Module- 4

SAP







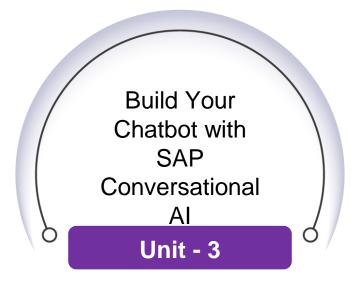




Units for Discussion









Unit - 1

Introduction to SAP Ecosystem





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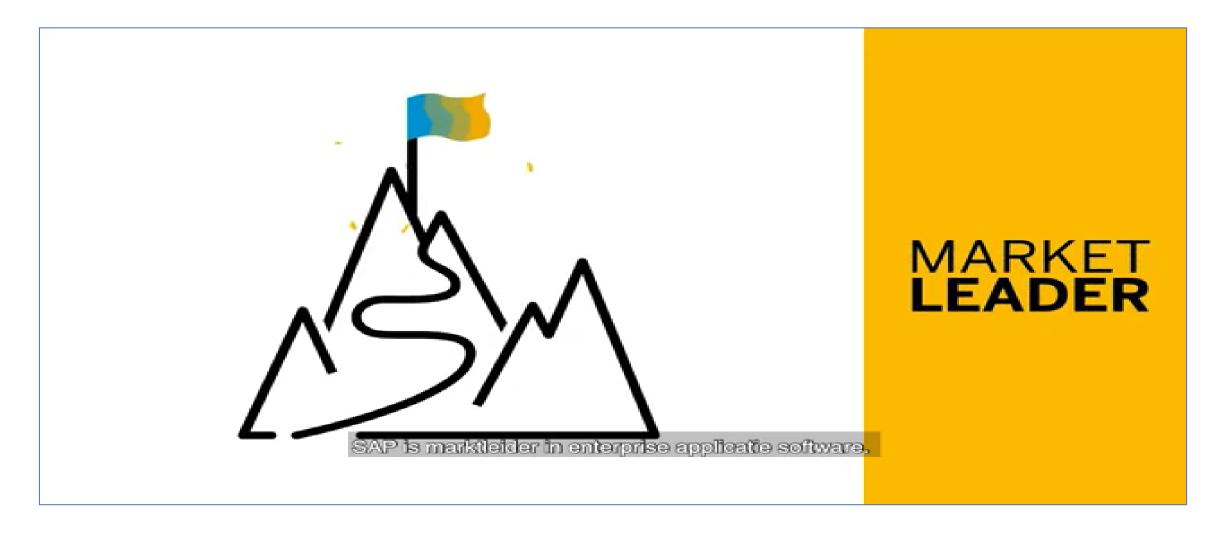
Learning Objectives

- What is SAP?
- Understanding SAP
- What is SAP software used for?
- ERP Systems
- Benefits of Enterprise Resource Planning
- Popular ERP Systems
- Evolution of SAP
- The Journey
- SAP Layered Architecture
- Functional Module vs Technical Module





What is SAP?





What is SAP?

• SAP is one of the world's leading producers of software for the management of business processes, developing solutions that facilitate effective data processing and information flow across organizations.

Overview

Founded in 1972, the company was initially called System Analysis Program Development.



Understanding SAP

What does SAP stand for?

- The name is an initialism of the company's original German name: System Analyse Program men twicklung, which translates to System Analysis Program Development.
- Today the company's legal corporate name is SAP SE — SE stands for societas Europaea, a public company registered in accordance with the European Union corporate law.





What is SAP Software used for?

By centralizing data management, SAP software provides multiple business functions with a single view of the truth. This helps companies better manage complex business processes by giving employees of different department's easy access to real-time insights across the enterprise.

What does SAP do?

SAP helps companies and organizations of all sizes and industries run their businesses profitably, adapt continuously, and grow sustainably.



ERP Systems

What is ERP Software?

- ERP stands for "enterprise resource planning." ERP software includes programs for all core business areas, such as procurement, production, materials management, sales, marketing, finance, and human resources (HR).
- SAP is one of the first companies to develop standard software for business solutions and continues to offer industry-leading ERP solutions.





How does it work?

ERP has evolved over the years from traditional software models that made use of physical client servers and manual entry systems to cloud-based software with remote, web-based access.

In ERP, all departments are tied into the system, all data is collected on the server and becomes instantly available to those with permission to use it. Reports can be generated with metrics, graphs, or other visuals and aids a client might need to determine how the business and its departments are performing.



Benefits of Enterprise Resource Planning

Improve Accuracy & Productivity

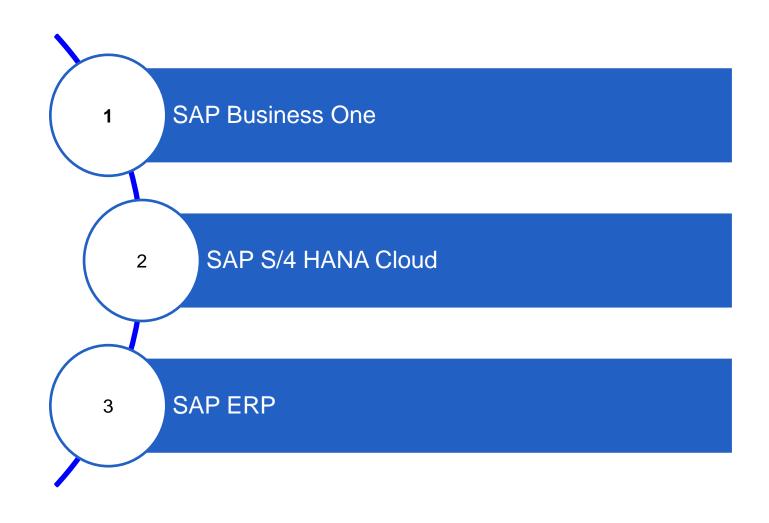
Improve Reporting

Increases Efficiency

Increases Collaboration



Popular ERP Systems





Evolution of SAP

The journey of SAP ERP from R/1 system to SAP S/4 HANA system

SAP R/1 1972

SAP entered the ERP software domain with its SAP R/1 system. R1 stands for single tier architecture.

SAP R/2 1982

Based on mainframe architecture, SAP R/2 system was designed to manage large global enterprise. R/2 stands or 2 tier architecture.



SAP R/3 and SAP ECC: 1992

R/3 followed client-server architecture. R/3 systems could also take advantage of then evolving internet technology.

ECC stands for Enterprise Central Component and is successor of SAP R/3 system.

SAP S/4HANA: 2015

Launched in the year 2015, SAP S/4HANA is SAP's next generation business suite designed to work in a truly connected digital world.



The Journey

The Journey

1972

Founded in the year 1972 by five ex-IBM employees Dietmar Hopp, Hasso Plattner, Hans-Werner Hector, Klaus Tschira, and Claus Wellenreuther, SAP was headquartered in Weinheim, Germany.

1972- Developing Mainframe programs

- The five engineers were working on developing mainframe programs for payroll and accounting.
- SAP's first customer was Imperial Chemical Industries in Östringen.

1973 to 1979

 Other systems were under development, and together they were called SAP R/1.

1979, SAP launched SAP R/2

 SAP R/2 was a mainframe software application capable of integrating all of an enterprise's business functions, including material management and production planning, with real-time processing.

1992, SAP releases the new SAP R/3

SAP R/3 was built on the client-server concept, having a uniform graphical interface, dedicated use of relational databases, and support for servers from various manufacturers.

1993, begins work with Microsoft

- 1993 SAP begins working with Microsoft, the world's largest software maker, to port SAP R/3 to the Windows NT operating system.
- 1994 The SAP R/3 system is released for Windows NT.



The Journey

1999, mySAP.com

 In May 1999, SAP announces a new strategy that completely realigns the company and its product portfolio: mySAP.com.

2004- SAP NetWeaver

- R/3 was replaced with the introduction of SAP ERP Central Component (ECC) 5.0 in 2004.
- 2004, SAP launches SAP NetWeaver to market. SAP NetWeaver brings in a new integration and application platform and a service-oriented architecture

2009, SAP Business Suite 7

 2009, SAP introduces a new business suite, SAP Business Suite 7 software, designed to optimize business performance and reduce IT costs.

2011 on wards

- SAP continues to innovate and invest in cloud computing, an inmemory database called as SAP HANA database
- 2015, SAP launches its 4th Generation business suite, SAP S/4HANA, and SAP C/4HANA.

Focus on cloud – 2012

 In 2014, IBM and SAP began a partnership to sell cloud-based services.

SAP S/4HANA-2015

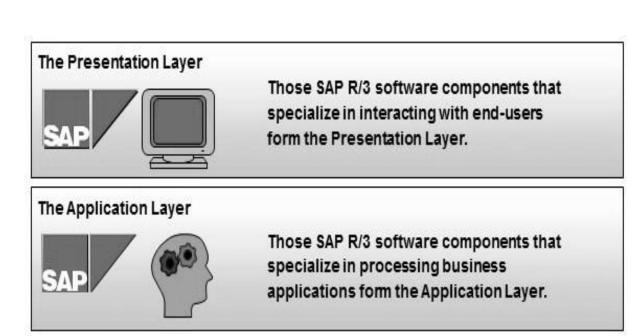
 In 2015, SAP launched its 4th generation business suite SAP S/4HANA to leverage the features of the SAP HANA platform.



SAP Layered Architecture

SAP Three-Tier Architecture

With SAP R/3, SAP ushers in a new generation of enterprise software - from mainframe computing (client-server architecture) to the three-tier architecture of database, application, and user interface.



The Database Layer Those SAP R/3 software components that specialize in the management , storage and retrieval of data form the Database Layer

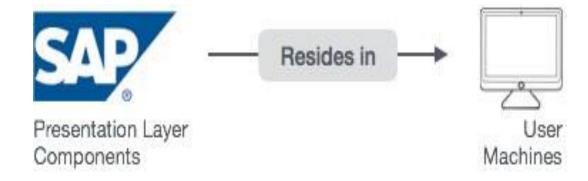


Presentation Servers

Presentation Layer is also known as client Layer

Presentation Layer is a user interaction

In SAP-User interaction purpose we use GUI





Application Servers

Application Servers

Application Layer is also known as Kernel Layer and Basic Layer.

SAP application programs are executed in Application Layer.

Application Layer serves as a purpose of a communicator between Presentation and Database Layer.



Reference: https://www.tutorialspoint.com/sap/sap_architecture.htm

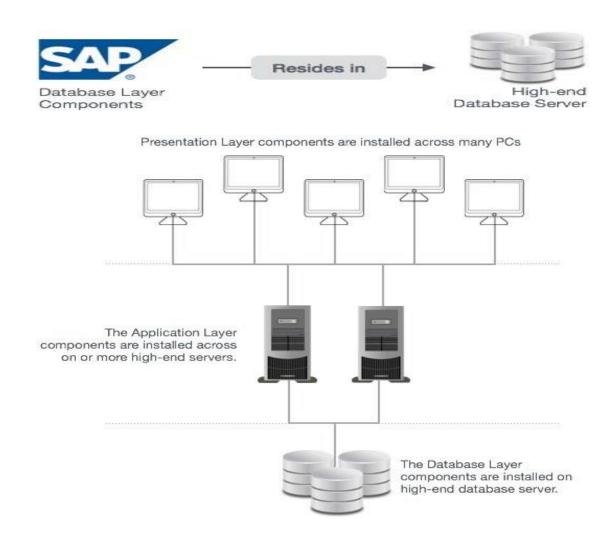


Database Servers

Database layer stores the data

Data store can be Business data, SAP system data, SAP tables, Programs.

Examples – Oracle, Microsoft SQL Server, IBM DB/2, Siebel, Sybase, etc.





Functional Module vs Technical Module

Functional Module

- In order to replicate and enable business process, SAP offers various predefined or standard functionality to help departments in performing various business activities.
- The SAP modules which provide predefined standard functionality to replicate actual business activity are called functional module.

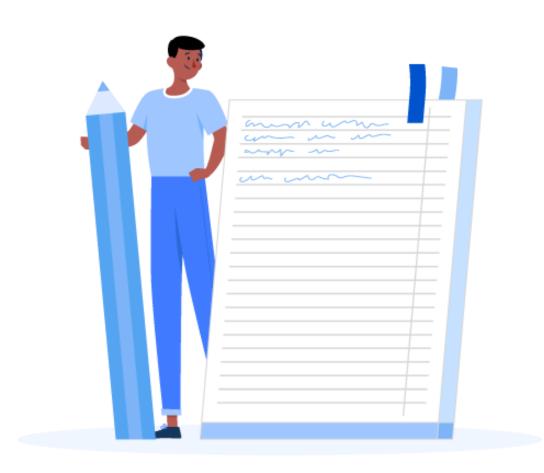
Technical Module

- These modules do not directly replicate actual business activity but provide needed support to functional modules.
- They enable technical consultants to maintain and tune your landscape, schedule tasks, troubleshoot performance issues, build applications, download and install updates, and plan and execute migrations.



Conclusion

- We have completed this section and now we have understood about:
- Evolution of SAP & its working
- The Journey of SAP
- What is ERP system & its benefits
- SAP Layered Architecture
- Difference between functional module & technical module





References

- https://www.sap.com/india/about/company/what-is-sap.html
- https://www.investopedia.com/terms/e/erp.asp
- https://www.g2.com/categories/erp-systems







1. What is SAP?

- a) Software Application Programming
- b) Systems, Applications, and Products
- c) Security and Administration Platform
- d) Scientific Analysis Protocol

Answer: B

Systems, Applications, and Products





2. What is SAP software used for?

- a) Managing Human Resources
- b) Enterprise Resource Planning (ERP)
- c) Graphic Design
- d) Web Development

Answer: B

Enterprise Resource Planning





- 3. What are the benefits of Enterprise Resource Planning (ERP)?
- a) Increased efficiency and streamlined processes
- b) Decreased data security
- c) Limited scalability
- d) Reduced communication within an organization







4. Which of the following is a popular ERP system?

- a) Photoshop
- b) Microsoft Word
- c) SAP
- d) Chrome

Answer: C

SAP





5. What is the layered architecture of SAP called?

- a) SAP Layers
- b) SAP Stack
- c) SAP Hierarchy
- d) SAP Pyramid

Answer: B SAP Stack





Thank You