# Web Technology

SHIV NADAR UNIVERSITY
CHENNAI

# Introduction

**Department of Computer Science and Engineering**
**Shiv Nadar University**

# Marks Split-up

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1. **Theory**
   - **Mid Semester - 30 marks**
   - **End Semester - 50 marks**
   - **CT/Assignment - 20 marks**

2. **Lab**
   - **Model Exams - 20 marks**
   - **End Semester Exams – 80 marks**

# Course Outcomes

- **CO1 -  Design Workflows, Websites, and Web Components.**
- **CO2 - Front-End Development (Client-Side Programming).**
- **CO3 - Back-End Development (Server-Side Programming).**
- **CO4 - Build Web Services APIs.**
- **CO5 - Full-Stack Development.**

K1

# Full Stack Development Careers

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## Software Engineer, Developer Tools, Silicon

Google · Bengaluru, Karnataka, India (On-site) Reposted 2 days ago · 424 applicants

### About the job

**Minimum qualifications:**

- Bachelor's degree in Engineering, Computer Science, or equivalent practical experience.
- 5 years of experience with software development in one or more programming languages (e.g., Python, C, C++, Java, JavaScript).
- 1 years of experience in a technical leadership role, overseeing projects.

**Preferred qualifications:**

- Master's degree or PhD in Computer Science, Engineering, or related technical field.
- Experience developing accessible technologies, architecture search and full stack development (front end and back end).
- Experience in quantization of models, including QAT, PTQ.
- Experience with low-level and low intrusiveness developer tooling concepts such as profiling, instrumentation, API tracing, hardware tracing.

**Responsibilities**

- Optimize Machine Learning models for Google Tensor and make the process repeatable and automated as much as possible.
- Design and implement new ways to gather useful performance metrics from hardware and/or software stack.
- Design and implement tools that can correlate performance data at a ML graph level and/or logical hardware level.
- Show users how to use our tools to analyze, debug and improve latency, accuracy, and power through codelabs, documentation, and tutorials.
- Propose new ways of authoring ML models that are optimized for inference hardware.

K2

# Full Stack Development Careers

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## Senior Software Engineer, Full Stack, Google Cloud

Google · Warsaw, Mazowieckie, Poland (On-site) Reposted 2 days ago · 38 applicants

### About the job

**Minimum qualifications:**

- Bachelor's degree or equivalent practical experience.
- Candidates typically have 5 years of experience with software development in one or more programming languages, and with data structures/algorithms.
- Typically 3 years of experience with full stack development, across back-end such as Java, Python, GO, and/or C++ codebases, and front-end experience including JavaScript and/or TypeScript, HTML, CSS or equivalent.
- Typically 3 years of experience testing, maintaining, and/or launching software products, and 1 year of experience with software design and architecture.

**Preferred qualifications:**

- Master's degree or PhD in Computer Science or related technical field.
- Candidates will typically have 1 year of experience in a technical leadership role.
- Experience developing accessible technologies.

**Responsibilities**

- Write and test product or system development code.
- Participate in, or lead design reviews with peers and stakeholders to decide amongst available technologies.
- Review code developed by other developers and provide feedback to ensure best practices (e.g., style guidelines, checking code in, accuracy, testability, and efficiency).
- Contribute to existing documentation or educational content and adapt content based on product/program updates and user feedback.
- Triage product or system issues and debug/track/resolve by analyzing the sources of issues and the impact on hardware, network, or service operations and quality.

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# Software Development Life-Cycle?

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# Software Development Life-Cycle

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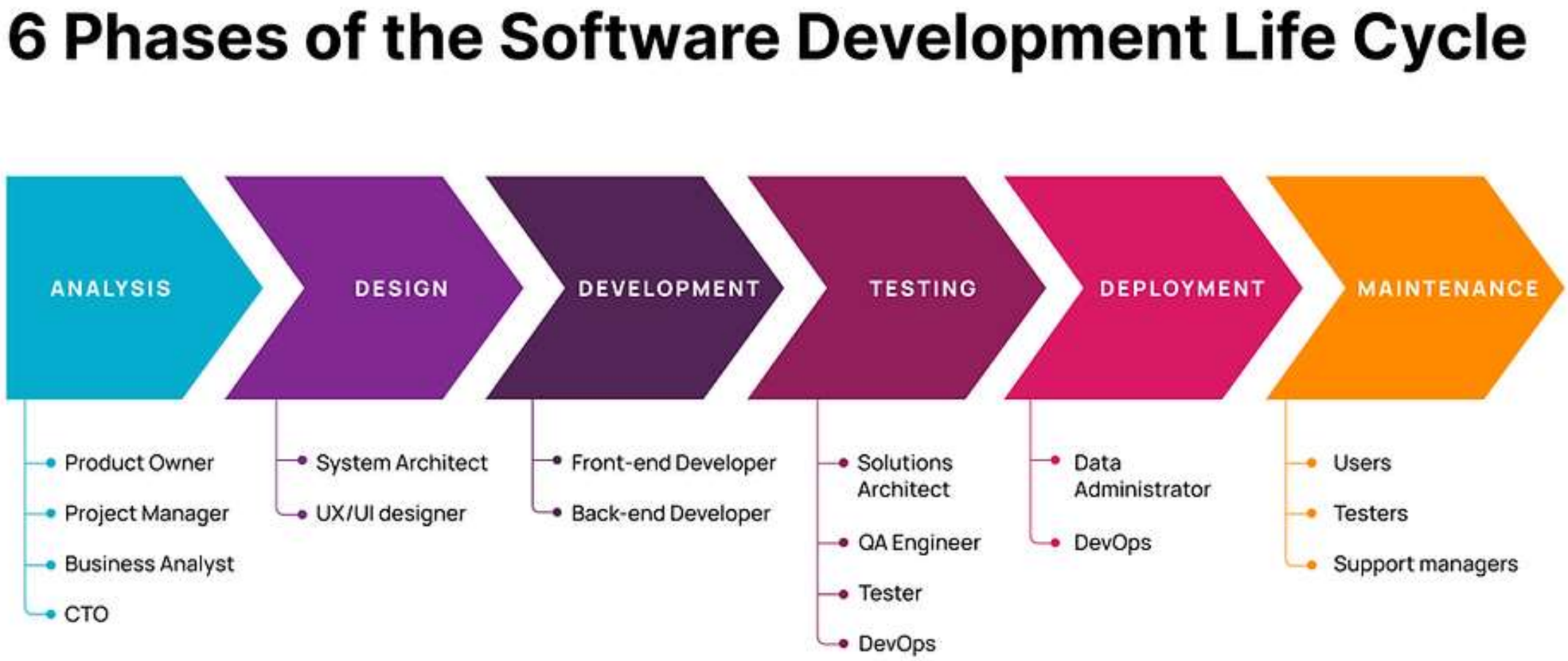


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# Questions?

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# Introduction – Web Technology

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- **Web?**

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# Introduction – Web Technology

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- **Web**
  - **Collection of Machines**
  - **Connected via the Internet**
  - **HTTP**
- **Web Client?**
- **Web Browser?**
- **Web Server?**

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# Introduction – Web Technology

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- **Web**
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  - **Machines that Request Information**
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# Introduction – Web Technology

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- **Web**
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- **Web Client**
  - **Machines that Request Information**
- **Web Browser**
  - **End User Software**
  - **Render Web Pages**
- **Web Server?**

# Introduction – Web Technology

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- **Web**
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  - **End User Software**
  - **Render Web Pages**
- **Web Server**
  - **Machines that Provide Information**

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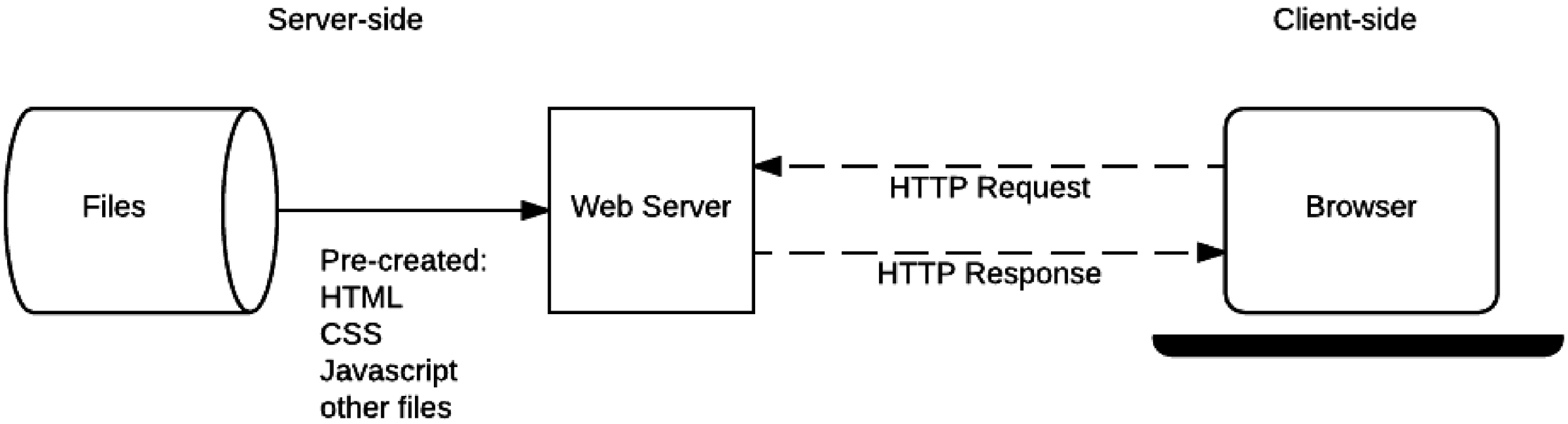
# Introduction – Web Technology



# Introduction – Web Technology

- **Web**
  - **Web 1.0**
  - **Web 2.0**
  - **Web 3.0**
  - **Web 4.0**
  - **Web 5.0**

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# Introduction – Web Technology

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- **Web**
  - **Web 1.0 - Read – Only**
  - **Web 2.0 - Social - Read/Write**
  - **Web 3.0 - Semantic – Read/Write/Execute**
  - **Web 4.0 - Mobile**
  - **Web 5.0 - Intelligent/ Emotional Symbiotic**

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# Introduction – Web Technology

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- **Technology?**
- **Technology vs Engineering?**

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# Introduction – Web Technology

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- **Technology**
  - **Focuses more on application.**
  - **Adapts to changes in the industry**
- **Technology vs Engineering?**

# Introduction – Web Technology

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- **Technology**
  - **Focuses more on application.**
  - **Adapts to changes in the industry**
- **Technology vs Engineering**
  - **Technology – Focus more on Application, Analysis, and Evaluation**
  - **Engineering – Focus more on Design, Analysis, and Evaluation.**

# Summary

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- **Class Timings**
- **Mark Split-up**
- **Prerequisites**
- **Course Outcomes**
- **Full Stack Career Examples**
- **Software Development Life Cycle**
- **Web**
- **Web Client, Browser, Web Server**
- **Web 1.0 to 5.0**
- **Technology**
- **Technology vs Engineering**

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# References


1. **Paul J Deitel, Harvey M Deitel, and Abbey Deitel, "Internet and the world wide web: How to program," Pearson, Fifth Edition, 2012**

# THANK YOU

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# Lab - 0

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1. https://www.16personalities.com/
2. **Fill the quiz with as extreme values as possible.**
3. **Screenshot**
    1. **Your MBTI Person.**
    2. **Your Result Overview.**
4. **Create a HTML document with**
    1. **Write a heading and a paragraph about your MBTI**
    2. **Add the two screenshot images**
    3. **Write a heading and paragraph on the function stack relating to your personality**
    4. **At the last line of your HTML page,**
        1. **Add “I am an _____.” Fill the blank with your MBTI (E.g. INTJ). If any of the MBTI letter falls between 40 to 60%, Fill the above blank with an ‘x’. (E.g. INXJ).**

Your Personality

# Architect (INTJ-A)

Architects are imaginative and strategic thinkers, with a plan for everything. These thoughtful tacticians love perfecting the details of life, applying creativity and rationality.

Learn more →

Your Traits

100% Introverted

Extraverted — Introverted

58% Intuitive

Intuitive — Observant

54% Thinking

Thinking — Feeling

99% Judging

Judging — Prospecting

85% Assertive

Assertive — Turbulent