



Tribhuvan University

Faculty of Humanities And Social Science

Bachelor in Computer Application (BCA)

Presentation on

THE ORIGINS OF SOFTWARE

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INTRODUCTION

➤ Software:

- Set of programs + configuration data + associated documentation + operating procedure

➤ Origins of Software:

- Origin of software not only refers the beginning of software development but it also includes different sources of software and about where we get information system.

INTRODUCTION

- There was a time, not too long ago, when there were no systems analysts and no symbolic computer programming languages. Yet people still wrote and programmed applications for computers.
- The first administrative information system was developed at J. Lyons & Sons in the United Kingdom.
- In the United States General Electric's (GE) payroll system was developed in 1954.
- Since GE's payroll system was built, software development has become progressive and companies continue to spend time and money on software development and maintenance.
- Today we have many choices when seeking an information system.

OUTSOURCING

- ▶ If one organization develops or runs a computer application for another organization, that practice is called outsourcing.
- ▶ Outsourcing examples:
 - A company that runs payroll application for clients.
 - A company that runs your application at your side.

OUTSOURCING

► Reasons to outsource:

- Cost-effective
- Free up internal resources
- Increase process efficiencies

SOURCES OF SOFTWARE

- ▶ Information Technology Services Firm
- ▶ Packaged Software Producers
- ▶ Enterprise Resource Planning Providers
- ▶ Cloud Computing
- ▶ Open Source Software
- ▶ In-house Development

SOURCES OF SOFTWARE



Figure 1
Sources of Application Software

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SOURCES OF SOFTWARE

► Information Technology Services Firms:

- IT services firms help companies develop custom information systems for internal use.
- They develop, host, and run applications for customers.
- These firms employ people with expertise in the development of information systems.

SOURCES OF SOFTWARE

► Packaged Software Producers:

- Packaged software producers provides software for general productivity requirement to some specific requirement.
- Software runs on all size computers, from microcomputers to large mainframes.
- Microsoft, Oracle etc. are some packaged software producers.

SOURCES OF SOFTWARE

► Enterprise Resource Planning Providers :

- It is a collection of computer programs that have common business application, tools for modelling how the entire organization and development tools for building applications unique to the organization.
- This type software used to satisfy the needs of an organization rather than individual.
- SAP AG, Oracle Corp etc. are example of ERP providers.

SOURCES OF SOFTWARE

► Enterprise Resource Planning Providers :



Figure 2
ERP Modules

SOURCES OF SOFTWARE

► ERP Modules:

▪ Human Resource Module(HR):

- Helps HR team for efficient management of human resources.
- Manages employee information, performance reviews, designations, job descriptions, skill matrix etc.

SOURCES OF SOFTWARE

► ERP Modules:

▪ Customer Relationship Management(CRM):

- All the stored details of the customers are available in CRM module.
- Boost the sales performance through better customer service & establishing a healthy relationship with customers.

SOURCES OF SOFTWARE

► ERP Modules:

▪ Supply Chain Management(SCM):

- Manages the flow of product items from manufacturer to consumer & consumer to manufacturer.
- Common roles involved are a manufacturer, Super Stockiest, Stockiest, distributors, retailers etc.

SOURCES OF SOFTWARE

► Cloud Computing:

- Cloud computing refers to the provision of applications over the Internet.
- Where customers do not have to invest in the hardware and software resources needed to run and maintain the applications.
- Users have access to the applications through the Internet or through virtual private networks.
- A well-known example of cloud computing is Google Drive.

SOURCES OF SOFTWARE

► Cloud Computing:

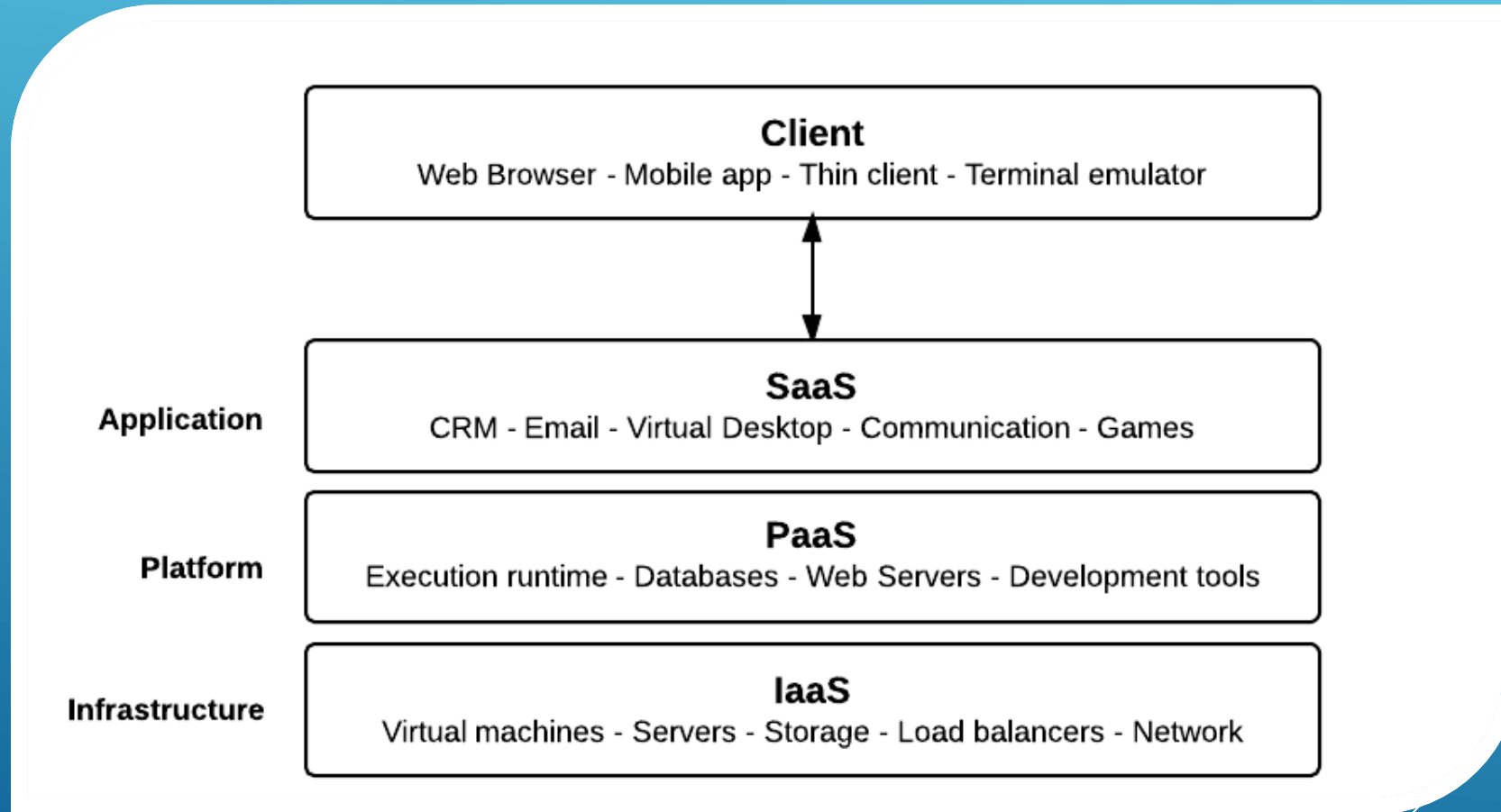


Figure 3
Different Cloud Services

SOURCES OF SOFTWARE

► Cloud Computing:

▪ Software as a Service(SaaS):

- It offers an application to customer or organization through a web browser.
- The data for the app runs on a server on the network, not through an apps on the user's computer.
- Software is usually sold via subscription.
- Example of SaaS are Salesforce, Google Docs, Office 365, Basecamp etc.

SOURCES OF SOFTWARE

► Cloud Computing:

▪ Platform as a Service(PaaS):

- Provides networked computer running in a hosted environment, and also adds support for the development environment.
- Provides dynamic scalability, automated database backups without need to specifically code for it.
- Examples of PaaS are Google App Engine, Cloud Foundry, Engine Yard etc.

SOURCES OF SOFTWARE

► Cloud Computing:

▪ Infrastructure as a Service(IaaS):

- Provides the hardware and usually virtualized OS to their customers.
- Software is charged only for computing power that is utilized, usually CPU hours used a month.
- Examples of IaaS are Amazon EC2, Rackspace, Google Computer Engine etc.

SOURCES OF SOFTWARE

► Open-Source Software:

- Freely available including source code.
- Developed by a community of interested people.
- Performs the same functions as commercial software.
- Examples: Linux, mySQL, Firefox etc.

SOURCES OF SOFTWARE

► In-House Development:

- It means building a software product using internal company's resources.
- It is good option if company have the required technology expertise and professionals available.

IN-HOUSE VS. OUTSOURCING

in-house

You need multiple specialists or vendors to create results with each marketing medium.

Setting up hiring and equipment to begin a project takes longer when starting from scratch.

The constant battle of talent acquisition, training and implementation adds to the challenge.

An inside marketing team may not have the depth of expertise you can find with outside specialists.

If you stay in-house, you are responsible for the stress of employee.



outsourcing

A comprehensive and competent outsourced provider can get you more specialists for less cost.

Outsourcing to trained individuals allows your projects to quickly begin and move forward quickly.

Outsourcing to those with experience allows your business to scale at a greater level.

Specialists with experience in marketing strategy, techniques and tools help you keep up with a rapidly changing business world.

If you have to manage your outsourced vendors, outsourcing may backfire. You need a marketing partner to help you manage it as well.

REUSE

- ▶ The use of previously written software resources, especially objects and components, in new applications.
 - The systematic development of reusable components.
 - The systematic reuse of these components as building blocks to create new system.

REUSE

► Advantages of reuse:

- Increase software productivity
- Shorten software development time
- Develop software with fewer people
- Reduce software development and maintenance costs
- Produce better standardized software

THANK YOU