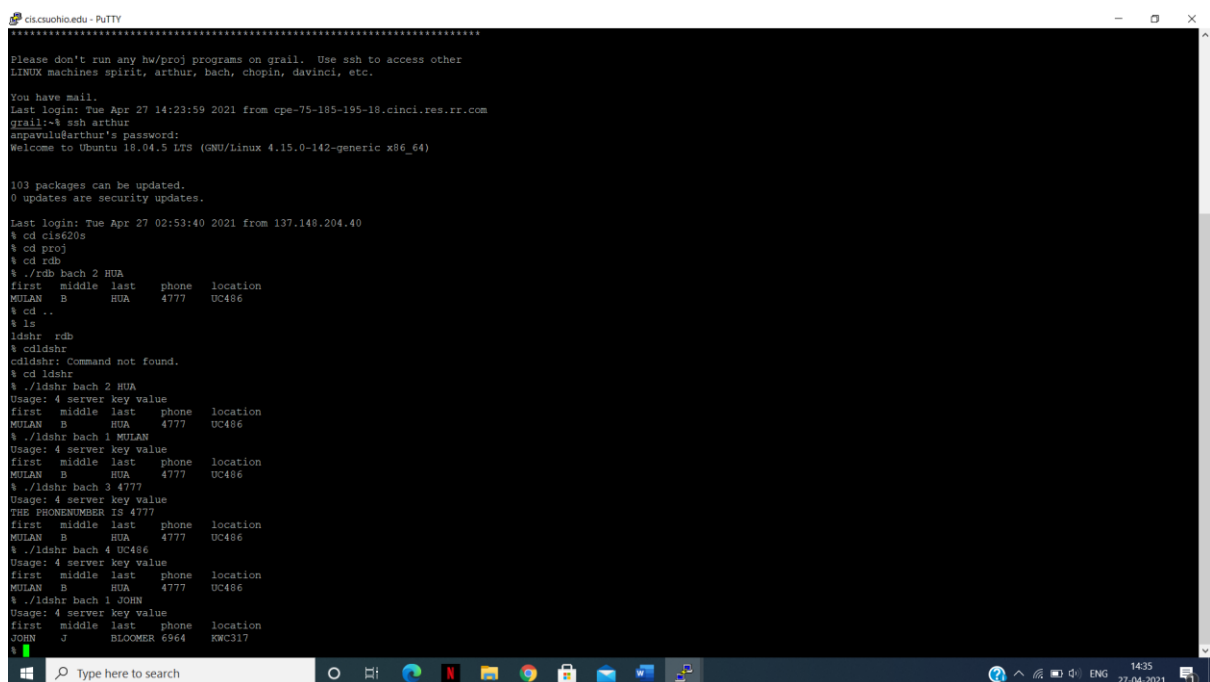
Arthur% ./ldshr bach 4 UC486

Bach server run 4 means location as key and UC486

Arthur% ./ldshr bach 1 JOHN

Bach server run 1 means first name as key and JOHN

Another record we can read and get record by record from personnel.dat file



```

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LINUX machines spirit, arthur, bach, chopin, davinci, etc.

You have mail.
Last login: Tue Apr 27 14:23:59 2021 from cpe-75-185-195-18.cinci.res.rr.com
grail:~$ ssh arthur
arthur@arthur:~$ ./ldshr bach 2 HUA
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% cd ..
% ls
ldshr rdb
% cdldshr
cdldshr: Command not found.
% cd ldshr
% ./ldshr bach 2 HUA
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 1 MULAN
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 3 4777
Usage: 4 server key value
THE PHONENUMBER IS 4777
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 4 UC486
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 1 JOHN
Usage: 4 server key value
first middle last phone location
JOHN J BLOOMER 6964 KWC317
%

```

ldshr_svc_proc.c

inorder to get above resulted output I filled out function code for firstname,phone and location based on the last name, and added the method findmax_gpu_1_svc(void *r, struct svc_req *rqp)

and update_st_1_svc(void *r, struct svc_req *rqp)

Debugging experience:

Firstly with out add method in server I just type make It show me the warning like message where is the funvtion defination body so I just went at the partcular server file and written down the methods declartion that part is done.

Secondly while giving the work laod clacultaion `./ldshr -gpu 20 5 17`

Here my point is ldshr.c I am passing 5 values in the argument but in the given file it was 4 I was confused either I was increased to 5 or not if I changed it the ldshr.h template wise array location are changed because I need to increase phonekey lastname and firstname one incremenet in the argv I was strucked I did not have an idea how to implement

Next point I was strucked at the four workstation names in the table of array but I was understanding in the class but not have an idea how to store and tell which workstation the sever started and to execute in the client side.

I created pthread.h header file ldshr.c and create 5 threads because of work load calculation for each thread because thread is light weight processor.

Next getload() here I did not get how to implement the array of last 1.0minute workload from `./rpc cpuinfo`

In findmax.cu I changed int main header file and uncommented for the randomvalue summation to be done

Over all experience on this project I am understanding what we have do in the file but enabling to do in the code side from my side average.

```
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qmail:~$ ssh arthur
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first middle last phone location
MULAN B HUA 4777 UC486
% cd ..
% ls
ldshr rdb
% cdldshr
cdldshr: Command not found.
% cd ldshr
% ./ldshr bach 2 HUA
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 1 MULAN
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 3 4777
Usage: 4 server key value
THE PHONENUMBER IS 4777
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 4 UC486
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 1 JOHN
Usage: 4 server key value
first middle last phone location
JOHN J BLOOMER 6964 KWC317
% ./ldshr -gpu 20 5 17
Usage: 5 server key value
Usage: ./ldshr server key value
% ^C
% ./ldshr -gpu 20 5 17
Usage: 5 server key value
-gpu: RPC: Unknown host
% ^C
```

Makefile : add nvcc in the make file findmax.cu errors and warning declaration are solved before the make file to build in the kernel.

```
ciscuohio.edu - PuTTY
% cd ldshr
% ./ldshr bach 2 HUA
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 1 MULAN
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 3 4777
Usage: 4 server key value
THE PHONENUMBER IS 4777
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 4 UC486
Usage: 4 server key value
first middle last phone location
MULAN B HUA 4777 UC486
% ./ldshr bach 1 JOHN
Usage: 4 server key value
first middle last phone location
JOHN J BLOOMER 6964 KWC317
% ./ldshr -gpu 20 5 17
Usage: 5 server key value
Usage: ./ldshr server key value
% ^C
% ./ldshr -gpu 20 5 17
Usage: 5 server key value
-gpu: RPC: Unknown host
% ./ldshr bach 1 JOHN
Usage: 4 server key value
Usage: ./ldshr server key value
% ./ldshr bach 1 JOHN
Usage: 4 server key value
first middle last phone location
JOHN J BLOOMER 6964 KWC317
% make clean
rm -f ldshr ldshr_svc ldshr_svc.c ldshr_xdr.c ldshr_clnt.c ldshr.h *.o *.**%
% make
gpgen ldshr.x
gcc -c -o ldshr.o -DDEBUG ldshr.c
gcc -DDEBUG -c -o ldshr_clnt.o ldshr_clnt.c
gcc -DDEBUG -c -o ldshr_xdr.o ldshr_xdr.c
gcc -DDEBUG -o ldshr ldshr.o ldshr_clnt.o ldshr_xdr.o \
ldshr.o
gcc -c -o ldshr_svc_proc.o -DDEBUG ldshr_svc_proc.c
gcc -DDEBUG -c -o ldshr_svc.o ldshr_svc.c
gcc -DDEBUG -o ldshr_svc ldshr_svc_proc.o ldshr_svc.o \
ldshr_xdr.o
% ^C
```