



UC Berkeley EECS  
Lecturer SOE  
Dan Garcia

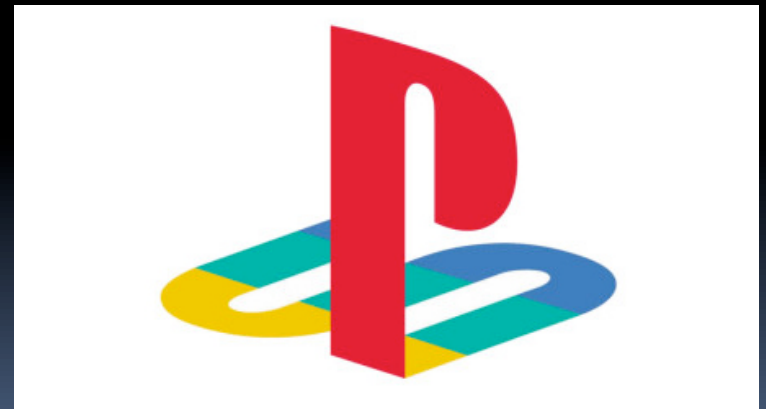
# CS10 The Beauty and Joy of Computing

## Lecture #26 Summary & Farewell

2011-04-27

### FUTURE OF VIDEO GAMES?

Analysts close to both Microsoft and Sony are predicting no new home console until 2014. "Will anyone care? How do you make a \$60 game look like a good value when everyone is used to buying \$1 games on their phones and tablets?"



# With \$1 casual games abounding, how has your likelihood to buy \$60 video games changed?

- a) Way less likely
- b) Less likely
- c) Neutral
- d) More likely
- e) Way more likely



# Upcoming Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
4/24	4/25	4/26	4/27 Lec: Farewell + Surveys (Lab: Feedback + Online Final)	4/28	4/29 Discussion (Final Thoughts)	4/30
5/1	5/2	5/3	5/4	5/5	5/6 Comments due @ 10:59am Project due @ 10:59am Final Project Demos 306 Soda Hall 11am-2pm	5/7
5/8 Review Session Wozniak Lounge (430-438 Soda) 3-6pm	5/9	5/10	5/11 Paper Final Exam 277 Cory Hall 7-10pm			

**RRR Week**

**Finals Week**



# Administrivia: Become active!

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- **Online Exam details**

- No exam handed out unless you've filled in both HKN + AP survey
- No "study sheets" needed / allowed since you have access to BYOB

- **Final Exam details**

- Only bring pen{cil}s, three 8.5"x11" handwritten sheets (writing on both sides).
- **Leave backpacks, books, calculators, cells & pagers home!**
- Everyone must take ALL of the final!

- **If you did well in CS10 and want to be on staff?**

- Usual path: Lab Assistant  $\Rightarrow$  Reader  $\Rightarrow$  TA
- LA: sign up w/Jenny Jones in 395 Soda before 1<sup>st</sup> week of semester
- Reader/TA forms: [www.cs/~juliaea/](http://www.cs/~juliaea/)
- I strongly encourage anyone who gets an A- or above in the class to follow this path...



# Clickers were worth the time spent

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- a) Strongly Agree
- b) Moderately agree
- c) Neutral
- d) Moderately disagree
- e) Strongly disagree



# Exciting Future Implications

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- **Need to revisit chronic unsolved problem**
  - Parallel programming!!
- **Implications for applications:**
  - Computing power available >>> (choose your favorite supercomputer from a decade ago) on an economical die inside your watch, cell phone or PDA
    - On your body health monitoring
    - Google + library of congress on your PDA
- **As devices continue to shrink...**
  - The need for great HCI (human-computer interfaces) is as critical as ever!



# Taking advantage of Cal Opportunities

***"The Godfather answers all of life's questions"***

– Heard in "You've got Mail"

- **Why were we the #2 Univ in the WORLD?**

So says the 2004 ranking from the "Times Higher Education Supplement"

- Research, reseach, research!
- Whether you want to go to grad school or industry, you need someone to vouch for you!
  - ...as is the case with the Mob

- **Techniques**

- Find out what you like, do lots of web research (read published papers), hit OH of Prof, show enthusiasm & initiative

- <http://research.berkeley.edu/>



# Opportunities Fall 2011

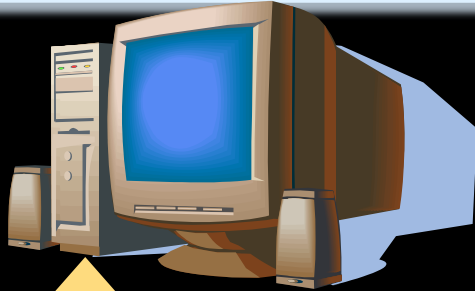
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- **CS61A** (1<sup>st</sup> course in CS major)
  - Structure and Interpretation of Computer Programs
- **CS9 series** (learn a second language)
  - I would recommend Python next, CS9H
- **GamesCrafters** (Game Theory R & D)
  - Develop SW, analysis on 2-person games of no chance. (e.g., go, chess, connect-4, nim, etc.)
  - Req: Game Theory / SW Interest
- **MS-DOS X** (Mac Student Developers)
  - Learn to program Macintoshes.
  - Req: Interest. Owning a mac helps, not required.
  - Taught as a DeCal by MS-DOS X veterans
- **UCBUGG** (Recreational Graphics)
  - Develop computer-generated images, animations.
  - Req: 3D interest
  - Taught as a DeCal by UCBUGG veterans

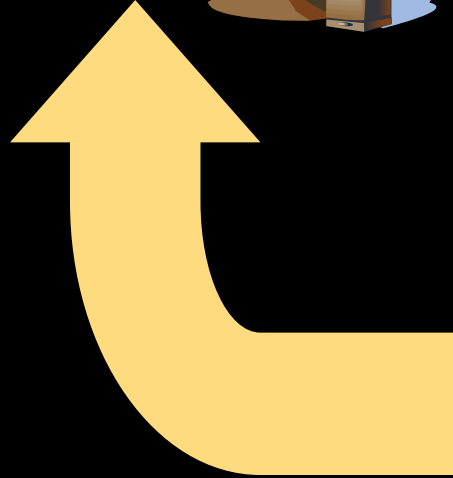




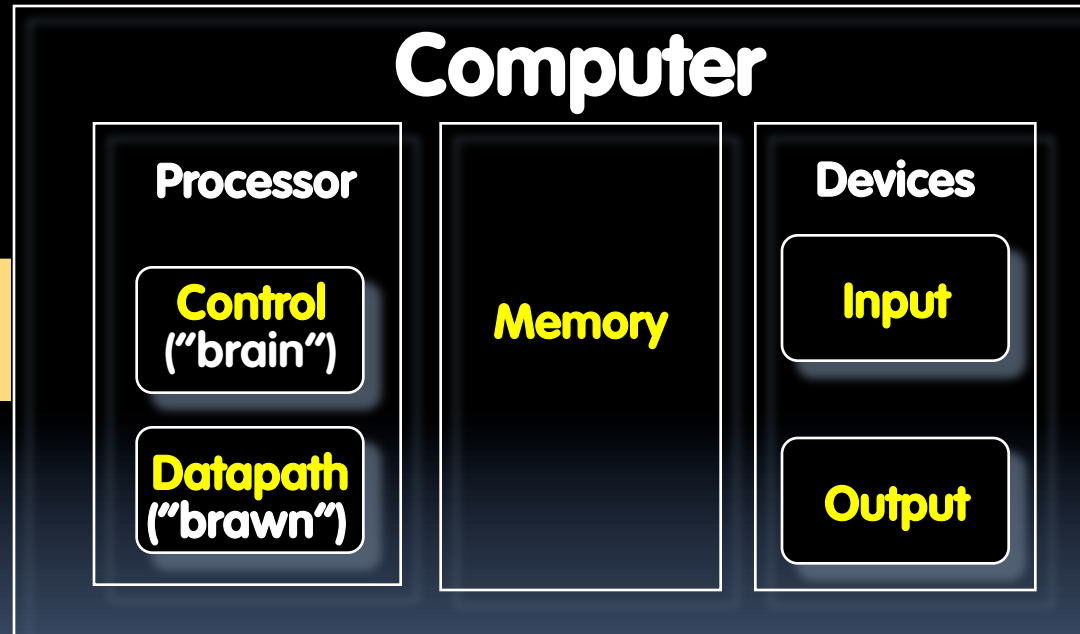
# Review: 5 components of any Computer



In the future, what'll be the most important computer component?



- a) Control
- b) Datapath
- c) Memory
- d) Input
- e) Output



# Peer Instruction Opinion

- “Forget cloning. Forget TVs on your wrist watch. The biggest invention of the next 100 years will be the ability to directly connect your brain to a machine, aka wet computing.” – Dan Garcia
- A macaque monkey at Duke University can already control a robotic arm with thought.
- DARPA interested for mind-control robots & flying
- Virtual Reality achieved with proper I/O interfacing...



**Jose Carmena**, UCB EECS Prof  
Research: Brain-Machine Interface  
[www.eecs.berkeley.edu/~carmena/](http://www.eecs.berkeley.edu/~carmena/)



# Penultimate slide: Thanks to the staff!

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## ■ TAs

- Luke Segars
- Glenn Sugden
- Navin Eluthesen

## ■ Readers

- Courtney Wang
- Pierce Vollucci

## ■ Lab Assistants

- Victor Muratalla
- Pierce Vollucci
- Aatash Parikh
- Jessica Hudiono
- Sameer Makhani
- Shreya Lakhan-Pal
- Guillaume Bellagarda
- Victor Lymar
- Max Dougherty
- Kelsey Theriault
- Yaniv Assaf
- Katrina Chang
- Kendall Agbulos
- Ivan Rodriguez



# The Future for Future Cal Alumni

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- What's The Future?
- New Millennium
  - Ubiquitous & Quantum Computing, Nanotechnology, 10 M "volunteer" CPUs, the Parallel revolution...
  - Rapid Changes in Technology
  - World's <sup>2nd</sup> Best Education
  - Never Give Up!

**"The best way to predict the future is to invent it"**  
– Alan Kay

# The Future is up to you!

