* **What is SAP?**
* SAP, or Systems Applications and Products, is a widely used enterprise resource planning (ERP) software. SAP creates a centralized system for businesses that enables every department to access and share common data to create a better [work environment](https://www.indeed.com/career-advice/finding-a-job/types-of-work-environments) for every employee in the company. SAP is the most-used ERP software on the market and contains hundreds of fully integrated modules that cover nearly every aspect of business management.
* Incredibly large, extensive software packages used to manage a Company's business processes.
* Standard software packages that must be configured to meet the needs of a company
* Database programs with the following functions:
  + Input
  + Storage/Retrieval
  + Manipulation
  + Output
* **SAP Modules can be categorized into**
* SAP Functional Modules
  + SAP MM – MM stands for material management
  + SAP PP – where PP stands for production planning
  + SAP SD – where SD stands for sales and distribution
  + SAP CRM – CRM stands for customer relationship management
* SAP EC Module – where EC stands for Enterprise Controlling
* SAP TR Module – where TR stands for Treasury
* SAP IM Module – where IM stands for Investment Management
* SAP IS – where IS stands for Industry Specific Solution

NOTE : there are total of 64 SAP modules excluding technical modules

* SAP Technical Modules
* SAP ABAP - ABAP (Advanced Business Application Programming) is the default programming language for SAP applications. You can also use[Java](https://www.guru99.com/java-tutorial.html)to code in SAP. Learn more about [SAP ABAP](https://www.guru99.com/abap-tutorial.html)
* SAP Basis - SAP Basis is a set of programs and tools that act as an interface with Database, Operating system, communication protocols and other SAP modules like FI,HCM, SD etc. Learn more about [SAP Basis](https://www.guru99.com/sap-basis-training-tutorials.html)
* **Advantages of SAP**
* Integration: SAP offers comprehensive integration across various business functions, providing a unified platform for managing enterprise resources efficiently.
* Streamlined Processes: SAP automates repetitive tasks, reduces manual data entry, and streamlines business processes, leading to increased efficiency and productivity.
* Real-time Insights: With SAP's reporting and analytics capabilities, organizations gain access to real-time data and insights, enabling informed decision-making and strategic planning.
* Scalability: SAP solutions are scalable and can accommodate the growth and evolving needs of organizations, making them suitable for both small businesses and large enterprises.
* Global Reach: SAP supports multi-country, multi-language, and multi-currency operations, making it ideal for global organizations with diverse business requirements.
* Compliance and Security: SAP solutions adhere to industry standards and regulations, ensuring compliance with legal and regulatory requirements. Additionally, SAP offers robust security features to protect sensitive data and mitigate cybersecurity risks.
* Enhanced Customer Experience: SAP enables organizations to deliver personalized experiences to customers by centralizing customer data, facilitating targeted marketing campaigns, and providing efficient customer service.
* Innovation and Future-proofing: SAP invests heavily in research and development, continually innovating and introducing new features and functionalities to stay ahead of industry trends and technologies.
* **Disadvantages of SAP:**
* Complexity: SAP implementations can be complex and time-consuming, requiring significant resources, expertise, and careful planning. Complexity may lead to delays, cost overruns, and resistance from stakeholders.
* Cost: The upfront costs associated with SAP licensing, implementation, customization, and maintenance can be substantial, particularly for small and mid-sized businesses with limited budgets.
* Customization Challenges: While SAP offers extensive customization capabilities, excessive customization can increase complexity, make upgrades difficult, and lead to compatibility issues with future releases.
* Dependency on Consultants: Organizations often rely on external consultants or SAP partners for implementation, customization, and support services, leading to dependency and additional costs.
* User Adoption: SAP systems may be perceived as difficult to use by some users, requiring comprehensive training and change management initiatives to ensure widespread adoption and maximize ROI.
* Upgrade Issues: Upgrading to newer versions of SAP software can be challenging and disruptive, requiring thorough testing, data migration, and reconfiguration to ensure compatibility and minimize downtime.
* Performance Concerns: Poorly optimized SAP systems may experience performance issues, such as slow response times, system crashes, and downtime, impacting productivity and user satisfaction.
* Vendor Lock-in: Organizations that heavily invest in SAP solutions may become locked into the SAP ecosystem, making it difficult and costly to switch to alternative vendors or platforms in the future.
* **Difference in SAP and ERP**

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| --- | --- | --- |
| S.No | ERP | [SAP](https://www.geeksforgeeks.org/sap-an-introduction/) |
| 1. | ERP are software solutions that helps organizations to manage their business processes. | SAP is multinational company that sells[ERP softwar](https://www.geeksforgeeks.org/sap-erp-components-working-process-and-advantages/)e solutions to business. |
| 2. | It is a centralized system that streamline all processes. | It groups process into modules and interact with different business aspects. |
| 3. | ERP is termed as super set of SAP. | SAP are largest provider of ERP software systems. |
| 4. | ERP is a web-based application. | SAP is developer that provides variety of options depending upon requirements. |
| 5. | ERP systems are more focused about the organization growth. | SAP takes the care of both customers and organization while developing software solutions. |
| 6. | Examples – NetSuite ERP, Scoro, AcTouch, etc. | Examples – SAP Business Intelligence, SAP Enterprise Buyer Professional, SAP Internet Transaction Server, etc. |

* **Evolution of SAP**
* SAP is basically a German software founded in the year 1972, by five IBM engineers.
* SAP R/1 and R/2 was the first product which was released, ‘R’ refers for Real-time data processing.
* SAP R/2 – used to run on mainframe
* SAP R/3 – Introduction of 3-tier architecture i.e., presentation layer, application layer and database layer.
* SAP ecc ERP – Became part of a larger ERP family i.e., SAP Business Suite. It includes SAP ECC that is the successor of SAP R/3
* SAP S/4 HANA – Back-end application layers run on SAP HANA database while the front-end application runs on SAP Fiori.

