Midterm Review & More

Lecture 10
Feb 16th 2023 | COMP 211-002 | Joshua Bakita

Welcome!

Today:

- ➔ Midterm Review
- ➔ More on Preprocessor

Logistics:

- ➔ Scores for Midterm 1, and Assignment 1 Style are up
- ➔ Let us know if mistakes are in the readings. Ex: the online copy of *Computer Systems*… has different section numbering
- ➔ Assignment 3 coming soon

Remember to vote!

Early voting:
Sat & Sun, Feb 17-18

General Voting:
Thurs, Feb 21

go.unc.edu/theo

Fun fact…

Midterm Review

Great job!

Midterm Review

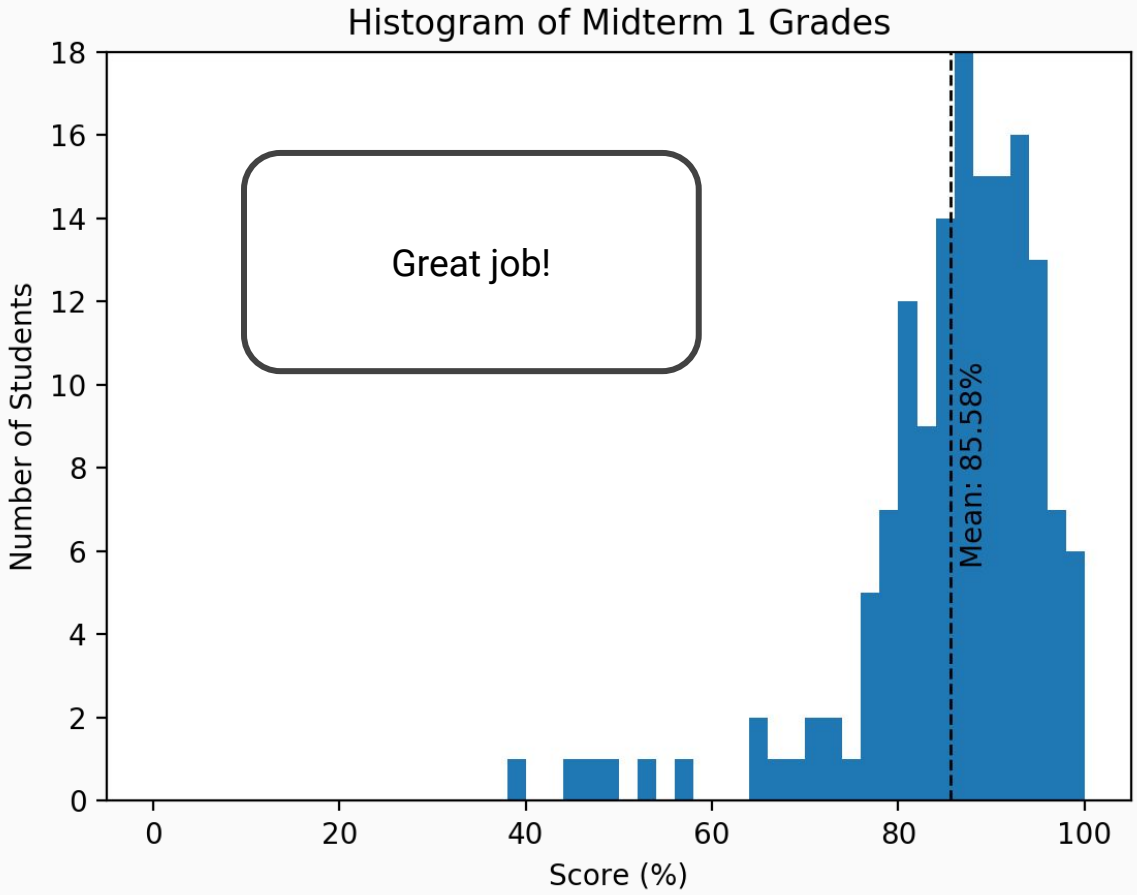
Statistics

Raw Scores:

- ➔ Best: 25.7/26 (99%)
- ➔ Worst: 10.3/26 (40%)
- ➔ Avg (mean): 22/26 (86%)

Top incorrect questions:

1. Q. 1.3.2 (79%)
2. Q. 1.1.5 (57%)
3. Q. 1.1.12 (54%)
4. Q. 1.1.1 (47%)
5. Q. 1.1.7 (33%)
6. Q. 1.1.9 (29%)
7. Q. 1.3.5 (28%)



Q. 1.1.1: "warning: implicit declaration of function"

Code available at
https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l10/q1_demo.c

Q. 1.1.5: string termination

Code available at
https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l10/q5_demo.c

Q. 1.1.12: define `FALSE` as the value `0`

Code available at
https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l10/q12_demo.c

Question 1.3.2

1.3.2 To find documentation for a C function, I might try the command: (Select all that apply)

A) whatis
B) man
C) info
D) cmatrix

Lecture 3 (and others)

Lecture 7 (and others)

More on the Preprocessor

Beyond `#define` and `#include`. Picking up from last time…

This section of the slides was not covered in-class, but the midterm question demos sufficiently covered the preprocessor. These examples have been cut from future lectures, but are left here for your study.

```
»···CHANNEL_STATUS_ON_ENG_PENDING_ACQUIRE = 8,
»···CHANNEL_STATUS_ON_ENG_PENDING = 9,
»···CHANNEL_STATUS_ON_PBDMA_CTX_RELOAD = 10,
»···CHANNEL_STATUS_ON_PBDMA_AND_ENG_CTX_RELOAD = 11,
»···CHANNEL_STATUS_ON_ENG_CTX_RELOAD = 12,
»···CHANNEL_STATUS_ON_ENG_PENDING_CTX_RELOAD = 13,
»···CHANNEL_STATUS_ON_ENG_PENDING_ACQ_CTX_RELOAD = 14,
};

#define NV_PCCSR_CHANNEL_INST(i) (0x00800000+(i)*8)
// There are a total of 512 possible channels
#define MAX_CHID 512
typedef union {
»···struct {
// 0:31
»···»···uint32_t inst_ptr:28;
»···»···enum INST_TARGET inst_target:2;
»···»··· uint32_t pa
»···»···bool inst_bi
// 32:64
»···»···bool enable:
```

Code available at
https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l6/nvdebug.h

```
VERSIONED_RL_ACCESSOR(tsg, uint32_t, tsgid);
VERSIONED_RL_ACCESSOR(tsg, enum ENTRY_TYPE, entry_type);
VERSIONED_RL_ACCESSOR(tsg, uint32_t, timeslice_scale);
VERSIONED_RL_ACCESSOR(tsg, uint32_t, timeslice_timeout);
VERSIONED_RL_ACCESSOR(tsg, uint32_t, tsg_length);


#define NV_RL_ENTRY_SIZE(g) \
        ((g)->chip_id >= NV_CHIP_ID_VOLTA ? sizeof(struct gv100_runlist_tsg) : \
                                            sizeof(struct gk110_runlist_tsg))

#define for_chan_in_tsg(g, chan, tsg) \
        for (chan = (typeof(chan))(((u8*)tsg) + NV_RL_ENTRY_SIZE(g)); \
             (u8*)chan < ((u8*)tsg) + (1 + tsg_length(g, tsg)) * NV_RL_ENTRY_SIZE(g); \
             chan = (typeof(chan))(((u8*)chan) + NV_RL_ENTRY_SIZE(g)))

#define next_tsg(g, tsg) \
        (typeof(tsg))((u8*)(tsg) + NV_RL_ENTRY_SIZE(g) * (tsg_length(g, tsg) + 1))

struct runlist_iter {
»···// Pointer to either
»···void *curr_entry;
»···// This should be se
»···// decremented as ea
»···// track which chann
```

Code available at
https://www.cs.unc.edu/~jbakita/teach/comp211-s23/l6/nvdebug.h

Questions?

See office hour calendar on the website for availability.

Assignment 3 will be posted by next class.

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Old Well, University of North Carolina at Chapel Hill, Winter 2017