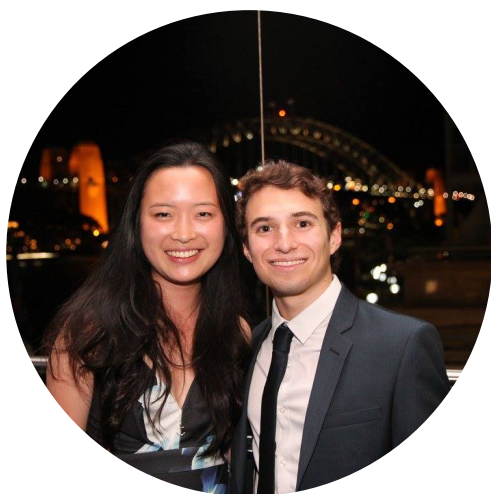


βeta

— news from computer science and engineering —



meet your new **CSESoc Team**
page 3–4



find out **what's on**
page 6

The Codeless Code, Case 1: The Small Stuff

For three days and nights the Java master did not emerge from his cubicle. On the fourth day the monks of the temple sent a novice to inquire after him.

The novice found the master at his whiteboard, contemplating a single dataflow diagram. The novice recognized it as a minor component of the vast system that the monks were contracted to maintain. Politely, the novice asked what the master was working on.

The master replied: “There is a defect, and I am considering the best way to repair it.”

The novice said, “You preach often about the importance of setting priorities. How, then, can you obsess about something so tiny and unimportant?”

Without saying a word, the master raised his staff and brought it down hard upon the bare left foot of the novice, breaking his smallest toe. The novice screamed in pain and staggered from the cubicle. In that moment, the novice was enlightened.



Beta

About CSESoc beta

CSESoc beta is published fortnightly by UNSW CSESoc, Beta team.

Find us online at

www.csesoc.unsw.edu.au

Got some good content? Email us!

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2016 issue 115

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Puzzle Wranglers

Emily and Sharif Olorin

News Chaser

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Editorial

Hello, and welcome to a year full of fun, adventures, and CSESoc beta. Jashank called it early in last year; I've braved the horrors within the CSESoc beta build and styles, and survived, and taken over the role he so coveted. Sorry, not sorry?

I have high hopes for this year with technical content, non-technical content and even a story or two. We're aiming to run the gamut from technology to computer science (surprise), to logic and mathematics with a side of music, movies

and books. Plus events! We have lots of those. As per last year, this entire magazine is produced using \LaTeX , and none of us have died yet.

As ever, if you've stumbled on anything interesting, or you're keen to get involved, join the team via the CSESoc website and get with us!

See you on the other side.

■ Emily Olorin

Words of the Week

Every week, we bring you the latest and greatest in Jargon, be it obscure or otherwise. Where does this Jargon come from, you ask? Why, the Jargon Files of course, the internet's favourite place for all things *hacker*. Have fun! These weeks words are:

playpen: [IBM] A room where programmers work. Compare

salt mines.

go root: [Unix; common] To temporarily enter root mode in order to perform a privileged operation. This use is deprecated in Australia, where v. 'root' is a synonym for "f*ck".

lose lose: A reply to or comment on an undesirable situation. "I accidentally deleted all my files!" "Lose, lose."

The CSESoc Team, 2016

Meet your society team!

Co-Presidents



Lavender Chan
& Jake Bloom

Leading your society this year are two powerhouses of, well, power: Jake “The Mighty Waratahs” Bloom, who can be found in a singlet and boardies telling us all about sports (just don’t mention e-sports), and Lavender “I’m Actually A Cat” Chan, who really, really, *really* loves cats.

Lavender and Jake are already off to a flying start, bringing on board a raft of new sponsors, and preparing the team for a busy year ahead.

Secretary



Carmen Wang

With the aid of her mighty enforcer, Carmen keeps everyone honest and organised in the role of secretary. Keeping tabs on everything and everyone, you can count on her to know the minutiae of any and all goings-on of the society.

Treasurer



Steven Strijakov

Pioneering efforts in reducing CSESoc’s funding footprint by moving the print to his own feet (don’t ask), Steven brings to the table all his skill and ingenuity to keeping the weekly barbecue funded. 10 points to Gryffindor for pronouncing his name right on your first try.

Arc Delegate



David Sison

David has a creative mind, and often enjoys narrating in games of Mafia, which may result in a dinosaur serial killer who chooses to oven his victims. And, oh yes, if you look at him at just the right angle, in just the right light, you might catch a glimpse of his inner Jackie Chan.

Social Heads



George Mountakis
& Jathurson Subachandran

Two classy individuals are the masterminds of a whole raft of spectacular events, including our weekly barbecue, and in just a few weeks, First Year Camp.

These individuals are the inimitable George, who still hasn’t been found since the last time he was running shirtless around the Village Green howling (and who still can only be kept calm with the quadratic formula in iambic pentameter), and the indefatigable Jathurson, who, thankfully, *knows* the quadratic formula in iambic pentameter, and in his off-time, causes small volcanic eruptions off the coast.

Publicity Head



Nicola Gibson

Nicola is *still* active in just about everything, and this year, she’s carrying the mantle of Publicity head, so just about everything of CSESoc’s that looks good can probably be attributed to her, somehow.

Beta Head



Emily Olorin

Emily has immense difficulty talking about herself in the third person. She is not a) A brick, b) A series of cats jammed into human clothing, c) A good juggler, d) Queen of the internet, e) A tentacled monster, lurking in the deep.

DevSpace Head



John Wiseheart

DevSpace is truly awesome, so naturally it's run by a truly awesome person; John Wiseheart who's currently hiding out in the Blue Mountains (!) due to crimes against Arduinos (!!). Hopefully he'll escape charges and get given a space to dev in.

Dev Head



Nicholas Whyte

Nicholas maintains a mop of hair as a protective shield while doing server maintenance, and, and, given that he maintains a server called GLaDOS, it's little wonder that it's necessary.

He's also the goto person when it comes to the CSESoc website or Bark, even though he regularly reminds us that goto is considered harmful.

TalkShops Heads



Adam Tizzone
& Daniel Phillips

TalkShops is no longer TalkShops, but Talks and (Work)Shops! What a surprise for the start of the year.

Adam and Daniel are the minds behind this year's talks and workshops that fill the CSESoc calendar, bringing the brightest minds and sharpest people to CSE—usually *back* to CSE. And with a goals list that contains “*hev fun*” twice, and some fantastic events planned already, it's well worthwhile keeping tabs on the calendar.

CompClub Head



Joseph Hilsberg

Joseph is a key person in bringing the magic of computer science to high schools, with CompClub. Unfortunately, due to budget cuts, the entire team and all their equipment must fit on his bicycle to get from school to school.

Student Network Head



Jesse Zhang

Ever the party animal (and a “magical, magical horse”), Jesse is our StuNet head this year, although most of the time he's trying to make it through airport security with hundreds of USBs in his pockets.

Upcoming Events

every Monday CSESoc's Weekly Barbecue
12:30–2p, John Lions Garden

social

Come on down to John Lions Garden for your weekly dose of free barbecue! Don't forget to pick up your copy of CSESoc *beta*, and make some new friends!

8 March CompClub Info Session and Presentation **tech**
1pm–2pm, Seminar Room (first floor of the K17 building)

CompClub helps high school students explore the depth and breadth of Computer Science through a variety of events, holiday workshops and weekly sessions.

For new and existing members of CompClub. The presentation will cover basic information in regards to CompClub and we will be discussing some of the new roles and events being held in 2016.

There will also be free SUBWAY being provided for attendees.

Join the facebook event page www.facebook.com/events/997065310368020/

11 March Atlassian Diversity Event *City Recital Hall*

Atlassian is offering 10 CSESoc members - who are passionate about diversity - tickets to go to this year's Link Festival! Link Festival is the premier event for people who are passionate about design, technology and social change. It is being held at Sydney's City Recital Hall in the CBD on Friday March 11th with talks by Amina Horozic, Chris Raine and Kyra Maya Phillips.

If you would like to attend, please email csesoc@cse.unsw.edu.au with your full name, dietary requirements and why you would like to attend Link Festival.

14 March Beta Meetup **social** 1pm–3pm, SOCS Office (K17 basement)

Interested in writing? Interested in meeting people? Interested in free cookies?

CSESoc's very own Beta magazine is hosting an informal meetup to get together, chat, and prove that we're not all dogs on the internet. Come along, grab a cookie, and say hi! We don't bite, promise.

Join the facebook event page at www.facebook.com/events/1568239290156988/

15 March Linux Installfest **tech**
1–5:30pm, the Seminar room (first floor of the K17 building)

Having issues getting the right operating system installed on your computer? Need some help with Linux and how to use it? Installfest is the place for you!

From 1-5:30pm on Tuesday 15th March, the CSESoc team will be available to solve your technical woes! Come along to the Seminar Room (on level 1 of K17), and learn some stuff! Pizza will be available for \$3 later in the afternoon for arc members, or \$5 for non arc members.

(For anyone interested in volunteering with set-up/pack-up/sharing your knowledge as a Linux veteran, please email csesoc.workshops.head@cse.unsw.edu.au)

Visit the Facebook event page at www.facebook.com/events/458991860970189

19 March Jane Street Hackathon **tech**
9am–10pm, UNSW Campus (exact location TBC)

eth1: a day-long programming contest. Form teams and hack together a trading bot to compete against others and the markets.

Each member of the winning team will receive AU\$300. There'll be lots of (free) food and drink available.

Absolutely no special math, OCaml, or finance knowledge is required; you can use any language you like. The contest is entirely technical in nature and you won't need any visual design skills. The exact details of the hackathon aren't released until the competition begins. The one thing you can do ahead of time to prepare is familiarize yourself with the libraries for writing TCP clients in your programming language of choice.

Sign up before March 13th at eth1-sydney.janestreet.com. For any other queries, email: eth1-sydney@janestreet.com

18-20 March First Year Camp **social**
Camp Wombaroo

First years of CSESoc, you have been offered a place of safe haven to survive the incoming apocalypse, that place is Camp Wombaroo. Join us for a weekend of trivia, challenges, and an apocalypse themed fancy dress party (so start working on your costumes) with friends both new and old. We're all incredibly excited and can't wait to see you there!

For additional info go to www.csesoc.unsw.edu.au/first-year-camp.

Printcrime

This story is part of Cory Doctorow's 2007 short story collection "Overclocked: Stories of the Future Present," published by Thunder's Mouth, a division of Avalon Books. It is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 2.5 license.

(Originally published in Nature Magazine, January 2006)

The coppers smashed my father's printer when I was eight. I remember the hot, cling-film-in-a-microwave smell of it, and Da's look of ferocious concentration as he filled it with fresh goop, and the warm, fresh-baked feel of the objects that came out of it.

The coppers came through the door with truncheons swinging, one of them reciting the terms of the warrant through a bullhorn. One of Da's customers had shopped him. The ipolice paid in high-grade pharmaceuticals – performance enhancers, memory supplements, metabolic boosters. The kind of thing that cost a fortune over the counter; the kind of thing you could print at home, if you didn't mind the risk of having your kitchen filled with a sudden crush of big, beefy bodies, hard truncheons whistling through the air, smashing anyone and anything that got in the way.

They destroyed grandma's trunk, the one she'd brought from the old country. They smashed our little refrigerator and the purifier unit over the window. My tweetybird escaped death by hiding in a corner of his cage as a big, booted foot crushed most of it into a sad tangle of printer-wire.

Da. What they did to him. When he was done, he looked like he'd been brawling with an entire rugby side. They brought him out the door and let the newsies get a good look at him as they tossed him in the car, while a spokesman told the world that my Da's organized-crime bootlegging operation had been responsible for at least twenty million in contraband, and that my Da, the desperate villain, had resisted arrest.

I saw it all from my phone, in the remains of the sitting room, watching it on the screen and wondering how, just how anyone could look at our little flat and our terrible, manky estate and mistake it for the home of an organized crime kingpin. They took the printer away, of course, and displayed it like a trophy for the newsies. Its little shrine in the kitchenette

seemed horribly empty. When I roused myself and picked up the flat and rescued my peeping poor tweetybird, I put a blender there. It was made out of printed parts, so it would only last a month before I'd need to print new bearings and other moving parts. Back then, I could take apart and re-assemble anything that could be printed.

By the time I turned eighteen, they were ready to let Da out of prison. I'd visited him three times – on my tenth birthday, on his fiftieth, and when Ma died. It had been two years since I'd last seen him and he was in bad shape. A prison fight had left him with a limp, and he looked over his shoulder so often it was like he had a tic. I was embarrassed when the minicab dropped us off in front of the estate, and tried to keep my distance from this ruined, limping skeleton as we went inside and up the stairs.

"Lanie," he said, as he sat me down. "You're a smart girl, I know that. Trig. You wouldn't know where your old Da could get a printer and some goop?"

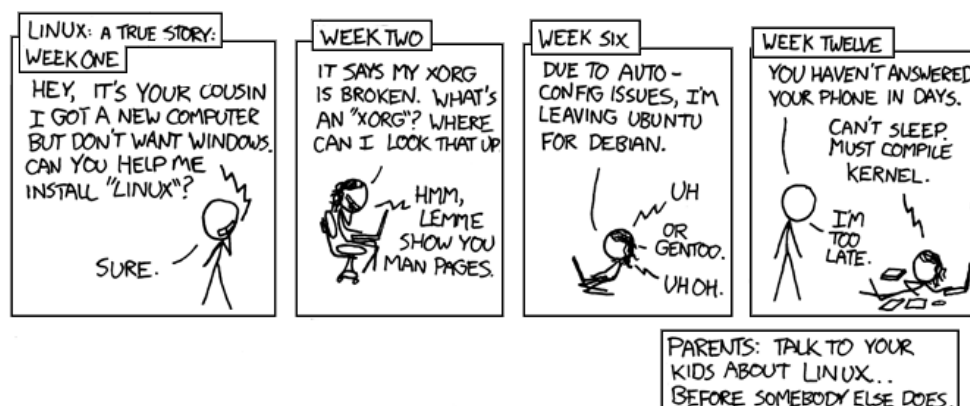
I squeezed my hands into fists so tight my fingernails cut into my palms. I closed my eyes. "You've been in prison for ten years, Da. Ten. Years. You're going to risk another ten years to print out more blenders and pharma, more laptops and designer hats?"

He grinned. "I'm not stupid, Lanie. I've learned my lesson. There's no hat or laptop that's worth going to jail for. I'm not going to print none of that rubbish, never again." He had a cup of tea, and he drank it now like it was whisky, a sip and then a long, satisfied exhalation. He closed his eyes and leaned back in his chair.

"Come here, Lanie, let me whisper in your ear. Let me tell you the thing that I decided while I spent ten years in lockup. Come here and listen to your stupid Da."

I felt a guilty pang about ticking him off. He was off his rocker, that much was clear. God knew what he went through in prison. "What, Da?" I said, leaning in close.

"Lanie, I'm going to print more printers. Lots more printers. One for everyone. That's worth going to jail for. That's worth anything."

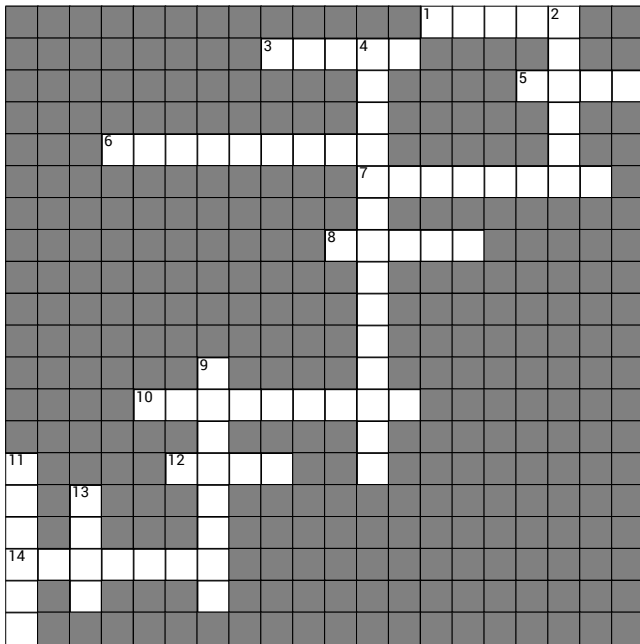


This really is a true story, and she doesn't know I put it in my comic because her wife hasn't worked for weeks.

xkcd 456 // Randall Munroe // CC-BY-NC 2.5

Puzzles

Crossword



Across 1 Pythagorean divinity 3 Primarily used in finance systems 5 An object oriented shiny rock 6 capitaliseAndRemoveAllSpaces 7 Developed by Grace Hopper 8 While, for, etc 10 Bad code can be compared to this food 12 Pez-like stack 14 No side effects

Down 2 Holds real numbers 4 e.g. Java 9 x 11 Non venomous and kind to newcomers 13 Mozilla Research design

B. FMTYU IUNPG LDUAP JCEIE WZVIQ REAYM IAIPG
ZIRKM JCDYZ AJYZN HENNT UTLGT TFZOY
SSGUW PMUAS RFFQY AUUAD IOLXT GDJCM
TUBDV YTAEW OWJLS UGDPR GXORZ HZLEE
IQWQK HVLJA TEAKV ZIOLX T

Takuzu

The goal of this problem is to fill the grid with 1 and 0. The rules of the game are:

1. each line has the same number of 1s and 0s;
2. no more than two consecutive cells may contain the same digit; and
3. each row and each column have to be unique.

0		0		1	1		1	1	
						0		1	
		0			1				
0				1				1	1
		0				1			
0	1			1					
				1			0		0
							1		
1			1	1		0			0
1			1	1		0		0	0

Solutions in issue 116!

Brain Teasers

A. Five CSE students are eating lunch together after an exhausting COMP4121 lecture, all following their usual routine of alternating between thinking about algorithms and eating delicious noodles, individually switching between activities whenever the mood strikes them. They're sitting in a circle in the quad setting out their food when they realise that they have a problem: they've only been given five chopsticks between them.

Being CSE students, they're both averse to unnecessary exertion and very fair-minded, so it is decided that each student will receive one chopstick, which they each lay down to their left side. None of them want to embarrass themselves by attempting to eat with only one chopstick, but they all know each other fairly well and so will happily take turns sharing the chopsticks.

Is there a procedure or set of rules which, if adopted by all of the students, will make sure that none of them starve regardless of how long they remain there? (You may assume that the students have infinite appetite and infinite noodles.)

The News

This Apple Is Cursed: FBI. Over the summer, we've been following the unfolding disaster of legalese and personal privacy that is the court battle between Apple and the United States FBI over backdooring cryptographic protections in iOS. A huge number of parties have come out in support for, and against, the FBI's proposed measures; we'll have more a comprehensive wrap-up in coming weeks.

Facebook Reactions: "Humanity in Six Emotions." The ever-ubiquitous "Like", a long-time byword for the world's single largest active social network, got an overhaul; now, instead of just a singular like, you can have one of a (carefully curated) range of emotions. This should, they hope, keep contentless comments to a minimum. You may enjoy the "Ironic" button below this item.

Accelerated Mobile Pages comes to Google, WordPress. The search giant is now flagging content using the AMP spec as being "mobile-friendly", and with 25% of content powered by the blog engine/remote code execution vulnerability, this puts the push on a leaner Web going forward. Who knew that stripping a gigabyte of miscellaneous JavaScript improved performance?

Edgy sequel to 'Blade Runner' confirmed. Finally, it's been confirmed: Ridley Scott has assembled a sequel, to be written by Hampton Fancher, directed by Denis Villeneuve, and star-

ring Harrison Ford and... Ryan Gosling? The masterwork's successor will be released on 12 January, 2018 in North America.

New flagships from Samsung and LG. Traces of innovation have been found in the Galaxy S7 and LG G5, with sharper displays, more cameras, water resistance, snappier processors, and fatter memory and storage, it's looking like 2016 is the year to watch in the smartphone arena.

Huge SSDs hitting the shelves. Samsung is also touting a 15.36 TB drive at the forefront of its new high-capacity enterprise SSD range, the PM1633a series; they claim it'll clock 1.2 GB/s sequential read and 200 kIOPS of random read. and will handle a full drive write per day for "several" years. If you're in enterprise storage, drool away; the price tag is expected to be in the several thousand dollar range.

SpaceX launches a rocket! After a week of five launch scrubs, SpaceX launched an unmanned Falcon 9, towing a telecommunications satellite into Earth's constellation of orbiting debris, before returning, though sadly not landing, to the sea.

2016, now in beta. No use beta-ing a dead horse: Emily Olorin has taken over CSE's favourite magazine, and is turning it to all kinds of evil and hopefully minimally tentacled deeds.

■ Jashank Jeremy

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