Welcome to CS 106

Winter 2018

Audience

This course is a continuation of the Fall 2017 offering of CS 105.

Time and place

Lectures

LEC 001	MW 8:30–9:50	STC 0040
LEC 002	MW 11:30–12:50	STC 0040

Time and place

Labs

LAB 101	MW 1:00–2:20	MC 3003
LAB 102	MW 1:00–2:20	MC 3004
LAB 103	MW 2:30–3:50	MC 3003
LAB 104	MW 2:30–3:50	MC 3004
LAB 105	MW 4:00–5:20	MC 3003
LAB 106	MW 4:00–5:20	MC 3004
LAB 107	MW 4:00–5:20	MC 3005

Subject	Catalog#	Units	Title
CS	106	0.5	Intro to Comp Programming 2

Notes: Choose LAB section with same Associated Class number as primary meet.

Class	Comp Sec	Camp Loc	Assoc. Class	Rel 1	Rel 2	Enrl Cap	Enrl Tot	Wait Cap	Wait Tot	Time Days/Date	Bldg Roo
6396	LEC 001	UW U	1		201	140	65	0	0	08:30-09:50MW	STC 004
Reserve: Fine ArtDigital Specialization						6	3				
Reserve: LEV at least 2A GBDA students						80	55				
6397	LEC 002	UW U	2		201	140	108	0	0	11:30-12:50MW	STC 004
Reserve: Fine ArtDigital Specialization						6	2				
Reserve: LEV at least 2A GBDA students						80	77				
6398	LAB 101	UW U	1			60	36	0	0	01:00-02:20MW	MC 300
6399	LAB 102	UW U	1			20	5	0	0	01:00-02:20MW	MC 300
6400	LAB 103	UW U	1			60	24	0	0	02:30-03:50MW	MC 300
6401	LAB 104	UW U	2			30	31	0	0	02:30-03:50MW	MC 300
6402	LAB 105	UW U	2			60	47	0	0	04:00-05:20MW	MC 300
6403	LAB 106	UW U	2			30	22	0	0	04:00-05:20MW	MC 300
8295	LAB 107	UW U	2			20	8	0	0	04:00-05:20MW	MC 300
6404	TST 201	UW U	99		99	280	173	0	0	07:00-08:50W 02/28-02/28	

Information last updated: **2018/1/2**

Time and place

Labs

LAB 101	MW 1:00–2:20	MC 3003
LAB 102	MW 1:00–2:20	
LAB 103	MW 2:30–3:50	MC 3003
LAB 104	MW 2:30–3:50	MC 3004
LAB 105	MW 4:00–5:20	MC 3003
LAB 106	MW 4:00–5:20	MC 3004
LAB 107	MW 4:00–5:20	

Time and place

Midterm	February 28th, 7:00–8:50	TBA
Final exam	TBA	TBA

Course staff

Instructor: Kevin Harrigan
Email: kevinh@uwaterloo.ca

Instructor: Craig S. Kaplan
Email: csk@uwaterloo.ca

Course staff

Instructional Support Assistant:
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Course staff

Instructional Assistant:
Will Callaghan

Instructional Assistant:
Jessy Ceha

Instructional Assistant:
Greg d'Eon

Instructional Assistant:
Lisa Elkin

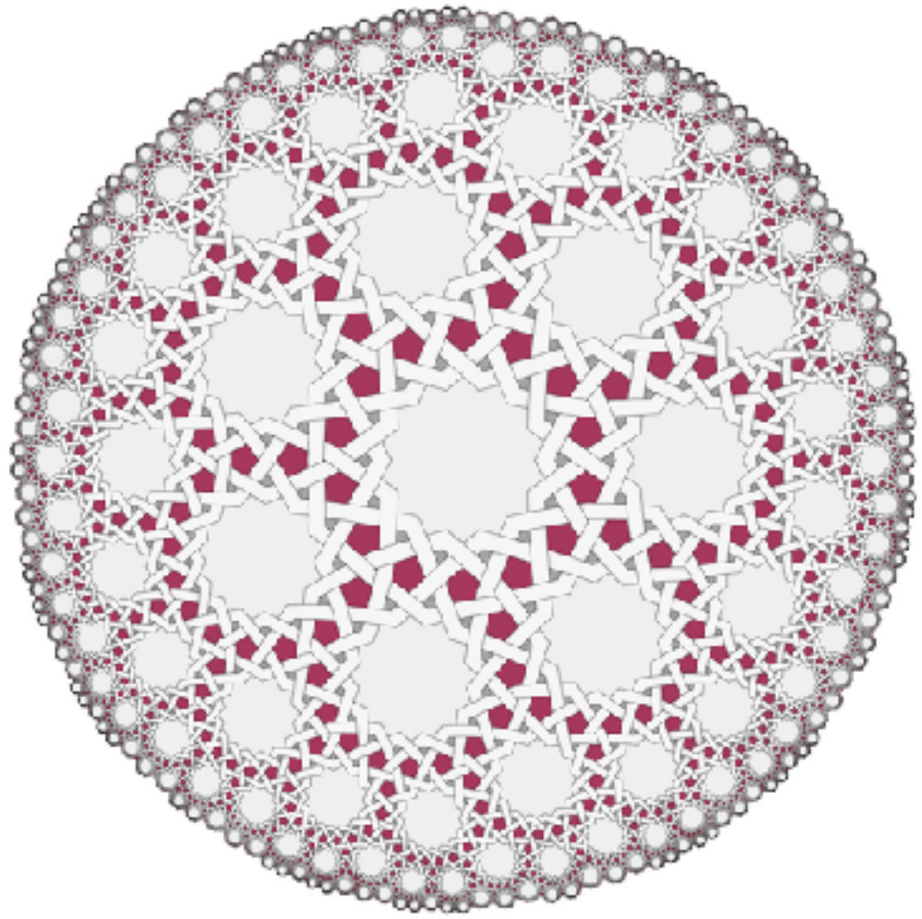
Instructional Assistant:
Sang Ho Suh

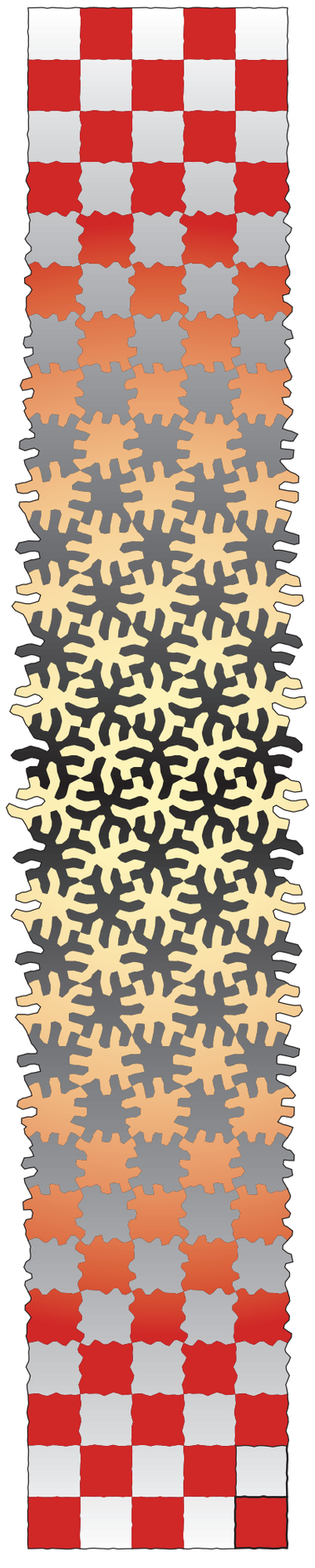
Course staff

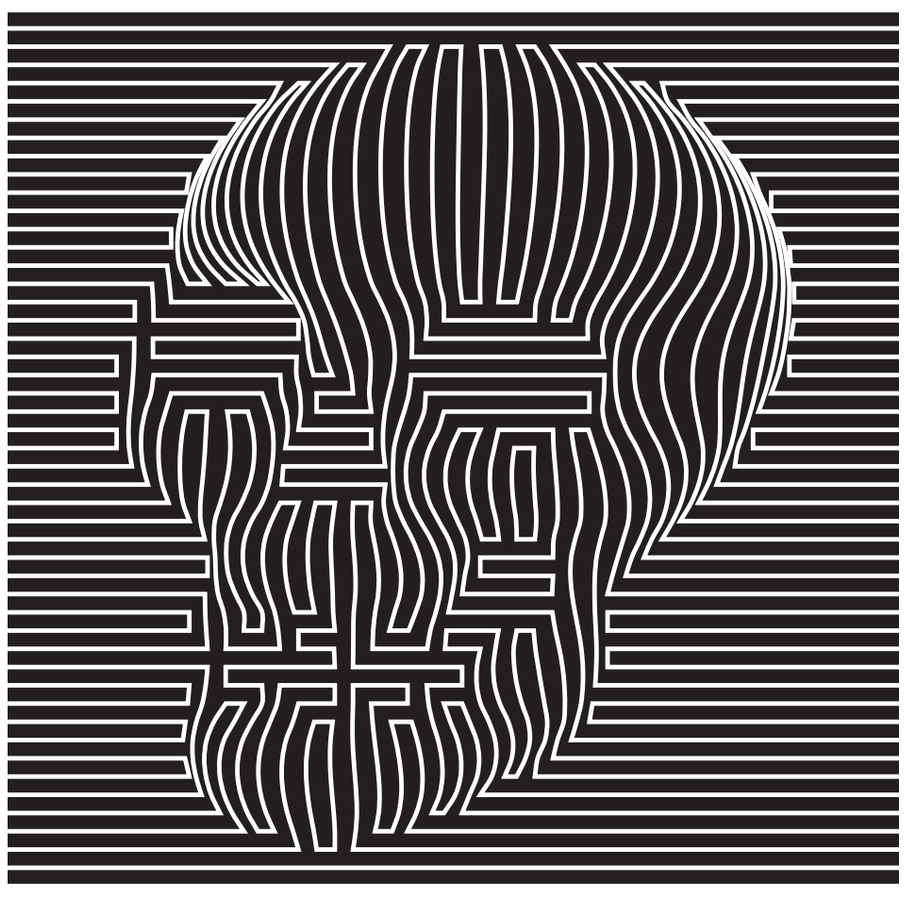
Coordinator: Chantelle Gellert
Email: chantelle.gellert@uwaterloo.ca

Teaching assistants

Undergraduate advisors








IRWIN

Rob Gorbet added 2 new photos.

October 16, 2017 ·

Surprised at the absence of Anouk Wipprecht or Iris van Herpen in the MoMA exhibit "Is Fashion Modern?" But neat to see kippot from colleague Craig S. Kaplan and KISS mom Suzy Rosenstein!

Like Comment Share

001 — 501s
002 — A-POC QUEEN
003 — ADIDAS SUPERSTAR
004 — AIR FORCE 1
005 — ARAN SWEATER
006 — AVIATOR SUNGLASSES
007 — BACKPACK
008 — BALACLAVA
009 — BALLET FLAT
010 — BANDANNA
011 — BASEBALL CAP
012 — BERET
013 — BIKER JACKET
014 — BIKINI
015 — BIRKIN BAG
016 — BODY MEETS DRESS—DRESS MEETS BODY
017 — BRETON SHIRT
018 — BRIEFS
019 — BUCKET HAT
020 — BURKINI
021 — CAFTAN
022 — CAPRI PANTS
023 — CARTIER LOVE BRACELET
024 — CHANEL NO. 5
025 — CHEONGSAM
026 — CHINOS
027 — CLOG
028 — CONVERSE ALL STAR
029 — COPPOLA
030 — DASHIKI
031 — DIAMOND ENGAGEMENT RING
032 — DIAMOND STUD
033 — DOOR-KNOCKER EARRINGS
034 — DOWN JACKET
035 — DR. MARTENS
036 — DUTCH WAX
037 — ESPADRILLE
038 — FANNY PACK
039 — FITBIT
040 — FLEECE
041 — FLIP-FLOP
042 — FUR COAT
043 — GORE-TEX
044 — GRAPHIC T-SHIRT
045 — GUAYABERA
046 — HAREM PANTS
047 — HEAD WRAP
048 — HEADPHONES
049 — HIJAB
050 — HOODIE
051 — JUMPSUIT
052 — KEFFIYEH
053 — KENTE CLOTH
054 — KILT
055 — KIPPAH
056 — LAPEL PIN
057 — LE SMOKING
058 — LEATHER PANTS
059 — LEOTARD
060 — LITTLE BLACK DRESS
061 — LOAFER
062 — MANICURE
063 — MAO JACKET
064 — MINISKIRT
065 — MONOGRAM
066 — MOON BOOT
067 — OXFORD-CLOTH BUTTON-DOWN SHIRT
068 — PANAMA HAT
069 — PEARL NECKLACE
070 — PENCIL SKIRT
071 — PLAID FLANNEL SHIRT
072 — PLATFORM SHOE
073 — POLO SHIRT
074 — PREMAMAN
075 — RED LIPSTICK
076 — ROLEX
077 — SAFARI SUIT
078 — SAFETY PIN
079 — SALWAR KAMEEZ
080 — SARI
081 — SEVEN EASY PIECES
082 — SHAWL
083 — SHIFT DRESS
084 — SHIRTDRESS
085 — SILK SCARF
086 — SLIP DRESS
087 — SNUGLI
088 — SPACE AGE
089 — SPANX
090 — SPEEDO
091 — SPORTS JERSEY
092 — STILETTO
093 — SUIT
094 — SUNSCREEN
095 — SURGICAL MASK
096 — SWATCH
097 — TABI BOOT
098 — TATTOO
099 — TEVA SANDAL
100 — TIE
101 — TIGHTS
102 — TRACKSUIT
103 — TRENCH COAT
104 — TURTLENECK
105 — UNISEX PROJECT
106 — WHITE T-SHIRT
107 — WONDERBRA
108 — WRAP DRESS
109 — Y-3
110 — YOGA PANTS
111 — YSL TOUCHE ÉCLAT

ITEMS:
IS FASHION MODERN?

[stylecurated.blogspot.ca]

[stylecurated.blogspot.ca]

Resources

Course web page

www.student.cs.uwaterloo.ca/~cs106/

LEARN

learn.uwaterloo.ca/

Piazza

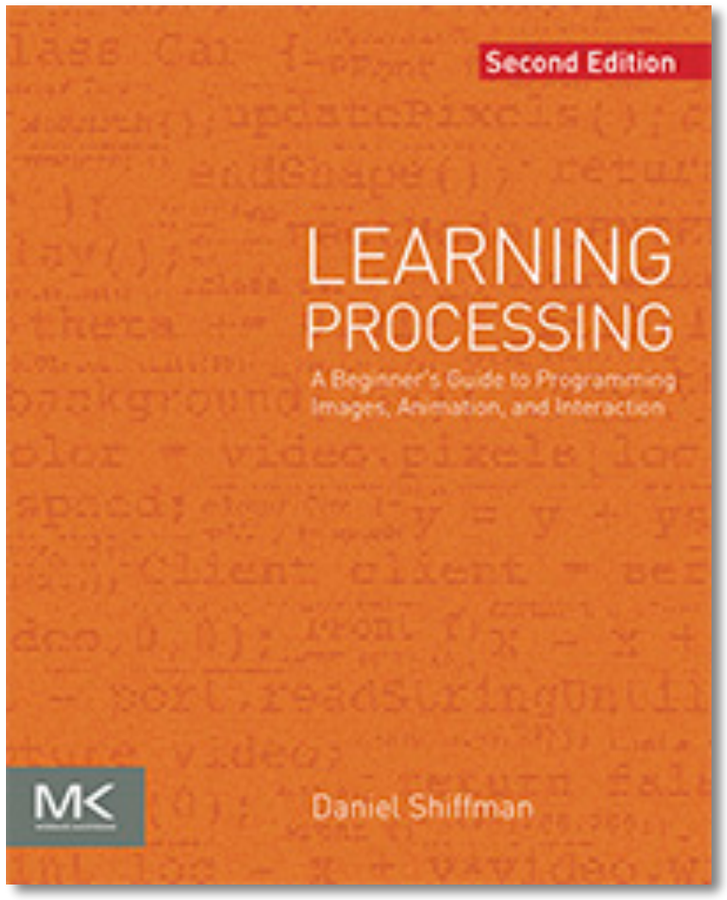
piazza.com/uwaterloo.ca/winter2018/cs106/

Processing

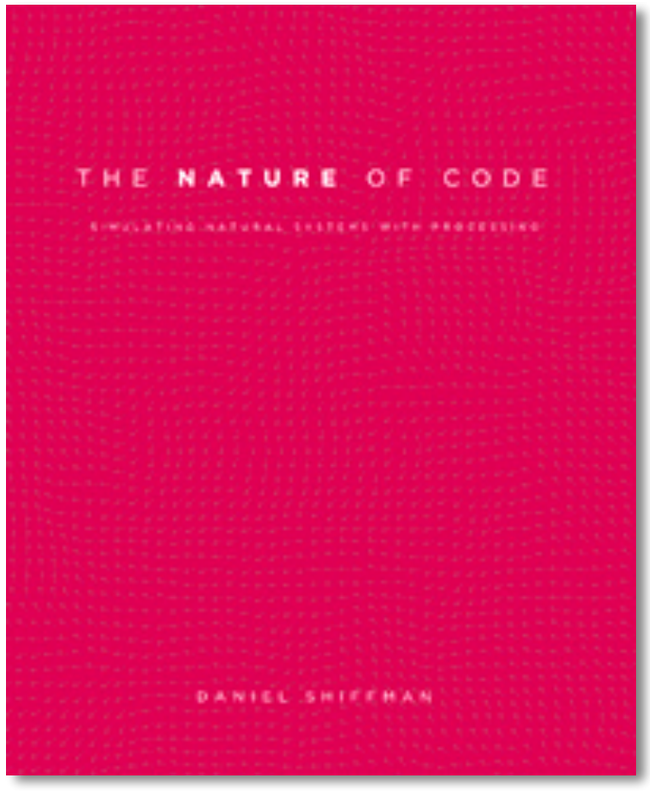
processing.org

Version 3.3+

Books



Shiffman, *Learning Processing*,
second edition.



Shiffman, *The Nature of Code*
natureofcode.com

i▸Clicker

CQ

Do you have your clicker with you today?

(A) Yes

(B) No

(C) I reject the premise of this question

CQ

Try to make the number of people who responded with each of (A) through (E) be as close as possible to identical.

Technology in class

Bad idea

Good idea

Research Article

The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking

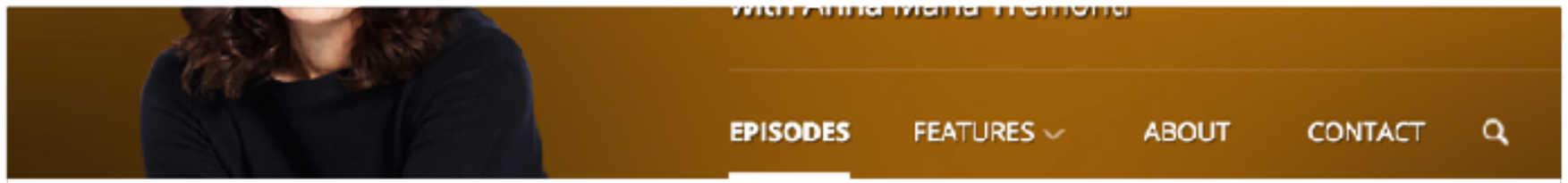
Pam A. Mueller[1] **and Daniel M. Oppenheimer**[2]
[1]Princeton University and [2]

In-class laptop use and its effects on student learning

Carrie B. Fried *

Winona State University, Psychology Department, 231 Phelps Hall, Winona, MN 55987, United States

24 September 2006



Monday September 07, 2015

Laptops in classrooms distracting students, teachers call for ban

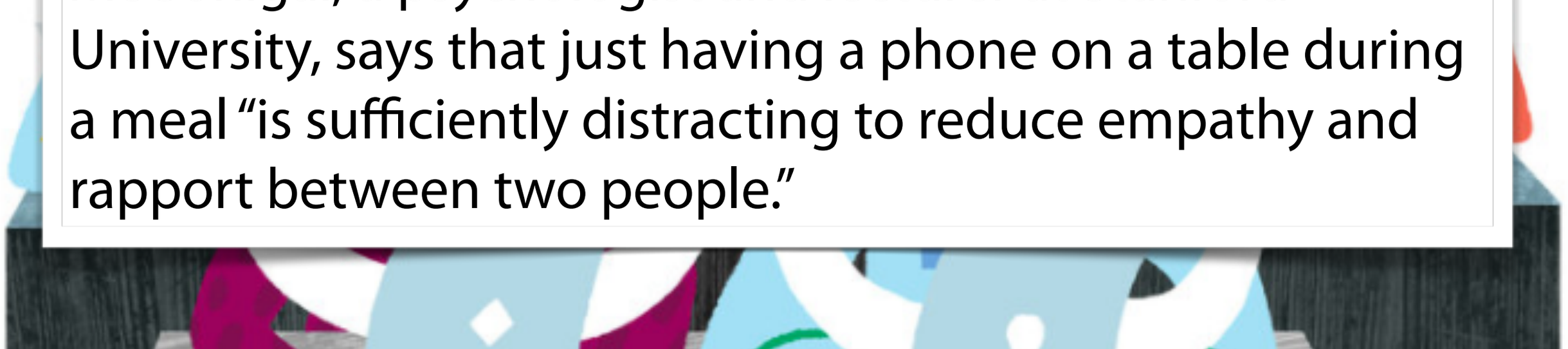
Leave Your Laptops at the Door to My Classroom

Darren Rosenblum
ON CAMPUS JAN. 2, 2017

Le

Focus is crucial, and we do best when monotasking: Even disruptions of a few seconds can derail one's train of thought. Students process information better when they take notes — they don't just transcribe, as they do with laptops, but they think and record those thoughts.

Laptops or tablets can undermine exam performance by 18 percent. Other studies reveal that writing by hand helps memory retention. Screens block us from connecting, whether at dinner or in a classroom. Kelly McGonigal, a psychologist and lecturer at Stanford University, says that just having a phone on a table during a meal "is sufficiently distracting to reduce empathy and rapport between two people."



Marking

Marking

Participation	5%
Labs	5%
Assignments	30%
Midterm	20%
Final	40%

Based on the best 75% of your clicker responses:

No answer: 0
Wrong answer: 1
Right answer: 2

Marking

Participation	5%
Labs	5%
Assignments	30%
Midterm	20%
Final	40%

Usually due Wednesdays, 11:59pm.

No marks if you submit nothing

A random subset marked in full, other submitted labs automatically receive 100%

Marking

Participation	5%
Labs	5%
Assignments	30%
Midterm	20%
Final	40%

Approximately 8–10 assignments

Usually due Sunday at 11:59pm; **A00 due this Sunday!**

Marking

Participation	5%
Labs	5%
Assignments	30%
Midterm	20%
Final	40%

NO LATE SUBMISSIONS, NO GRACE DAYS

We will drop the lowest assignment mark

Final assignment (probably) counts double, can’t be dropped

Marking

Participation	5%
Labs	5%
Assignments	30%
Midterm	20%
Final	40%

Must pass weighted average of exams to pass the course.

Academic Integrity

- I will reference and footnote all ideas, words or other intellectual property from other sources used in the completion of every assignment.
- Each assignment will be completed by my own efforts and I will not collaborate with any other person for ideas or answers, except as allowed by each assignment, and noted within each submission.
- I will neither give nor receive an electronic copy or a printed version of any part of the code included in any submission, except as allowed by each assignment, and noted within that submission.

Academic Integrity

- I declare that the output (including any screen captures) provided as part of any assignment will have been generated by the program code submitted.
- Every assignment I submit will not have been submitted (either partially or entirely) for academic evaluation for any course at Waterloo or at any other academic institution.
- **Note:** Submitting partial or entire work(s) already submitted for other purposes is only acceptable when approved by your current instructor in advance for a specific assignment.

https://uwaterloo.ca/academic-integrity/integrity-students

The course

A continuation of CS 105

Less emphasis on learning the basic structure of Processing programs

More emphasis on writing more interesting, more expressive programs (using external libraries, standard idioms and techniques, real-world data)

Still about small programs in a comfortable environment

Planned contents

1. Arrays, Strings
2. Input/Output
3. Advanced Shapes
4. User interfaces
5. Geometric context
6. Recursion and fractals
7. Randomness and noise
8. Text processing
9. Structured data processing

Recurring themes

1. Program design
2. Reading and understanding programs
3. Thinking computationally
4. Applications in art, design and visualization

Philosophy

(i.e., why you should care)

You don’t have to become a computer scientist.

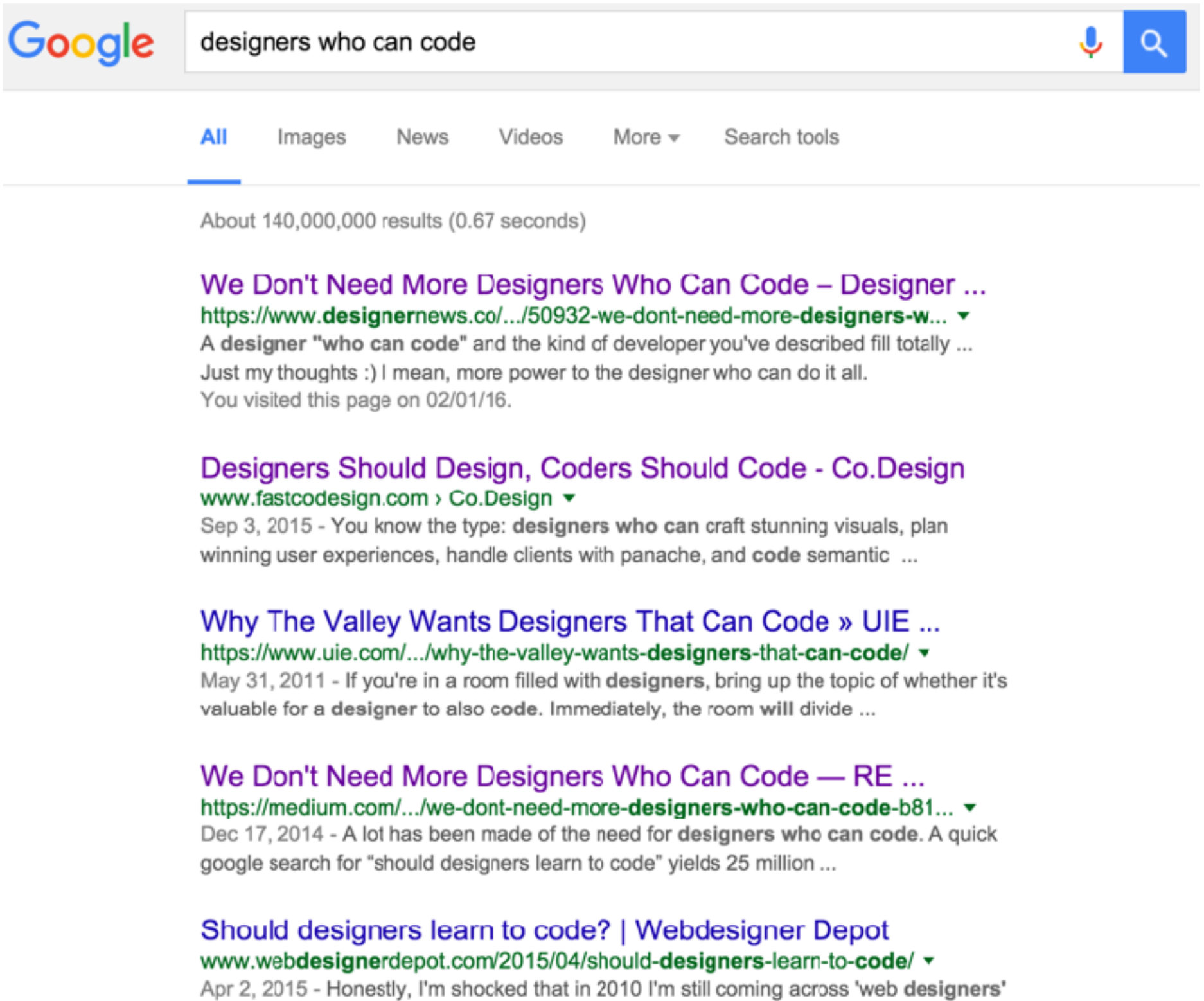
Nevertheless, there are good reasons to take the time to understand programming

Programming is an artistic medium.

Understanding programming will make you better at what you do.

GBDA Students: Future courses will rely on your programming skills.

The world needs designers who can code, or at least designers who understand the process.

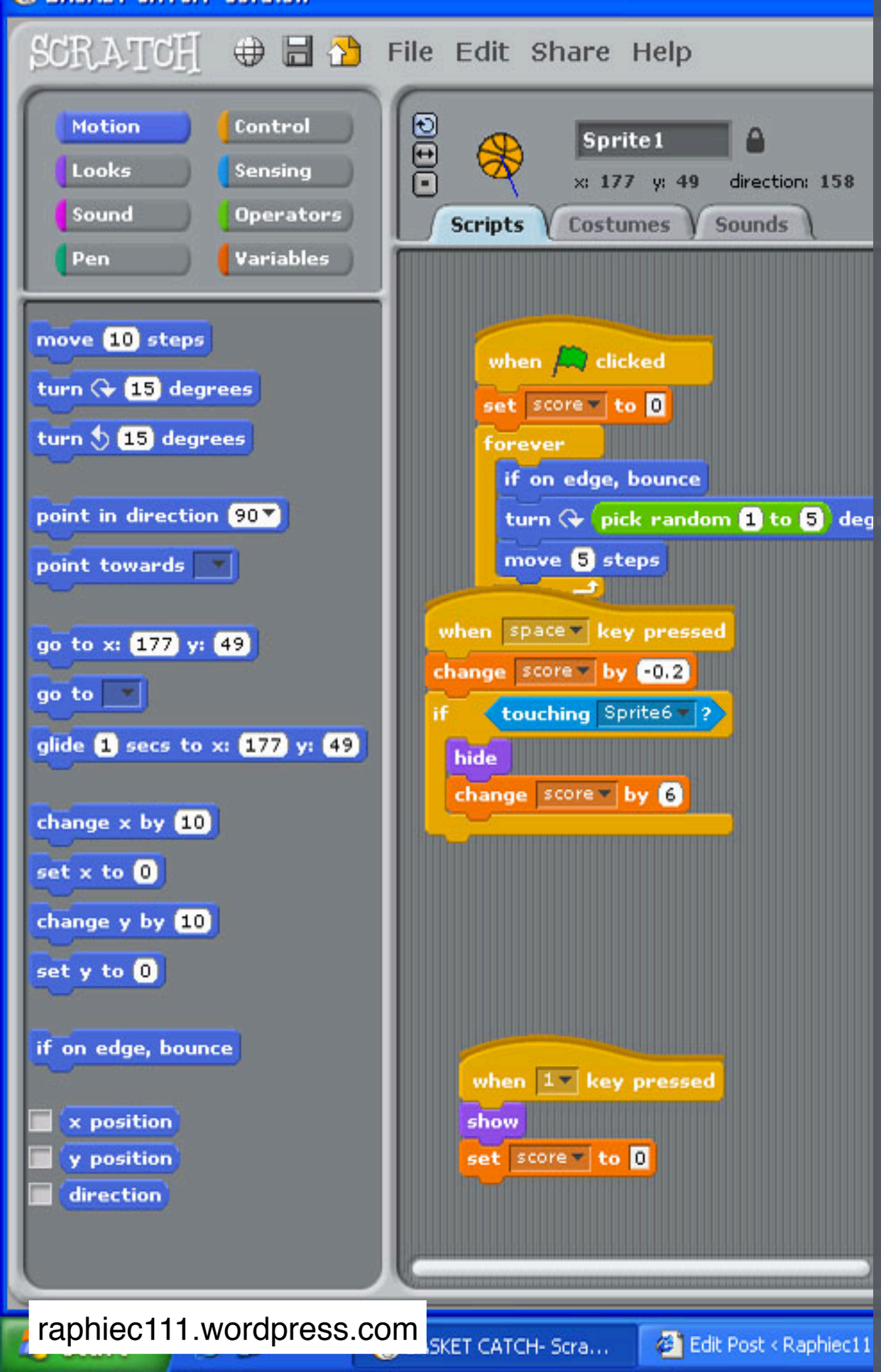


We don't need more designers who can code
(Jesse Weaver, medium.com, 17 December 2014)

To be straight from the outset, I don't completely disagree with the premise. However, I think the statement, "we need designers who can code" misrepresents the underlying issue...

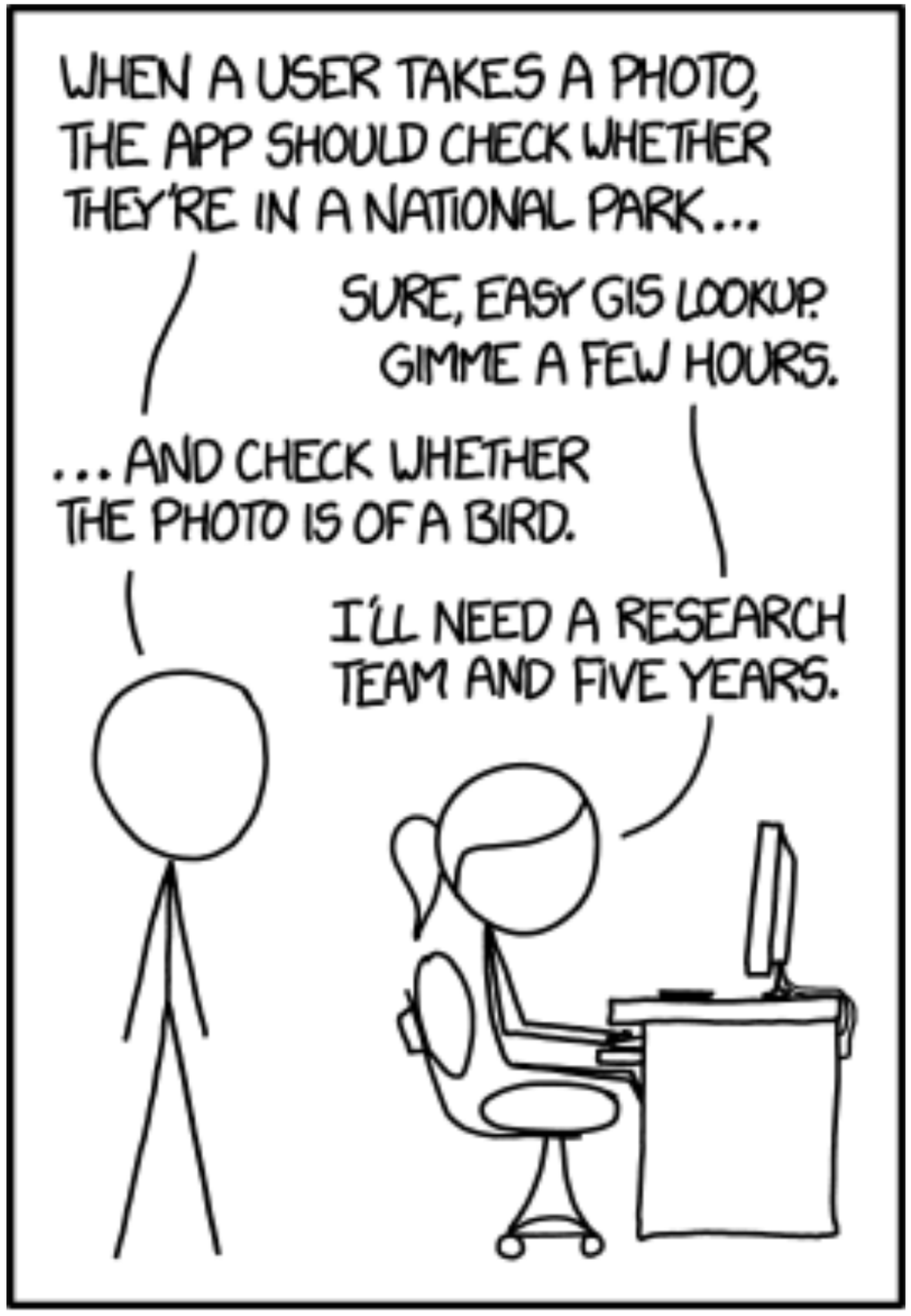
What we should be saying is that we need more designers who know ***about*** code.

The reason designers should know about code, is the same reason developers should know about design. Not to become designers, but to empathize with them. To be able to speak their language, and to understand design considerations and thought processes. To know just enough to be dangerous, as they say.



Even though most people don't grow up to become professional journalists and novelists, it's important for everyone to learn to write. So too with coding—and for similar reasons. Most people won't grow up to become professional programmers or computer scientists, but learning to code fluently is valuable for everyone. Becoming fluent, whether with writing or coding, helps you to *develop your thinking, develop your voice,* and *develop your identity.*

Mitchel Resnick,
Lifelong Kindergarten: Cultivating Creativity through Projects, Passion, Peers, and Play.



IN CS, IT CAN BE HARD TO EXPLAIN THE DIFFERENCE BETWEEN THE EASY AND THE VIRTUALLY IMPOSSIBLE.

xkcd.com/1425

Doing well

Come to lectures *and be present.*

The work doesn't start in front of the keyboard.

Show up for labs and complete the exercises.

Get help when you need it.

We give you all the tools you need.

Programming is a creative act.