



# Final Review

Reading & Vocabulary Development  
for CS50x Iran Learners

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## □ Review 1 (Weeks 0-2)

Fill in the blanks with the words below.

employee - recruitment - booming -  
decentralized - platform - compiler - assembler  
- data warehouse - DevOps - efficient code -  
optimization - scalability - allocate memory -  
disaster - resource consumption - business  
acumen - thorough knowledge - environmental  
sustainability - familiarize - urgency

In today's \_\_\_\_\_ (1) technology landscape, companies must constantly adapt to rapid changes. Businesses are investing heavily in building a scalable \_\_\_\_\_ (2) that supports distributed systems, remote operations, and flexible development environments.

Organizations that embrace \_\_\_\_\_ (3) models often gain a significant competitive edge, enabling faster responses to shifting market demands.

In this competitive environment, the responsibilities of an \_\_\_\_\_ (4) have broadened considerably. Today's professionals must write \_\_\_\_\_ (5) that meets high performance standards, \_\_\_\_\_ (6) system efficiency across diverse workloads, and effectively manage technical tasks like using a \_\_\_\_\_ (7) to translate code or an \_\_\_\_\_ (8) to process low-level instructions. Success depends not just on technical proficiency, but also on demonstrating strong \_\_\_\_\_ (9), allowing individuals to interpret business needs, contribute to strategic initiatives, and deliver high-value solutions.

employee - recruitment - booming - decentralized -  
platform - compiler - assembler - data warehouse - DevOps -  
efficient code - optimization - scalability - allocate memory -  
disaster - resource consumption - business acumen -  
thorough knowledge - environmental sustainability -  
familiarize - urgency

Managing large-scale data operations has also become critical. Professionals handling a \_\_\_\_\_ (10) are responsible for maintaining data integrity, security, and performance while supporting business analytics. Increasingly, companies are integrating \_\_\_\_\_ (11) goals into their IT strategies, recognizing that responsible technology management contributes to long-term profitability and brand reputation.

Securing a role in today's dynamic market involves navigating a highly competitive \_\_\_\_\_ (12) process. Recruiters prioritize candidates who combine technical ability with a \_\_\_\_\_ (13) of systems architecture, cloud platforms, and project management principles. To stay ahead, both freshers and experienced candidates must \_\_\_\_\_ (14) themselves with evolving technologies, industry best practices, and organizational priorities before applying.

Being prepared for unexpected challenges is equally vital. Whether responding to a cybersecurity threat or a system outage, professionals must have effective \_\_\_\_\_ (15) plans in place. Companies increasingly demand teams that can enhance system \_\_\_\_\_ (16) under pressure while minimizing downtime and disruption.



employee - recruitment - booming -  
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sustainability - familiarize - urgency

Best practices such as continuous \_\_\_\_\_ (17)  
efforts, clean coding standards, and streamlined  
deployment processes within \_\_\_\_\_ (18)  
pipelines play a major role in achieving  
operational excellence. Thoughtful management  
of \_\_\_\_\_ (19) is now seen not only as a  
financial responsibility but also as a core pillar  
of corporate social responsibility strategies.

Ultimately, succeeding in the modern tech  
industry requires a mix of technical expertise,  
strategic thinking, and an understanding of the  
\_\_\_\_\_ (20) that drives innovation and  
sustainable growth. Those who act decisively,  
align with broader business goals, and adapt  
quickly will shape the future of technology and  
business alike.

[Answer Key](#)

## Reading Comprehension Qs 1

1. According to the passage, what skills beyond technical ability are increasingly important for IT professionals?
2. Why is resource management critical for both financial and environmental reasons?
3. How does adopting decentralized platforms give companies a competitive advantage?

[Answer Key](#)

## □ Review 2 (Weeks 3, 4)

Fill in the blanks with the words below.

paradigm - manipulate - disadvantages - raw -  
flow - define - suitable - relevance - dabble -  
components - fragmentation - sequence -  
assume - robust - algorithm - efficiency

In the development of modern computing systems, adopting the correct \_\_\_\_\_ (1) is essential for achieving both structural stability and operational efficiency. A well-chosen foundation allows engineers to design a logical \_\_\_\_\_ (2) of tasks and organize critical system \_\_\_\_\_ (3) effectively. While designing complex architectures, developers must allocate and \_\_\_\_\_ (4) responsibilities, weighing both the advantages and inevitable \_\_\_\_\_ (5) of each approach. A deep understanding of system behavior during the planning stage can significantly influence extended project outcomes.

Innovation in system design often requires engineers to \_\_\_\_\_ (6) into unfamiliar technical areas or emerging fields. Unlike conventional methods, exploratory development often demands that teams \_\_\_\_\_ (7) certain conditions about performance, scalability, or user needs, and validate them through rigorous testing. When systems are built to handle extensive and unstructured \_\_\_\_\_ (8) data, developers must be prepared to effectively \_\_\_\_\_ (9) this information to extract valuable insights. Managing data \_\_\_\_\_ (10) is critical, as poor handling can lead to inefficiencies and systemic vulnerabilities.

paradigm - manipulate - disadvantages - raw -  
flow - define - suitable - relevance - dabble -  
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Moreover, ensuring a smooth and reliable \_\_\_\_\_ (11) of operations across modules is essential to prevent internal conflicts. A system lacking cohesion may experience instability, even if individual parts are well-designed. Building a truly \_\_\_\_\_ (12) system involves selecting the most \_\_\_\_\_ (13) algorithms and technologies that can perform reliably across diverse environments. Core \_\_\_\_\_ (14), such as database management and error handling, must be integrated seamlessly to support flexibility and sustainability over time.

Finally, evaluating the upcoming \_\_\_\_\_ (15) of design decisions is crucial for sustained development. Furthermore, ensuring that system resources are optimized for \_\_\_\_\_ (16) is key to achieving long-term success. By combining strategic planning, technical precision, and a commitment to continuous improvement, developers can create computing solutions that meet current needs and adapt effectively to evolving challenges.

[Answer Key](#)



## Reading Comprehension Qs 2

1. What is the importance of adopting the correct paradigm in system development?
2. How does system design innovation differ from conventional methods?
3. Why is managing data fragmentation important in system development?

[Answer Key](#)

## □ Review 3 (Weeks 5, 6)

Fill in the blanks with the words below.

leverage - initiative - gig economy - freelancer  
- repeat business - diversify income sources - a  
wealth of opportunities - robust portfolio -  
personal brand - unprecedented rate - set  
schedules - emerging trends - command -  
freedom - fluctuations in income - remote work  
flexibility

Picture this: You're sitting in your favorite coffee shop, typing away on your laptop, and suddenly, your phone buzzes. It's a client from halfway across the world asking if you're available for a project. No need to check the office calendar or rush to a meeting — you're a \_\_\_\_\_ (1), and you make your own rules. Thanks to \_\_\_\_\_ (2), you can work from anywhere, even in your pajamas (no judgment here). The \_\_\_\_\_ (3) has transformed how people work, offering \_\_\_\_\_ (4) for those who are willing to embrace the freedom of freelancing.

But let's not sugarcoat everything — it's not all beach days and flexible hours. With great freedom comes great responsibility. Freelancers often face \_\_\_\_\_ (5), and suddenly those "unexpected" bills seem much harder to ignore. To combat this, it's crucial to \_\_\_\_\_ (6), which sounds like a fancy way of saying, "Don't put all your eggs in one basket." A \_\_\_\_\_ (7) is key to securing \_\_\_\_\_ (8), and a \_\_\_\_\_ (9) ensures you're the go-to person for your area of expertise.



leverage - initiative - gig economy - freelancer  
- repeat business - diversify income sources - a  
wealth of opportunities - robust portfolio -  
personal brand - unprecedented rate - set  
schedules - emerging trends - command -  
freedom - fluctuations in income - remote work  
flexibility

Of course, even freelancers have to \_\_\_\_\_  
(10) — or, at least, try to. The truth is, you may  
end up working at 2 AM because that's when  
the ideas come to life. However, the \_\_\_\_\_ (11)  
to choose your hours is a huge perk, even if  
your “workday” often involves late-night  
brainstorming. As the gig economy grows at an  
\_\_\_\_\_ (12), staying informed about \_\_\_\_\_  
(13) and gaining experience in new fields is  
critical. The most successful freelancers are the  
ones who take \_\_\_\_\_ (14) and \_\_\_\_\_ (15)  
platforms to \_\_\_\_\_ (16) competitive rates  
while continuing to juggle multiple projects

[Answer Key](#)

## Reading Comprehension Qs 3

1. What makes freelancing so appealing in the gig economy?
2. How do freelancers manage the financial instability that comes with freelancing?
3. What strategies do successful freelancers use to stay competitive?

[Answer Key](#)

## Review 1 [back to exercise](#)

1. booming
2. platform
3. decentralized
4. employee
5. efficient code
6. optimize
7. compiler
8. assembler
9. business acumen
10. data warehouse
11. environmental sustainability
12. recruitment
13. thorough knowledge
14. familiarize
15. disaster
16. scalability
17. optimization
18. DevOps
19. resource consumption
20. urgency

## Comprehension Sample Answers 1 [back to exercise](#)

1. Business acumen, strategic thinking, adaptability, and the ability to deliver solutions aligned with organizational goals.
2. Efficient resource management reduces costs and minimizes environmental impact, supporting both profitability and sustainability.
3. Decentralized platforms allow faster adaptation to market changes, greater flexibility, and reduced risk of bottlenecks.

## Review 2 [back to exercise](#)

1. paradigm
2. sequence
3. components
4. define
5. disadvantages
6. dabble
7. assume
8. raw
9. manipulate
10. fragmentation
11. flow
12. robust
13. suitable
14. components
15. relevance
16. efficiency

## Comprehension Sample Answers 2

[back to exercise](#)

1. It ensures structural stability and operational efficiency in computing systems.
2. It requires engineers to explore new technical areas and validate assumptions through testing.
3. Poor data handling can lead to inefficiencies and systemic vulnerabilities.

## Review 3 [back to exercise](#)

1. freelancer
2. remote work flexibility
3. gig economy
4. a wealth of opportunities
5. fluctuations in income
6. diversify income sources
7. robust portfolio
8. repeat business
9. personal brand
10. set schedules
11. freedom
12. unprecedented rate
13. emerging trends
14. initiative
15. leverage
16. command

## Comprehension Sample Answers 3

[back to exercise](#)

1. Freelancing offers flexibility, allowing professionals to work from anywhere and set their own schedules.
2. By diversifying income sources, maintaining a strong portfolio, and setting aside savings for lean periods.
3. They stay informed about emerging trends, gain experience in new fields, and leverage platforms to command competitive rates.

## □ Week 0

a few years of experience  
a keen understanding of  
a leading employment sector  
according to  
achieve your dream job  
AI frameworks  
analyst  
API  
application  
architect  
ask questions to the recruiter  
aspect  
attend interview  
average pay  
based on  
basics  
be interested in something  
booming  
bring sth to life  
build online presence  
business acumen  
certain roles  
client  
collaborate  
common trends and patterns  
complex  
constructed  
contribute  
convey the findings  
core skills  
customer requirements





data models and algorithms  
data visualization techniques  
data warehouse  
decentralized  
designer  
develop and implement  
developer  
DevOps  
dominant  
DSA  
efficient code  
employee  
engineer  
ensure  
ensuring timely delivery  
entry-level tech jobs  
estimate  
ever increasing  
expect  
familiarity  
fast recruitment  
find out what interests you the most  
fresher/freshman  
full stack  
FY2024  
gain knowledge about  
gathering and analyzing  
geek  
generate money  
get started  
getting a job  
good analytical and programming skills  
good data intuition  
handle  
high demand jobs



India's GDP  
industry  
industry's revenue  
interact with  
interview preparation  
Involve  
key skills  
latest advancements  
lucrative fields  
maintain  
make choices/a choice  
making more informed decisions  
manager  
median annual wage  
miss opportunity  
occupation  
optimize the process  
oversee  
proactive and curious  
product lifecycle  
provided below  
quality  
reliability  
remain  
responsibility  
scientist  
setting strategies  
skills needed for the role  
software prototypes  
solidifying its position  
specialist  
statistical computing  
stay ready  
strategic planning  
strong understanding  
super-competitive environment

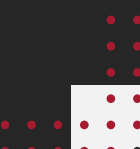


target your dream company  
technical knowledge  
technology is dominating the world  
the tech industry's worth  
thorough knowledge  
tips  
to ensure accuracy  
user experience  
user interface  
vast returns  
working cross-functionally  
your edge



## □ Week 1

a combination of both  
a little bit  
accessibility  
allocate memory  
allocate resources  
assembler  
authorization process  
batch operating system  
boost  
boost the performance  
capability  
combination  
compatibility  
compatibility  
compiler  
computing device  
control and monitor  
convenient  
database system  
deterministic  
disaster  
distributed  
easy/complex to use  
effective and fair utilization  
efficient grant  
efficient use  
embedded system  
encryption  
error-detecting aids  
establish  
execution of program  
flexibility  
function  
hardware  
household appliances



identifying bottlenecks  
in case of  
include  
intermediary  
keep track of  
log  
main memory  
manipulation  
manner  
mediate conflicting request  
multitasking  
objective  
operating system  
organize  
platform  
policies  
portability  
provide  
quick and deterministic responses  
reside in something  
resource request  
respond to events  
responsible for  
scheduling  
second storage  
serve a real-time server  
simultaneously  
software  
system calls  
system logs and metrics  
text editor  
time interval  
to be considered  
to deallocate memory  
usage  
various distributions  
virtualization  
wearable devices  
workloads



## □ Week 2

a challenging task  
a change of mindset  
a necessity  
a necessity, not an option  
a new research revealed  
actual  
adapt sth according to sth else  
adopting the following principles  
aggregate  
an umbrella term  
be upon someone  
carbon footprint  
carbon intensity specification  
climate  
climate crisis  
combination  
commensurate  
competitive advantage  
complementary approaches  
compliance requirements  
compress  
compress and aggregate  
conceptual framework  
discourse  
discourse  
dubbed red AI  
due attention  
embrace  
emphasize  
encompass  
energy intensive  
engaged  
enterprise  
environmentally sound  
environmentally sustainable  
exploded use of software



foundation  
further  
future generations  
get sb more engaged  
green software bandwagon  
greenhouse gases  
harness new opportunities  
impact  
imperative  
in case of  
initiatives  
Initiatives  
innovative solutions  
intended  
intended purpose  
intergovernmental  
inward-looking  
it's imperative to do  
limit climate change  
longevity  
make a huge difference  
mandate  
matter  
motivate  
motivate  
nevertheless  
our times  
outward-looking  
overall global emission  
overlooked  
overlooked factor  
pledge to do sth  
polling an unreachable server  
positively impact  
prospect



recognize

reduce

reduce duplicated efforts

reduce emissions

reinforce

reproducible

reproducible code

resource consumption

reveal

scalability

software is pervasive

span

sth holds huge potential to do sth

take sth down to sth

the very development of software

to deallocate memory

to take actions

transform

under different criteria

underlying hardware

unifying view

urgent

urgent and sustained actions

usage

when it comes to...

worsening

write and evaluate software





## □ Week 3

advantages/disadvantages

algorithm

arithmetic

audience

Boolean

component

consistent

control and manipulate

divide

flow

fragmentation

hierarchy

in-depth

integrated

intended and desired

paradigm

passionate enough

raw data

semantics

sequence

specific

specify

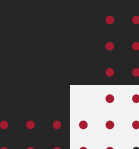
string

suit

take the big step to do sth

terminology

utility



## □ Week 4

applicable across various fields

apply

assume

backbone

based on

break down into

case study

dabble into sth

endeavor

equip yourself with

every blade of grass in a field

fetch data from an API

hack

in a strict sense

in its very essence

irrelevant

pattern recognition

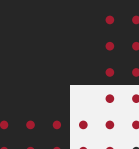
relevance

robust

simulate

sort sth into sth

tackle



## □ Week 5

a more nuanced picture  
ability to perceive such links  
an extreme path  
an outtake of  
augment  
be justified with  
bi-polar concepts  
brainstorming  
break out of habitual ways of thinking  
breakthrough insights  
bursts of clarity  
clichéd  
closely related  
come up with sth  
concern  
convergent  
creative pursuits  
different accounts of  
distinguish between sth  
divergence  
divergent  
dramaturgy  
elegant and aesthetic  
exaggeration  
feel a little guilty  
generate at will  
hawk sth around to sb/sth  
independence  
interdependence of objects  
interrelated  
intrinsic limitations in the brain  
it builds on (sth)  
it seemed obvious  
lateral thinking (horizontal thinking)  
leave sth behind  
light-bulb moment



make a distinction between  
make classification difficult  
peak experience  
perception  
poetic imagination/revelation/channeling  
propose  
recounting  
restructure  
scientific rigor  
sequential  
so-called vertical thinking  
spatial  
take a quantum leap  
take place  
tempo  
the same goes for all work  
transcend  
vast amount of literature  
well-crafted



## □ Week 6

a surge in sth

a wealth of opportunities

accelerate

at the forefront of sth

be sought after

broaden

cash flow

command competitive rates

continually

continually evolving

diversifying income sources

drive demand

dynamic sector

emergency fund

emerging trends

engage with the workforce

enhance skill set

enhance visibility and credibility

financial security

flexibility and autonomy

fluctuations in income

gain experience

geographical constraints

gig economy platforms

global reach

hurdle

implement effective strategies

income/financial stability

leverage platforms

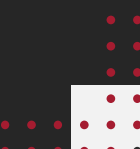
maintain work-life balance

mitigate a challenge

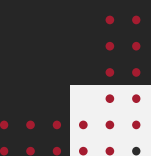
personal brand

pivotal

pivotal component



referral  
regular paycheck  
remote work flexibility  
repeat business  
reputation  
robust portfolio  
secure  
set aside savings  
set schedules  
shed light on sth  
showcase  
specialized skills  
stand out in a crowded market  
stay informed  
substantial  
substantial challenges  
threats and vulnerabilities  
thrive  
unprecedented growth



# CS50x Iran

Harvard's Computer Science 50x Iran

