

## **Software Design & Architecture Assignment 02**

### **Section: BSE-4B**

Group Members:

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### **Company Visit Report - Devday, 25th April 2024**

#### **Introduction:**

On 25th April 2024, our group visited three companies to explore the future of Software Engineering, understand their challenges, methodologies, and delve into their requirement collection processes. We asked them a set of questions in regard to software engineering practices, the tools and technologies they used in development of software design and architecture, along with some questions related to Agile and DevOps

#### **Questionnaire and Responses:**

##### **Company 1: Snapp Retail**

They mostly hire fresh graduates and provide both software and hardware services to retail stores so that they can become tech savvy.

Qno1: What is the role of software design and architecture in Agile methodologies?

At our company, software design and architecture are crucial components of our Agile methodologies. They enable us to build flexible, iterative solutions that respond quickly to changing requirements. Our focus on clear interfaces, collaboration, and continuous improvement ensures that our teams can deliver quality products efficiently.

Qno2: What is the requirements collection process for any project in your company?

Requirements are collected through direct interactions between our development team and clients. We conduct in-depth discovery sessions and utilize feedback mechanisms to refine requirements.

Qno3: What is your approach for developing software like iterative, continuous integration and deployment?

We adopt an iterative approach to software development, leveraging continuous integration and deployment pipelines to deliver updates efficiently. Our development process emphasizes collaboration, testing, and rapid feedback.

Q no 4: How do you ensure that design and architecture decisions align with evolving needs and expectations of your stakeholders?

We ensure alignment by fostering open communication channels with stakeholders throughout the development process. Regular feedback sessions, stakeholder meetings, and prototyping allow us to validate design decisions and make adjustments based on what customer needs.

**Company 2: Careem**

Q no1: How does your company view the role of software design and architecture in achieving strategic goals?

At Careem, we recognize the role of software design and architecture in achieving our strategic goals of providing efficient transportation services. Our software design and architecture serve as the backbone of our platform, enabling us to deliver reliable solutions to our customers. By prioritizing scalability and user experience in our design decisions, we ensure that our platform can handle the demands of our growing user base while delivering good service quality.

Qno2: What is the requirements collection process for any project in your company?

Requirements here are collected by business analysts by conducting meetings with clients to discuss their requirements, and identify the requirements that are the need of the project.

Q no 3: What are the tools and technology you use for software design and architecture?

In our software design and architecture, we utilize a variety of tools and technologies to ensure the performance of our platform. We leverage industry-standard design tools such as Adobe XD and Figma for creating wireframes and mockups, facilitating collaborative design processes.

Q no 4:What is the role of software design and architecture in Agile methodologies?

Our approach focuses on adapting to changing requirements, ensuring that our solutions remain flexible and responsive to customer needs throughout the development process. By embracing Agile principles, we prioritize delivering incremental value to our users.

Qno5: What is the role of software design and architecture in DevOps?

Software design and architecture are integral to our DevOps practices, serving as the sketch for our development, testing, and deployment processes. By architecting our systems with scalability, resilience, and automation in mind, we ensure smooth and efficient delivery of our transportation services.

### **Company 3: Systems**

Qno1: What is the requirements collection process for any project in your company?

Requirements here are collected by business analysts, power bi and data analysts for data requirement gathering. The process involves conducting stakeholder interviews, analyzing business documents, and utilizing data visualization tools like Power BI to gather insights into user needs and system requirements

Q no 2: What are the tools and technology you use for software design and architecture?

As an IT company, we use a variety of tools and technologies for software design and architecture. We utilize industry-standard tools such as Microsoft Visio, Lucidchart, and Enterprise Architect for creating detailed design diagrams. Additionally, we leverage cutting-edge technologies such as cloud computing platforms like AWS and Microsoft Azure for scalable infrastructure and deployment. Our team also utilizes collaboration tools like Jira to facilitate communication and project management.

Q no 3: What is the role of software design and architecture in Agile methodologies?

In Agile methodologies, software design and architecture play a crucial role in enabling iterative development, flexibility, and responsiveness to changing requirements. Our approach to design and architecture emphasizes adaptability and user-centricity. By continuously refining our designs based on user feedback and evolving business needs, we ensure that our solutions meet customer expectations and strategic goals.

Qno4: What is the role of software design and architecture in DevOps?

We use DevOps for automation, collaboration, and agility throughout the development lifecycle. Our approach emphasizes microservices and infrastructure as code principles for consistency and efficiency in DevOps processes, enabling us to deliver high-quality software rapidly.