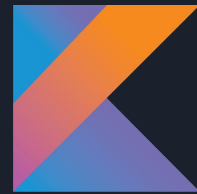


Development Monetization



CS 402: Mobile Development



The Common Path

1. Graduate
2. Look for a job.
3. Get a job.
4. Get paid biweekly.
5. Do what you're told.
6. Quit/Get Laid Off/Fired
7. Goto: 2



The Becoming Common Path

1. Graduate
2. Look for a job.
3. Get a job.
4. Get paid biweekly.
5. Do what you're told.
6. Work a side gig
7. Quit/Get Laid Off/Fired
8. Keep working your side gig
9. Goto: 2



Salary Estimates

Starting ~\$70,000

5+ years: \$110,000

401K vs IRA

Health Savings Account (HSA) ~\$500-1000/month ~\$2,000-\$10,000 deductible

Flexible Spending Account (FSA) - Save for medical costs, use it or lose it.



Charging for Services

Market always dictates

Salary you'd like to make, divided by 2,000 (50 weeks * 40 hours)

Ex: \$10/hour = \$20,000/year Ugh.

Ex: \$50/hour = \$100,000/year. Yeah! Or Yeah?

Health insurance, retirement, etc.

Not all hours are billable!



File for an LLC

File your LLC name with the state.

https://sos.idaho.gov/corp/llc_form.html

Get a free EIN number for you business. This is like a Social Security Number but for your business

[http://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/Apply-for-an-Employer-Identification-Number-\(EIN\)-Online](http://www.irs.gov/Businesses/Small-Businesses-&-Self-Employed/Apply-for-an-Employer-Identification-Number-(EIN)-Online)

Open a credit union account with your business name and EIN



LLC Taxes

LLC income for a sole proprietor is a "pass through"

You pay income tax on ALL income, whether you pay yourself or not

Use write offs and expenses to reduce the income amount

Make \$10,000, pay 20% in taxes, you owe \$2,000 (minus deductions, standard or otherwise)

Make \$10,000, have \$4,000 in expenses, pay 20% on \$6,000 instead. You owe \$1,200.



Developer Types

Backend - Spring, .Net, NodeJS

Frontend - React, AngularJS, VueJS, Bootstrap, Foundation

Mobile - Java, Kotlin, Swift, React Native

Languages - Java, C#, JavaScript, Python, Ruby, “Computer Programming”



Where to start?

Look at job requirements.

Ex: **Robotics**: Embedded development, firmware, ROS, C/C++. Start with Pi or Arduino robots.

Ex: **Sr. Software Engineer**: Spring, Kafka, Hibernate, GraphQL, NoSQL, SQL, Liquibase, SaaS, ReST, PaaS, Ehcache, Redis, Cucumber, Elasticsearch, Kubernetes, Docker, etc. Start with building your own web app. I recommend JHipster.



Real World Decision Makers

Usually no real programming experience. “Dabbled”

Technical directors with no technical skills. “I’m a people person.”

These are the What People.



Technical Managers

Decision makers with technical skills are rare.

No one is a born leader. It takes practice.

No one will give you a responsibility you have no experience in. You must make it yourself.



Job Interviews

Typical:

Resume with an internship, clubs, awards, classes.

But people want to see projects, portfolios and participation.

You go and try to prove you're worth your salary.

Interviewer usually has no experience themselves (in my experience).



Creating Your Own Thing

Who wouldn't want someone who can generate
\$100,000-400,000/year.

A developer who can manage their own teams, requirements, project
estimation and budget.

You'll know the same basics as CEOs and CTOs.

[Lean Start Up](#)



The Apps Business

First time in history it's this easy to make money.

One man shops can generate huge profits.

Flappybirds (\$50,000/day, 1 guy)

WhatsApp (\$19 billion, 32 engineers)



Main Revenue Generators

Ad supported

Paid apps

Business to Business (B2B)

Business to Consumer (B2C)



Ideas are Cheap

Those that can't execute, are simply dreamers.

Those that can implement are masters of their domain.

You all are able to execute on any idea.



More Realistic

Small dev team, building custom apps for yourself or for a client.

A couple hobby apps that generate \$50-100/month



In App Purchases

Freemium model allows low barrier to entry.

Shows users how useful your app can be and why they should unlock additional features.



Ads

Great for apps that get a lot of views



Sales - B2C

Business to Consumer (B2C)

Most apps are this model (including apps with ads)

It takes a lot of \$1 downloads to make a living.

ROI

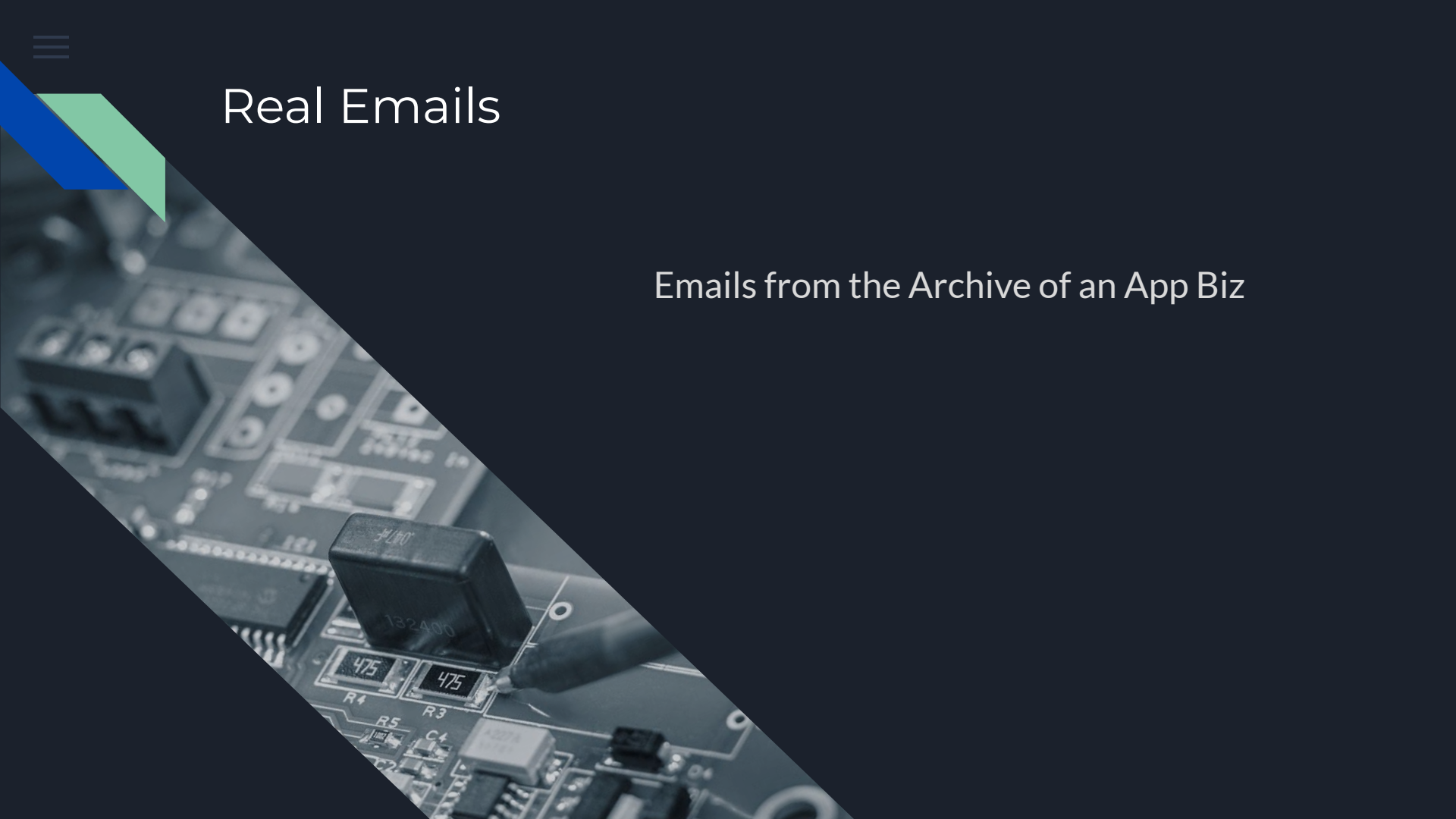
Cost of App	\$0.99
Store's Cut	\$0.30
Revenue	\$0.69
Cost of Dev	\$2,100.00

Daily Sales	Months											
	1	2	3	4	5	6	7	8	9	10	11	12
1	\$20.79	\$41.58	\$62.37	\$83.16	\$103.95	\$124.74	\$145.53	\$166.32	\$187.11	\$207.90	\$228.69	\$249.48
2	\$41.58	\$83.16	\$124.74	\$166.32	\$207.90	\$249.48	\$291.06	\$332.64	\$374.22	\$415.80	\$457.38	\$498.96
3	\$62.37	\$124.74	\$187.11	\$249.48	\$311.85	\$374.22	\$436.59	\$498.96	\$561.33	\$623.70	\$686.07	\$748.44
4	\$83.16	\$166.32	\$249.48	\$332.64	\$415.80	\$498.96	\$582.12	\$665.28	\$748.44	\$831.60	\$914.76	\$997.92
5	\$103.95	\$207.90	\$311.85	\$415.80	\$519.75	\$623.70	\$727.65	\$831.60	\$935.55	\$1,039.50	\$1,143.45	\$1,247.40
6	\$124.74	\$249.48	\$374.22	\$498.96	\$623.70	\$748.44	\$873.18	\$997.92	\$1,122.66	\$1,247.40	\$1,372.14	\$1,496.88
7	\$145.53	\$291.06	\$436.59	\$582.12	\$727.65	\$873.18	\$1,018.71	\$1,164.24	\$1,309.77	\$1,455.30	\$1,600.83	\$1,746.36
8	\$166.32	\$332.64	\$498.96	\$665.28	\$831.60	\$997.92	\$1,164.24	\$1,330.56	\$1,496.88	\$1,663.20	\$1,829.52	\$1,995.84
9	\$187.11	\$374.22	\$561.33	\$748.44	\$935.55	\$1,122.66	\$1,309.77	\$1,496.88	\$1,683.99	\$1,871.10	\$2,058.21	\$2,245.32
10	\$207.90	\$415.80	\$623.70	\$831.60	\$1,039.50	\$1,247.40	\$1,455.30	\$1,663.20	\$1,871.10	\$2,079.00	\$2,286.90	\$2,494.80
15	\$311.85	\$623.70	\$935.55	\$1,247.40	\$1,559.25	\$1,871.10	\$2,182.95	\$2,494.80	\$2,806.65	\$3,118.50	\$3,430.35	\$3,742.20
20	\$415.80	\$831.60	\$1,247.40	\$1,663.20	\$2,079.00	\$2,494.80	\$2,910.60	\$3,326.40	\$3,742.20	\$4,158.00	\$4,573.80	\$4,989.60
25	\$519.75	\$1,039.50	\$1,559.25	\$2,079.00	\$2,598.75	\$3,118.50	\$3,638.25	\$4,158.00	\$4,677.75	\$5,197.50	\$5,717.25	\$6,237.00
30	\$623.70	\$1,247.40	\$1,871.10	\$2,494.80	\$3,118.50	\$3,742.20	\$4,365.90	\$4,989.60	\$5,613.30	\$6,237.00	\$6,860.70	\$7,484.40
35	\$727.65	\$1,455.30	\$2,182.95	\$2,910.60	\$3,638.25	\$4,365.90	\$5,093.55	\$5,821.20	\$6,548.85	\$7,276.50	\$8,004.15	\$8,731.80
40	\$831.60	\$1,663.20	\$2,494.80	\$3,326.40	\$4,158.00	\$4,989.60	\$5,821.20	\$6,652.80	\$7,484.40	\$8,316.00	\$9,147.60	\$9,979.20
45	\$935.55	\$1,871.10	\$2,806.65	\$3,742.20	\$4,677.75	\$5,613.30	\$6,548.85	\$7,484.40	\$8,419.95	\$9,355.50	\$10,291.05	\$11,226.60
50	\$1,039.50	\$2,079.00	\$3,118.50	\$4,158.00	\$5,197.50	\$6,237.00	\$7,276.50	\$8,316.00	\$9,355.50	\$10,395.00	\$11,434.50	\$12,474.00
55	\$1,143.45	\$2,286.90	\$3,430.35	\$4,573.80	\$5,717.25	\$6,860.70	\$8,004.15	\$9,147.60	\$10,291.05	\$11,434.50	\$12,577.95	\$13,721.40
60	\$1,247.40	\$2,494.80	\$3,742.20	\$4,989.60	\$6,237.00	\$7,484.40	\$8,731.80	\$9,979.20	\$11,226.60	\$12,474.00	\$13,721.40	\$14,968.80
70	\$1,455.30	\$2,910.60	\$4,365.90	\$5,821.20	\$7,276.50	\$8,731.80	\$10,187.10	\$11,642.40	\$13,097.70	\$14,553.00	\$16,008.30	\$17,463.60
80	\$1,663.20	\$3,326.40	\$4,989.60	\$6,652.80	\$8,316.00	\$9,979.20	\$11,642.40	\$13,305.60	\$14,968.80	\$16,632.00	\$18,295.20	\$19,958.40
90	\$1,871.10	\$3,742.20	\$5,613.30	\$7,484.40	\$9,355.50	\$11,226.60	\$13,097.70	\$14,968.80	\$16,839.90	\$18,711.00	\$20,582.10	\$22,453.20
100	\$2,079.00	\$4,158.00	\$6,237.00	\$8,316.00	\$10,395.00	\$12,474.00	\$14,553.00	\$16,632.00	\$18,711.00	\$20,790.00	\$22,869.00	\$24,948.00



Real Emails

Emails from the Archive of an App Biz





Emails

“I would like to speak with someone about creating an app. I am curious about the timetable and costs involved with the creation process. An e-mail or phone call would be greatly appreciated. I look forward to hearing from your team.”



Emails

“Was wondering if someone could give us a call in regards to an application development.”



Emails

“Hi, I have an idea for an app that I believe could be very successful and lucrative. Unfortunately, I do not have the skills to create it. I am seeking a partnership with someone who would be willing to go 50/50. Please reply if interested.”



Emails

“Please contact me regarding app development.”



B2B

Business to Business

Businesses tend to have more money to spend

They understand it costs money to make money

When it comes to making money, they get it



B2B Emails

“We are currently developing a new product, and we need to outsource an app developer. I would like schedule a brief chat about our needs and to see if your company is able to create our needed the functionality. Please provide a contact number and preferred hours of contact. Look forward to hearing from you.”



Downloads

Downloads by the Numbers





B2B Earnings

Last 5 Client Apps total: ~\$75,000

Average cost per app: ~\$15,000

Lowest app: ~\$800

Highest: \$45,000



Investing in Your Business

What do you buy, when do you buy it, and what can you afford?

Investments as Income

Stock market geometric average is about 9. Your investments in your business should yield > 9 .

[Source](#)

Year and Return (%)		Date Range	
2018	-4.42	Jan 1	2008 to Dec 31 2018
2017	21.94	<input type="checkbox"/> Adjust for Inflation	
2016	11.93	<input checked="" type="checkbox"/> Include Dividends	
2015	1.31	Calculate	
2014	13.81	"Average" return:	9.06 %
2013	32.43	Annualized return	
2012	15.88	(= True CAGR):	7.25 %
2011	2.07	Standard Deviation:	18.04 %
2010	14.87	\$1.00 grew to:	\$ 2.16
2009	27.11		
2008	-37.22		
2007	5.46		



Real Estate as Income

\$120,000 apartment, renting out at \$900/month

Mortgage: \$750/month (PITI)

Rent: \$900/month

Income: \$150/month

Yearly income: \$1,800 + principal equity

ROI (assuming 20% down): 7.5%



Apps as Income

\$200 investment & 1 month (160 hours) (\$5,000.00)

App downloads per day: 3

Income per day: \$2.08

Income per month: \$62.37

Yearly income: \$748.44

ROI: ...



Not Everything is About Money

Trying to get a job and showing you have these skills is invaluable.

ROI

Year and Return (%)

2018	-4.42
2017	21.94
2016	11.93
2015	1.31
2014	13.81
2013	32.43
2012	15.88
2011	2.07
2010	14.87
2009	27.11
2008	-37.22
2007	5.46

Date Range

Jan 1 2008 to Dec 31 2018

☐ Adjust for [Inflation](#)

☒ Include Dividends

Calculate

"Average" return: 9.06 %

Annualized return
(= True CAGR): 7.25 %

Standard Deviation: 18.04 %

\$1.00 grew to: \$ 2.16