

Week 1: Introduction to Finance & Accounting

Role of Finance in Tech and Startups

Learning Objectives

- Understand the purpose of finance and accounting in any business.
- Recognize how financial decisions impact tech companies and startups.
- Identify key financial questions faced by software businesses or entrepreneurs.

1. What is Finance?

Finance is the science (and art) of managing money:

- **Raising money:** Where does funding come from? (e.g., investors, loans)
- **Spending money:** How to allocate it wisely? (e.g., hiring, marketing)
- **Tracking money:** How much do we earn or lose? (through accounting)

In a startup: Finance helps answer questions like:

- “How long can we survive before we run out of money?”
 - “Is it worth spending \$20K on a new feature?”
 - “Should we raise money from investors now or later?”
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2. What is Accounting?

Accounting is the process of:

- Recording
- Summarizing
- Reporting financial transactions

It's often called the "**language of business**".

Even if you never become an accountant, understanding the *outputs* of accounting (like financial statements) is crucial for making smart business or tech decisions.

3. Why CS Students Should Learn Finance

Reason	How it Applies
Startup mindset	If you plan to build or join a startup, you'll need to understand cash flow, costs, and revenue.
Project decisions	Helps with estimating return on investment (ROI) of a tech feature or product.
Communication	Know how to talk to CFOs, investors, and business teams.
Data-driven	Finance and CS both rely on logic, structure, and analysis—skills you already have.

4. Finance in Tech – Real Scenarios

Scenario 1 – Tech Startup Founders

You've built a new AI app. Users are growing but you're losing \$10,000/month.

- How long before you run out of cash?
- Should you raise \$100K now or wait until you grow more?

Scenario 2 – Developer as Product Manager

You propose building a new feature that will cost \$5,000 in dev time.

- Will it bring in enough new customers to pay off?
- How do you measure its ROI?

Scenario 3 – Working in a Big Tech Company

You want to deploy a new cloud system:

- What are the costs?
- Is the savings in efficiency worth it?

5. Key Roles of Finance in Startups

Role	Description
Budgeting	Planning how much to spend, and where.
Tracking	Keeping an eye on expenses and income.
Funding	Deciding how to raise money (VCs, loans, bootstrapping).
Forecasting	Predicting future revenue, costs, and profits.
Decision Making	Using numbers to choose between tech strategies.

6. Key Takeaways

- **Finance is not just about numbers—it's about decisions.**
- **Accounting tracks the past; finance helps plan the future.**
- Understanding financial basics makes you a smarter engineer, team lead, or entrepreneur.

Difference between accounting & finance

Learning Objectives

- Distinguish between accounting and finance.
- Understand the different purposes they serve in a business.
- Identify how both are used in decision-making, especially in tech/startup environments.

1. Overview of Accounting vs. Finance

Aspect	Accounting	Finance
Focus	Records the past	Plans for the future
Purpose	Track and report what happened with money	Manage and make decisions about money
Primary Question	“What happened to the money?”	“What should we do with the money?”
Main Tasks	<ul style="list-style-type: none">- Record transactions- Prepare financial statements- Ensure compliance (e.g., taxes)	<ul style="list-style-type: none">- Budgeting- Forecasting- Investment and funding decisions
Tools Used	Income Statement, Balance Sheet, Journal Entries	Cash Flow Projections, Valuation Models, NPV/IRR
Users	Internal & external stakeholders (e.g., auditors, tax authorities)	Managers, investors, decision-makers

2. Simple Analogy:

Imagine a **car** (representing a tech company):

- **Accounting** = Dashboard
 - Tells you **how fast you're going**, **how much fuel you've used**, and **how far you've traveled**.
 - It's about **tracking** performance and status.

- **Finance** = GPS & Driving Plan
 - Decides **where to go, which route to take**, and **how to optimize fuel**.
 - It's about **planning and decision-making**.

3. Example from a Tech Startup

Scenario:

You're running a startup building a productivity app.

Action	Accounting	Finance
You spend \$5,000 on Google Ads	Records it as a marketing expense	Analyzes: "Was it worth it? How many users did we gain?"
You receive \$10,000 from a client	Records as revenue	Projects future cash flow: "Can we hire another dev with this growth?"
You build a new server	Records as an asset	Evaluates: "Should we buy or lease a server?"

4. How They Work Together

Accounting and finance **complement each other**:

- **Accounting** creates the financial data →
- **Finance** interprets and uses it to make decisions.

Think of it as:

Accounting = Input → Finance = Action

5. Key Takeaways

- **Accounting** = record-keeping, reporting, and compliance.
- **Finance** = analysis, planning, and strategic decision-making.
- Both are critical for running tech companies, managing startups, or working as product-focused developers or leads.

Importance of Finance & Accounting for Developers and Entrepreneurs

Learning Objectives

- Understand why financial knowledge is crucial for tech professionals.
- Recognize how financial literacy enhances decision-making, entrepreneurship, and career growth.
- Identify real-world tech scenarios where finance/accounting plays a critical role.

1. Why Developers Need to Understand Finance & Accounting

While developers focus on building products, finance/accounting helps answer:

Question	Why It Matters
How much will this feature cost?	Budget constraints affect project decisions.
Will this new feature generate revenue or just add costs?	Understanding ROI helps justify tech work.
How much are we earning or losing?	Impacts hiring, expansion, or project continuation.
Can we afford new tools, cloud services, or APIs?	Budget decisions require cost-benefit thinking.

2. Why Entrepreneurs Need Financial Knowledge

If you're launching a startup or tech product, you'll be making decisions like:

Financial Area	Entrepreneur's Concern
Funding	How much capital do we need? Should we raise money or bootstrap?
Pricing	How should we price our product to cover costs and make profit?

Financial Area	Entrepreneur's Concern
Burn Rate	How long can we operate before we run out of money?
Hiring	Can we afford to hire a developer or outsource?
Growth	Is our business financially scalable?

3. Real-Life Tech Scenarios

Scenario 1: Developer in a SaaS Startup

You're building a new dashboard for customers. The CEO asks:

"Is this worth spending 2 weeks of dev time?"

You'll need to:

- Estimate development cost (your salary × time).
- Compare to projected revenue or customer retention boost.
- Use basic ROI thinking.

Scenario 2: Tech Entrepreneur Pitching to Investors

Investors ask:

"What's your monthly revenue? How fast are you burning cash? What's your break-even point?"

Even without being a finance expert, you must:

- Understand and explain key financial terms.
- Show a financial projection.
- Justify your funding ask.

4. Benefits of Financial Literacy for Tech Professionals

Benefit	Description
Better Decision-Making	Know when a tech investment is worth it.
Speak the Language of Business	Communicate effectively with finance, product, and execs.
Career Growth	Leadership roles (PM, CTO, founder) need financial understanding.
Entrepreneurial Success	Most startups fail due to poor financial planning—not bad tech.

5. Key Financial Concepts Developers Should Know

You don't need to *do* accounting, but you should understand:

- Revenue, cost, profit, loss
- Budgeting and forecasting
- Cash flow and burn rate
- Return on investment (ROI)
- Financial statements (what they show, not how to make them)

6. Key Takeaways

- **Tech skills build products; finance skills keep them alive.**
- Whether you're a solo developer, startup founder, or part of a team—you'll make better decisions with basic financial knowledge.
- You don't need to be an accountant—but you need to understand what the numbers mean and how they impact your work.