

# Project 1 Test Report

CS333

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## Compilation Test:

Subtest 1:

Compile with CS333\_PPROJECT set to PRINT SYSCALLS set to 0 and CS333 PROJECT set to 0 in the Makefile

(a) Code correctly compiles (**Passes**)

(b) No trace information is displayed (**passed**)

```
babbage.cs.pdx.edu - PuTTY
cervan4@babbage:~/CS333/xv6-pdx$ make run
make -s clean
make -s qemu-nox
nmeta 59 (boot, super, log blocks 30 inode blocks 26, bitmap blocks 1) blocks 1941 total 2000
ballocc: first 707 blocks have been allocated
ballocc: write bitmap block at sector 58
boot block is 467 bytes (max 510)
10000+0 records in
10000+0 records out
5120000 bytes (5.1 MB, 4.9 MiB) copied, 0.11596 s, 44.2 MB/s
1+0 records in
1+0 records out
512 bytes copied, 0.00230193 s, 222 kB/s
361+1 records in
361+1 records out
185044 bytes (185 kB, 181 KiB) copied, 0.00803484 s, 23.0 MB/s
SeaBIOS (version 1.13.0-lubuntul)

iPXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+1FF8CA10+1FECCA10 CA00

Booting from Hard Disk..xv6...
cpul: starting 1
cpu0: starting 0
sb: size 2000 nblocks 1941 ninodes 200 nlog 30 logstart 2 inodestart 32 bmap start 58
init: starting sh
$ █
```

# Project 1 Test Report

## Subtest 2:

Compile with the PRINT SYSCALLS set to 1 and CS333 PROJECT set to 0 in the Makefile

(a) Code correctly compiles (**Passes**)

(b) Tracing facility works correctly (**Passes**)

(c) Correct system call trace on boot (**Passes**)

```
babbage.cs.pdx.edu - PuTTY
cervan4@babbage:~/CS333/xv6-pdx$ !m
make run
make -s clean
make -s qemu-nox
nmeta 59 (boot, super, log blocks 30 inode blocks 26, bitmap blocks 1) blocks 1941 total 2000
ballocc: first 707 blocks have been allocated
ballocc: write bitmap block at sector 58
boot block is 467 bytes (max 510)
10000+0 records in
10000+0 records out
5120000 bytes (5.1 MB, 4.9 MiB) copied, 0.128389 s, 39.9 MB/s
1+0 records in
1+0 records out
512 bytes copied, 0.0025555 s, 200 kB/s
369+1 records in
369+1 records out
189248 bytes (189 kB, 185 KiB) copied, 0.00893726 s, 21.2 MB/s
SeaBIOS (version 1.13.0-lubuntul)
```

```
ipXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP FMM+1FF8CA10+1FECCA10 CA00
```

```
Booting from Hard Disk..xv6...
cpu0: starting 1
cpu0: starting 0
sb: size 2000 nblocks 1941 ninodes 200 nlog 30 logstart 2 inodestart 32 bmap start 58
exec -> 0
open -> -1
mknod -> 0
open -> 0
dup -> 1
dup -> 2
iwrite -> 1
nwrite -> 1
iwrite -> 1
twrite -> 1
:write -> 1
write -> 1
swrite -> 1
twrite -> 1
awrite -> 1
rwrite -> 1
twrite -> 1
iwrite -> 1
nwrite -> 1
gwrite -> 1
write -> 1
swrite -> 1
hwrite -> 1

write -> 1
fork -> 2
exec -> 0
open -> 3
close -> 0
$write -> 1
write -> 1

read -> 1
fork -> 3
...

```

# Project 1 Test Report

## Subtest 3:

with the CS333 P1 macro turned off, when CS333 PROJECT is set to 0 in the Makefile

(a) Test program forktest runs correctly **(Passes)**

(b) Test program usertests runs correctly **(Passes)**

```
Booting from Hard Disk..xv6...
cpu1: starting 1
cpu0: starting 0
sb: size 2000 nblocks 1941 ninodes 200 nlog 30 logstart 2 inodestart 32 bmap start 58
init: starting sh
$ forktest
fork test
fork test OK
$ usertests
usertests starting
arg test passed
createdelete test
createdelete ok
linkunlink test
linkunlink ok
concreate test
concreate ok
fourfiles test
fourfiles ok
sharedfd test
sharedfd ok
bigarg test
bigarg test ok
bigwrite test
bigwrite ok
bigarg test
bigarg test ok
bss test
bss test ok
sbrk test
pid 159 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80000000--kill proc
pid 160 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8000c350--kill proc
pid 161 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800186a0--kill proc
pid 162 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800249f0--kill proc
pid 163 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80030d40--kill proc
pid 164 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8003d090--kill proc
pid 165 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x800493e0--kill proc
pid 166 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80055730--kill proc
pid 167 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80061a80--kill proc
pid 168 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8006ddd0--kill proc
pid 169 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8007a120--kill proc
pid 170 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80086470--kill proc
pid 171 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800927c0--kill proc
pid 172 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8009eb10--kill proc
pid 173 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800aae60--kill proc
pid 174 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800b71b0--kill proc
pid 175 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800c3500--kill proc
pid 176 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800cf850--kill proc
pid 177 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800dbba0--kill proc
pid 178 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800e7ef0--kill proc
pid 179 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800ff4240--kill proc
pid 180 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80100590--kill proc
pid 181 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8010c8e0--kill proc
pid 182 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80118c30--kill proc
pid 183 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80124f80--kill proc
pid 184 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80131d20--kill proc
pid 185 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8013d620--kill proc
pid 186 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80149970--kill proc
pid 187 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80155cc0--kill proc
pid 188 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80162010--kill proc
pid 189 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8016e360--kill proc
pid 190 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8017a6b0--kill proc

pid 197 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x801cfde0--kill proc
pid 198 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x801dc130--kill proc
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
allocuvm out of memory
sbrk test OK
validate test
validate ok
open test
open test ok
small file test
creat small succeeded; ok
writes ok
open small succeeded ok
read succeeded ok
small file test ok
big files test
big files ok
many creates, followed by unlink test
many creates, followed by unlink; ok
openinput test
openinput test ok
exitiput test
exitiput test ok
iput test
iput test ok
mem test
allocuvm out of memory
mem ok
pipel ok
preempt: kill... wait... preempt ok
exitwait ok
rmdot test
rmdot ok
fourteen test
fourteen ok
bigfile test
bigfile test ok
subdir test
subdir ok
linktest
linktest ok
unlinkread test
unlinkread ok
dir vs file
dir vs file OK
empty file name
empty file name OK
fork test
fork test OK
bigdir test
bigdir ok
uio test
pid 653 usertests: trap 13 err 0 on cpu 0 eip 0x3448 addr 0x8006ddd0--kill proc
uio test done
exec test
ALL TESTS PASSED
$ █
```

# Project 1 Test Report

## Subtest 4:

The CS333 P1 macro turned on, when CS333 PROJECT is set to 1 in the Makefile

(a) Test program forktest runs correctly **(Passes)**

(b) Test program usertests runs correctly **(Passes)**

(c) The date command prints correct information **(Passes)**

(d) The date command prints information in the correct format **(Passes)**

(e) The following test shows that the date command and the Linux date command provide basically the same information. (i.e. Run date command in xv6 → Exit xv6 → Run date command from linux prompt → Compare output) **(Passes)**

(f) Control – P **(Passed)**

i. Displays correct header

ii. Data aligns with appropriate header i

ii. Correct data is displayed

## Forktest and usertests test

```
Booting from Hard Disk..xv6...
cpu0: starting 1
cpu1: starting 0
sb: size 2000 nblocks 1941 ninodes 200 nlog 30 logstart 2 inodestart 32 bmap start 58
init: starting sh
$ forktest
fork test
fork test OK
$ usertests
usertests starting
arg test passed
createddelete test
createddelete ok
linkunlink test
linkunlink ok
concreate test
concreate ok
fourfiles test
fourfiles ok
sharedfd test
sharedfd ok
bigarg test
bigarg test ok
bigwrite test
bigwrite ok
bigarg test
bigarg test ok
bss test
bss test ok
sbrk test
pid 159 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80000000--kill proc
pid 160 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8000c350--kill proc
pid 161 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x800186a0--kill proc
pid 162 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x800249f0--kill proc
pid 163 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80030d40--kill proc
pid 164 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8003d090--kill proc
pid 165 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800493e0--kill proc
pid 166 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80055730--kill proc
pid 167 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80061a80--kill proc
pid 168 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8006dd0--kill proc
pid 169 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8007a120--kill proc
pid 170 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x80086470--kill proc
pid 171 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800927c0--kill proc
pid 172 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x8009eb10--kill proc
pid 173 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800aae60--kill proc
pid 174 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800b71b0--kill proc
pid 175 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800c3500--kill proc
pid 176 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800cf850--kill proc
pid 177 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x800dbba0--kill proc
pid 178 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x800e7ef0--kill proc
pid 179 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x800ff4240--kill proc
pid 180 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80100590--kill proc
pid 181 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8010c9e0--kill proc
pid 182 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80118c30--kill proc
pid 183 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80124f80--kill proc
pid 184 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x801312d0--kill proc
pid 185 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x8013d620--kill proc
pid 186 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80149970--kill proc
pid 187 usertests: trap 14 err 5 on cpu 0 eip 0x2e91 addr 0x80155cc0--kill proc
```

```
pid 198 usertests: trap 14 err 5 on cpu 1 eip 0x2e91 addr 0x801dc130--kill proc
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
allocvmm out of memory
sbrk test OK
validate test
validate ok
open test
open test ok
small file test
creat small succeeded; ok
writes ok
open small succeeded ok
read succeeded ok
small file test ok
big files test
big files ok
many creates, followed by unlink test
many creates, followed by unlink; ok
openinput test
openinput test ok
exitinput test
exitinput test ok
input test
input test ok
mem test
allocvmm out of memory
mem ok
pipel ok
preempt: kill... wait... preempt ok
exitwait ok
rmdir test
rmdir ok
fourteen test
fourteen ok
bigfile test
bigfile test ok
subdir test
subdir ok
linktest
linktest ok
unlinkread test
unlinkread ok
dir vs file
dir vs file OK
empty file name
empty file name OK
fork test
fork test OK
bigdir test
bigdir ok
uio test
pid 653 usertests: trap 13 err 0 on cpu 0 eip 0x3448 addr 0x801cfd0--kill proc
uio test done
exec test
ALL TESTS PASSED
$ date
```

## Project 1 Test Report

```
pid 653 usertests: trap 13 err 0 on cpu 0 eip 0x3448 addr 0x801cfde0--kill proc
uio test done
exec test
ALL TESTS PASSED
$ date
Sun 10 Jan 2021 07:34:17 PM UTC
$ halt
```

```
Shutting down ...
reset -I
cervan4@babbage:~/CS333/xv6-pdx$ date
Sun 10 Jan 2021 11:36:18 AM PST
cervan4@babbage:~/CS333/xv6-pdx$ █
```

While I was in Xv6 the date was in UST time zone while in Linux it was on PST

### Control -P Test

```
iPXE (http://ipxe.org) 00:03.0 CA00 PCI2.10 PnP PMM+1FF8CA10+1FECCA10 CA00
```

```
Booting from Hard Disk..xv6...
cpu1: starting 1
cpu0: starting 0
sb: size 2000 nblocks 1941 ninodes 200 nlog 30 logstart 2 inodestart 32 bmap start 58
init: starting sh
$
PID      Name           Elapsed   State   Size   PCs
1        init             0.1074790400    sleep   12288   80103858 8010396b 80104de1 801041dc 8010505e 80104f4b
2        sh               0.1074790400    sleep   16384   80103858 801002d8 80101880 80100e78 8010450d 801041dc 8010505e 80104f4b
$ █
```