UC Berkeley EECS
Lecturer SOE
Dan Garcia

CS10 The Beauty and Joy of Computing

Lecture #26 Summary & Farewell

2010-12-01

UC Berkeley EECS
Lecturer SOE
Brian Harvey

BENDDESK WORKSTATION

Researchers from Aachen University have created the "BendDesk", in which the desk and screen are combined into a single multi-touch display.

`hci.rwth-aachen.de/benddesk`

Upcoming Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
12/28	12/29	12/30	12/1 Lec: Farewell + Feedback **(Lab: Online Final)** Beyond Blocks Scheme	12/2	12/3 Project due @ 11:59pm	12/4
12/5	12/6 **Final Project Demos 306 Soda Hall 10:30am-2pm**	12/7 CS Ed Day (best CS10 projects shown in AM)	12/8	12/9	12/10	12/11

RRR Week

Finals Week

Administrivia: Become active!

- **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 ⇒ Reader ⇒ TA
  - LA: sign up w/Jenny Jones in 395 Soda before 1st week of semester
  - Reader/TA forms: `www.cs/~juliea/`
  - I strongly encourage anyone who gets an A- or above in the class to follow this path…

Clickers were worth the time spent

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

Exciting Future Implications

- **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"

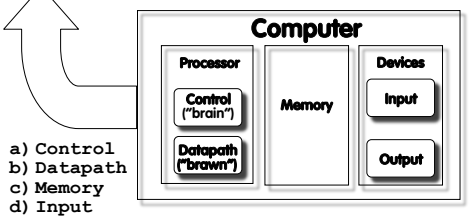
- **Why were we the #2 Univ in the WORLD?**
  "So says the 2004 ranking from the "Times Higher Education Supplement"
  - Research, reseach, research!
  - Whether you want to go to grad school or industry, you need someone to vouch for you!
    - …as is the case with the Mob
- **Techniques**
  - Find out what you like, do lots of web research (read published papers), hit OH of Prof, show enthusiasm & initiative
- `http://research.berkeley.edu/`

Opportunities Spring 2011

- **CS61A (1st 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/`

Penultimate slide: Thanks to the staff!

- **TAs**
  - Luke Segars
  - Jon Kotker
- **Readers**
  - Stephanie Chou
  - Courtney Wang
  - Daisy Zhou
- **Development & LAs**
  - Colleen Lewis
  - George Wang
  - Glenn Sugden
  - Brandon Young
  - Gideon Chia
  - Wayland Siao
  - Aloni Cohen
  - Pierce Vollucci
  - Navin Eluthesen
  - Christian Pedersen
  - Carrie Cai

The Future for Future Cal Alumni

- **What's The Future?**
- **New Millennium**
  - Ubiquitous & Quantum Computing, Nanotechnology, 10 M "volunteer" CPUs, the Parallel revolution…
  - Rapid Changes in Technology
  - World's ~ Best Education
  - Never Give Up!

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

The Future is up to you!