

Back to the Future: A Historical Perspective

Hakim Weatherspoon

CS 3410, Spring 2013

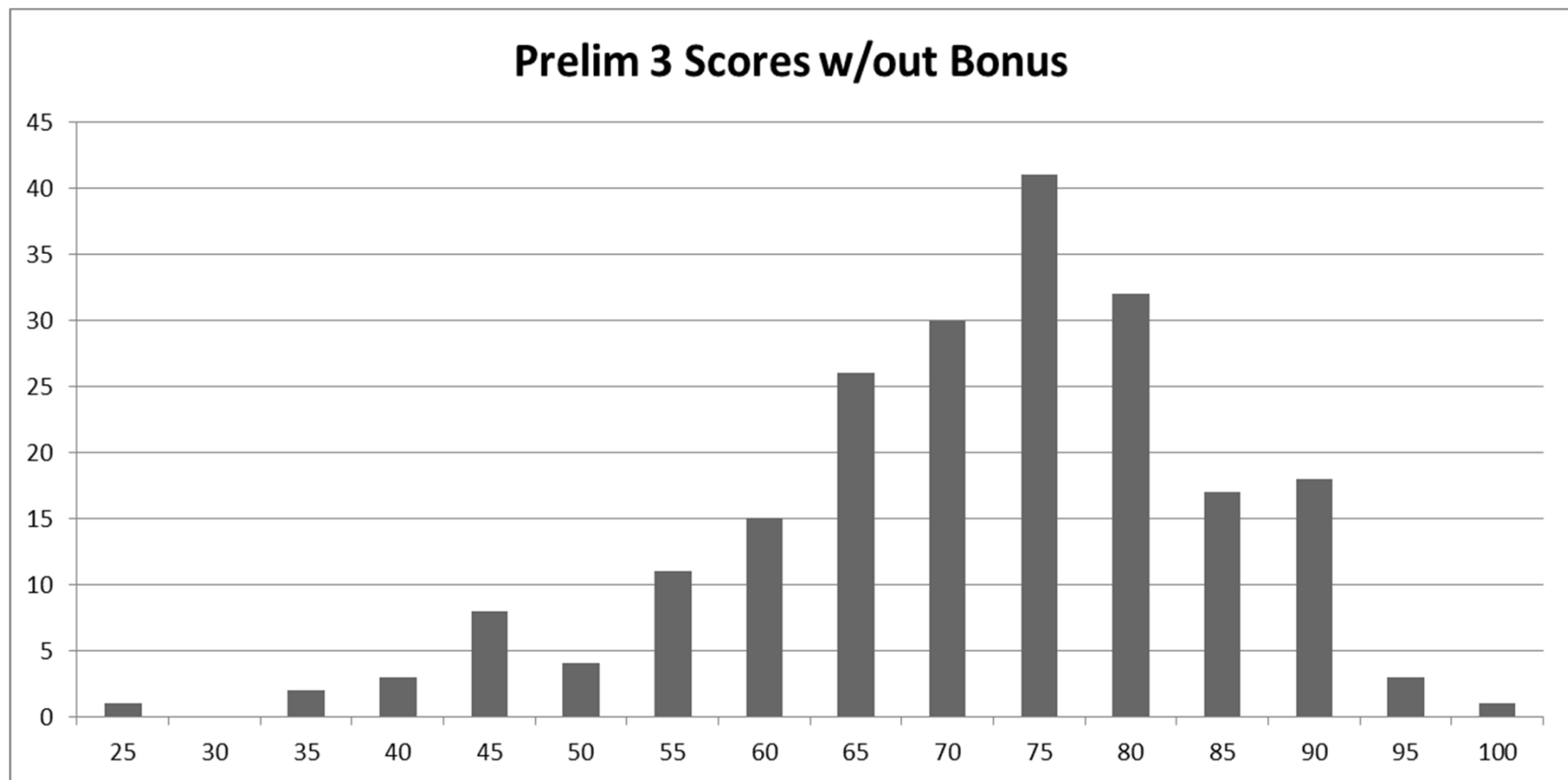
Computer Science

Cornell University

Announcements

Prelim3 Results (w/out bonus)

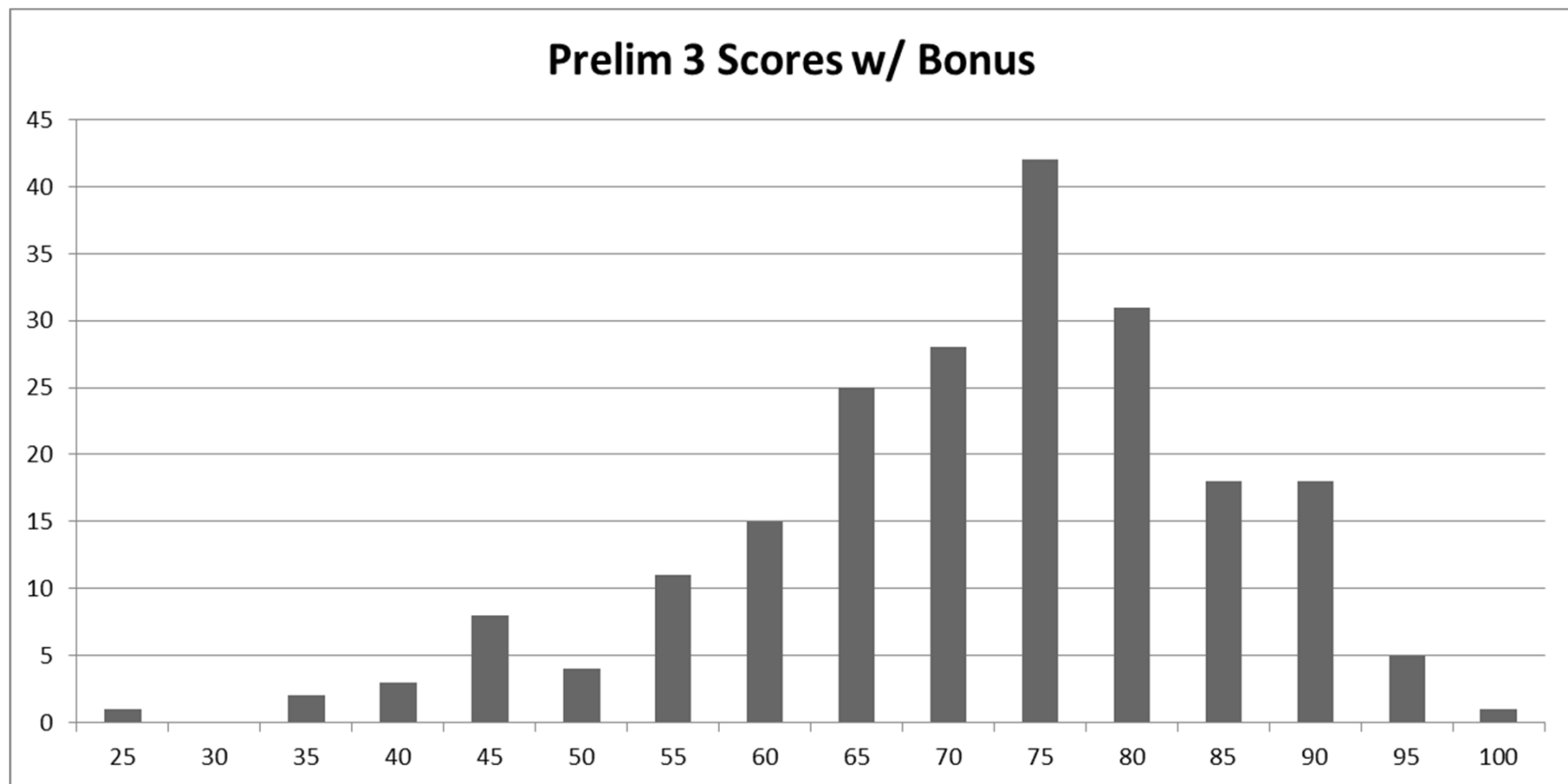
- Mean 69.5 ± 12.9 (median 71.5), Max 95.5, out of 98
- Pickup in Homework Passback Room (305 Upson)



Announcements

Prelim3 Results (w/ bonus)

- Mean 69.8 ± 13.1 (median 72.3), Max 95.5, out of 98
- Pickup in Homework Passback Room (305 Upson)



Announcements

How to improve your grade?

Submit a course evaluation and drop lowest homework score

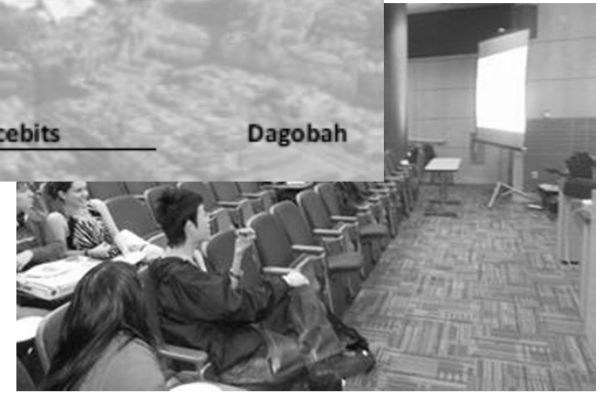
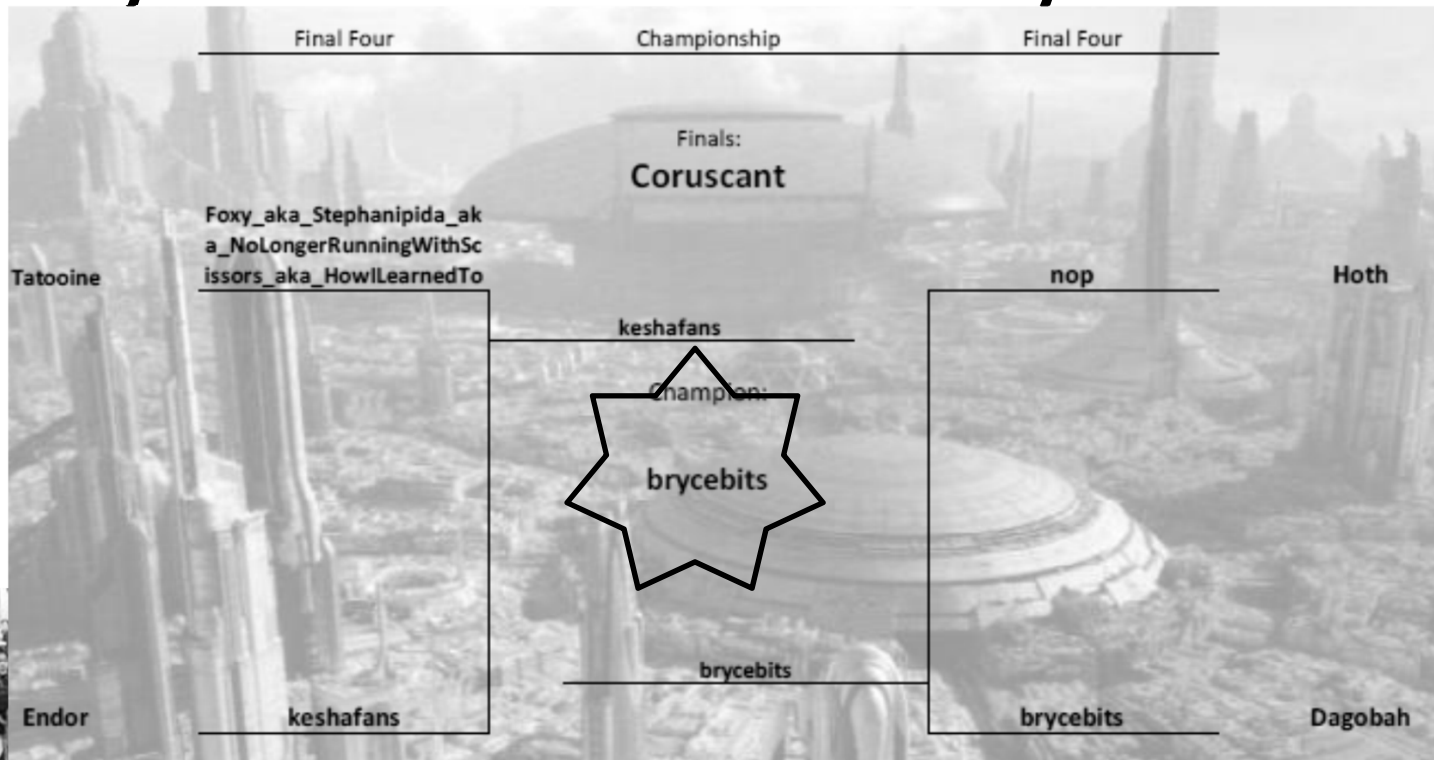
- To receive credit, Submit before Tuesday, May 7th

Announcements

CacheRace Games Night was great!

- Winner: Team ***Brycebits***

Bryce Evans and Dominick Twitty



CacheRace Games Night was great!

- Winner: Team ***Brycebits***

Bryce Evans and Dominick Twitty

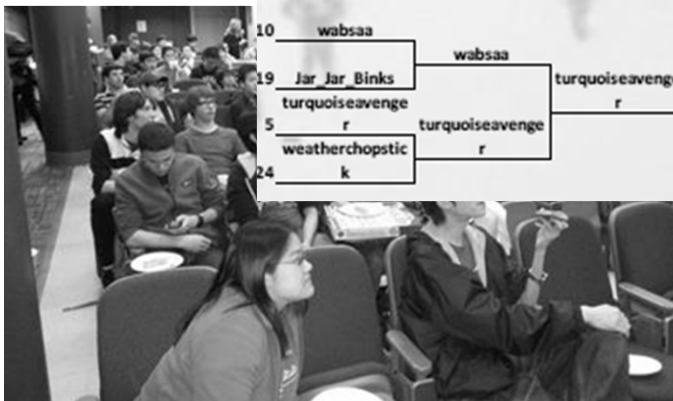
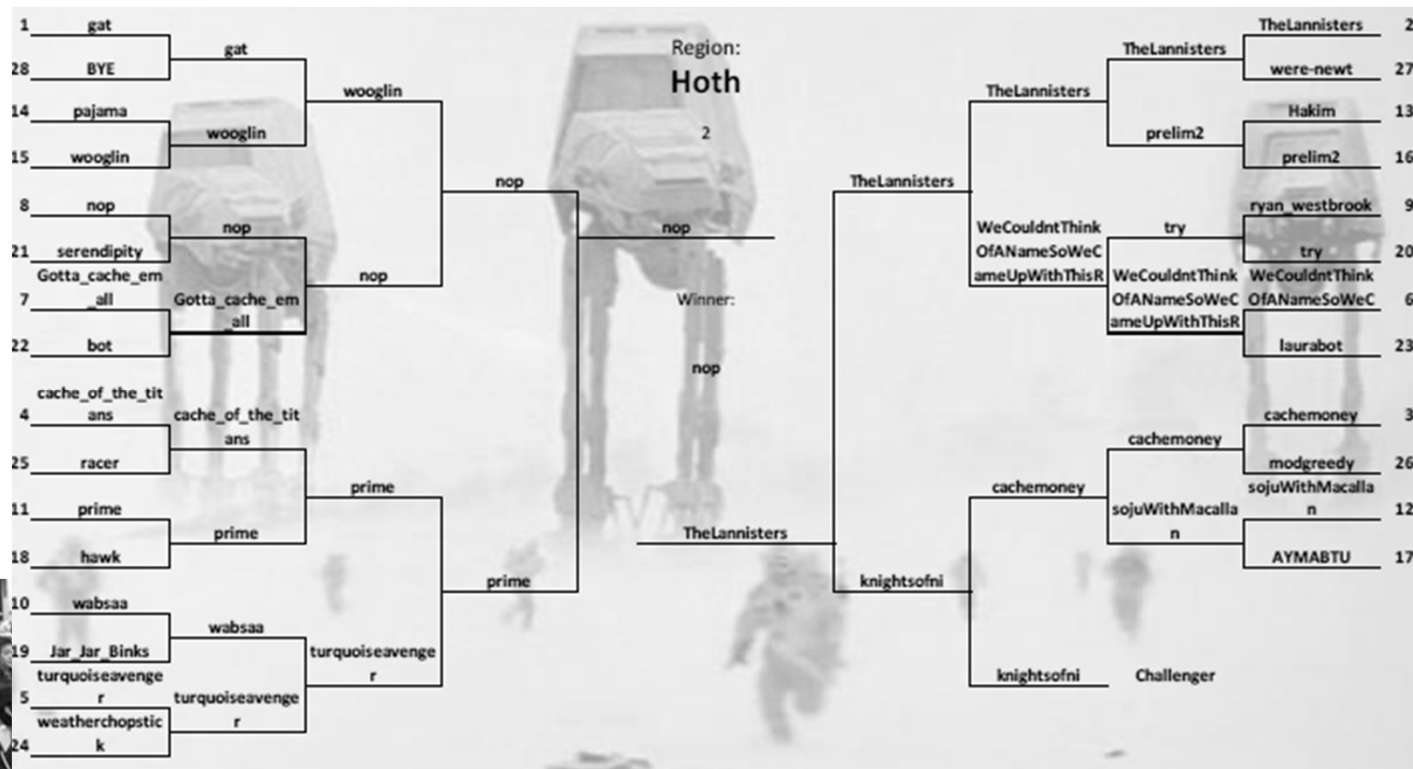


Announcements

CacheRace Games Night was great!

- Winner: Team ***Brycebits***

Bryce Evans and Dominick Twitty



CacheRace Games Night was great!

- Winner: Team ***Brycebits***

Bryce Evans and Dominick Twitty

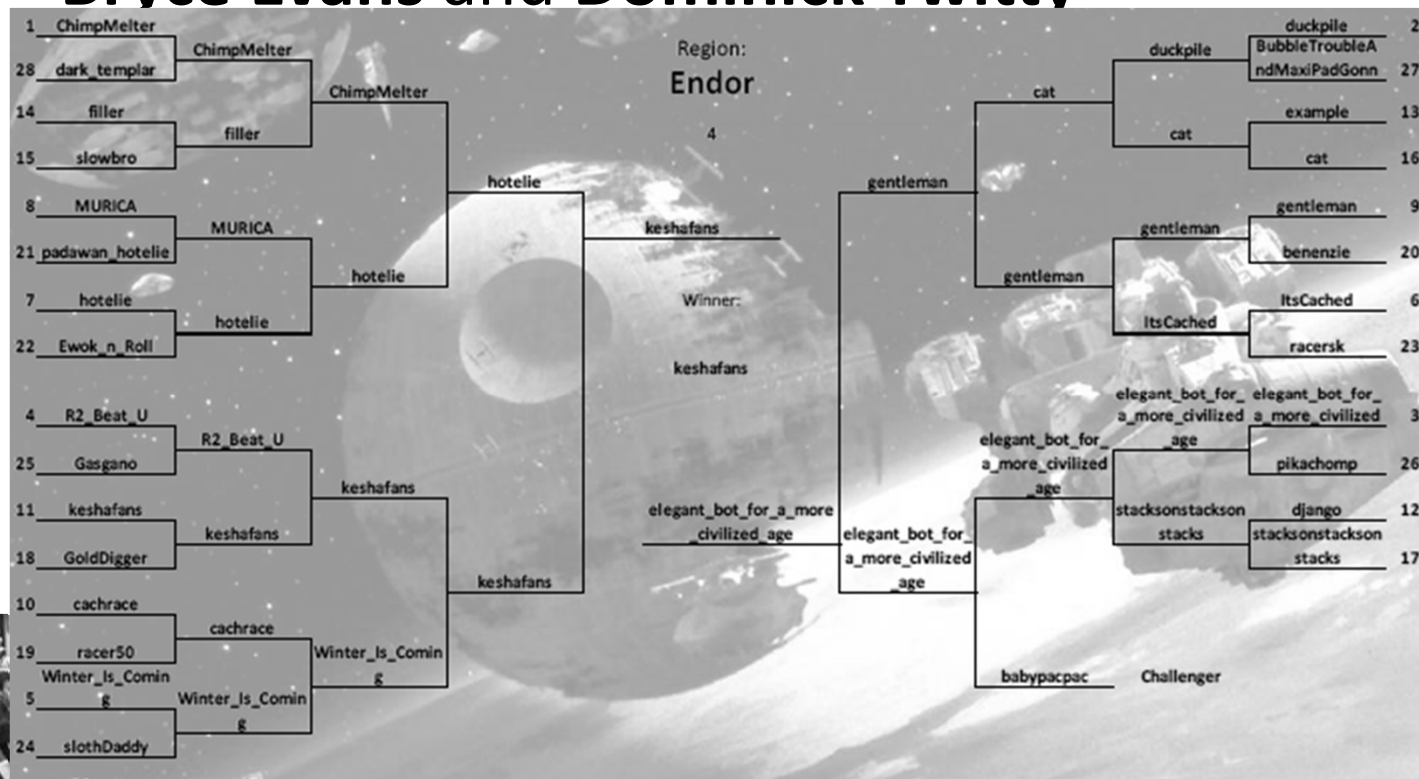


Announcements

CacheRace Games Night was great!

- Winner: Team ***Brycebits***

Bryce Evans and Dominick Twitty



Announcements

Final Project

Design Doc sign-up via CMS

sign up Sunday, Monday, or Tuesday

May 5th, 6th, or 7th

Demo Sign-Up via CMS.

sign up Tuesday, May 14th

or Wednesday, May 15th

CMS submission due:

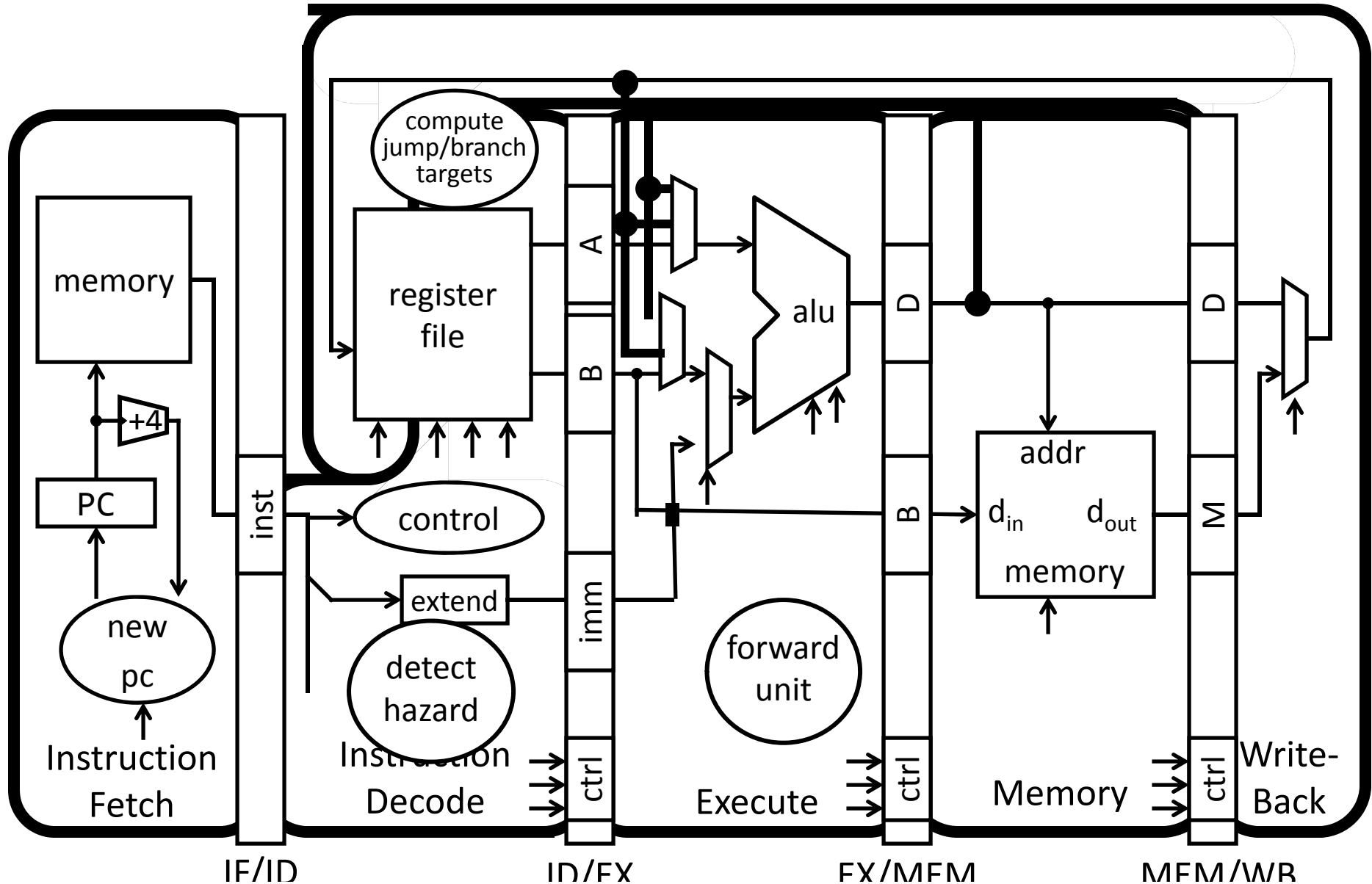
- Due 6:30pm Wednesday, May 15th

Goal for Today: Back to the Future

Can multiple entities interact with processor at once?

Back to the Future: Timesharing

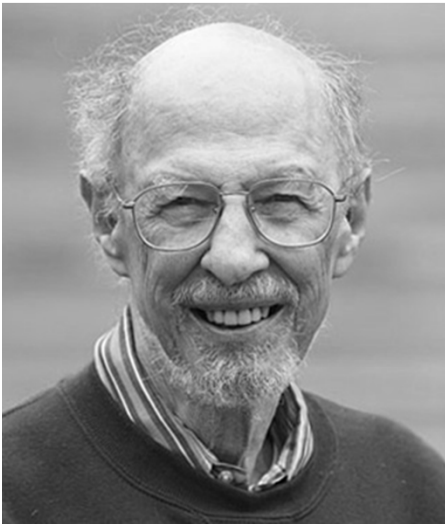
Can multiple entities interact with processor at once?



Back to the Future: Timesharing

Fernando J. Corbató (MIT)

- Known for pioneering time sharing systems and MULTICS operating system (later influence UNIX)
- Influences: Turing Award Recipient (1990).
 - "for his pioneering work in organizing the concepts and leading the development of the general-purpose, large-scale, time-sharing and resource-sharing computer systems"
 - Corbató's Law: "Regardless of whether one is dealing with assembly language or compiler language, the number of debugged lines of source code per day is about the same!"



IBM 7090

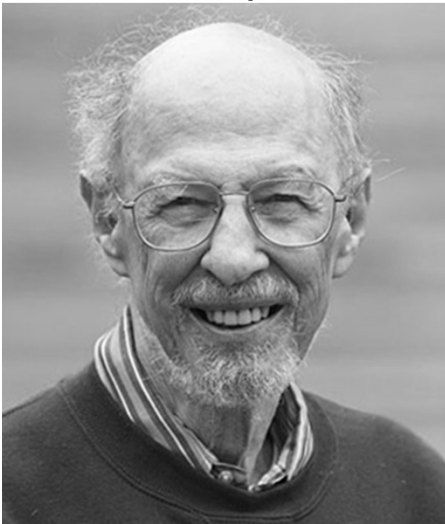
Back to the Future: Timesharing

1963 Timesharing: A Solution to Computer Bottlenecks

<http://www.youtube.com/watch?v=3lkP7gZlprk&feature=youtu.be> (cc)

<http://www.youtube.com/watch?v=Q07PhW5sCEk&feature=youtu.be>

- Reporter John Fitch at the MIT Computation Center in an extended interview with MIT professor of computer science Fernando J. Corbato
- The prime focus of the film is timesharing, one of the most important developments in computing



IBM 7090