

# Chapter 1 and 2 Exercise

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**Q1.1 : It is said that government spending on IT is increasing as government departments take initiatives to improve customer service or have a wider reach of services. Find out what factors are responsible for the increase of IT spending by government agencies. Also list and explain.**

IT or Information Technology is the jobs creating hub for the 21st century. As per the textbook around 4 million plus people work in the sector and government funds around 10 trillion dollars roughly out of 40 trillion dollars of total investment in 2008. Due to such staggering numbers IT industry is considered as a hot topic of the century. Ever since 2008 there is an increment in the number of people working and the investment in the sector. Some of the key reasons are related to new developments and invention that are leading to better customer service.

Some of the key factors for the increase of IT spending by government agencies are:

1. Scope expansion: Where in the technology is being improved every day to meet the requirements of the customers that includes some of the concepts of smart cities, IoT, cloud infrastructure and various software developments to help customers for easy life.
2. Risk management: As the requirements for newer software services increases and expands to a wider customer base, potential risks arise that need to be identified and managed accordingly.
3. Technology driven advancements: Introduction of new technical innovations in the information technology requires the effort and cost for the development along with the human resource to achieve the innovative milestones and expand the service to the customers.
4. Improving the services with legacy systems as a benchmark.

**Q2.2: Go to some open-source projects and find out about their project charters. Find out why they have those project charters.**

I was able to check with the project charters of Linux Kernel and Apache Kafka which are open-source tools that are commonly used by the open-source community.

1. Linux kernel:

Purpose: To build a robust, scalable and secure operating system kernel that powers devices ranging from servers to embedded systems.

Goals: Develop free and open source unix-like operating system kernel. Ensure compatibility and provide efficient process.

Scope: Operating system kernel, maintain compatibility with GNU, Wide support for network protocols and systems.

Stakeholders: Kernel developers, open-source contributors, End users and hardware vendors.

## 2. Apache Kafka:

Purpose: To build a distributed event streaming platform for high throughput, real time data streaming.

Goals: Provide a high performance, fault-tolerant platform. Facilitate event-driven architecture, offering tools for publishing, subscribing, and processing real time data streams.

Scope: Broker-based architecture, support for integration with popular streams and robust API development.

Stakeholders: Distributed system engineers, open-source contributors.

Both the above project charters describe about their key stakeholders with the goals that they intend to achieve. Since both are open-source projects the common stake holders are open-source community developers. Each project goal defines their solution to the customer specific requirements and are intended to develop the software to domain.

These project charters are very good example on how the charters are prepared specific to the customer requirements considering them as stakeholders and setting goals and scopes in accordance with the requirements.