# Unit 3

# Computer Software

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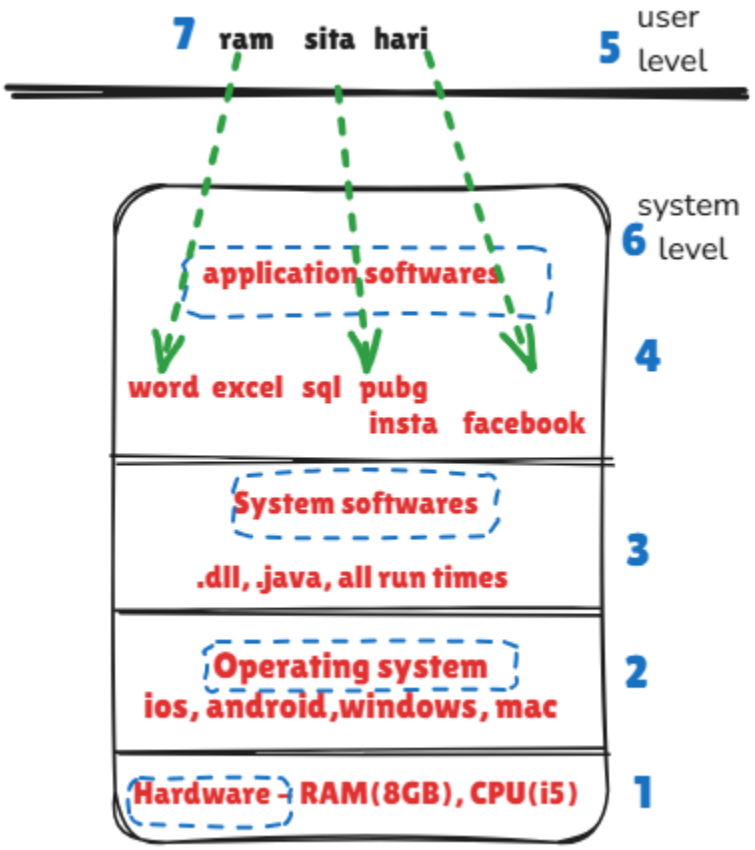
# 3.1 Software and its characteristics

**Definition**:
Software is a set of instructions, data, or programs used to operate computers and execute specific tasks. It can be broadly categorized into system software and application software.

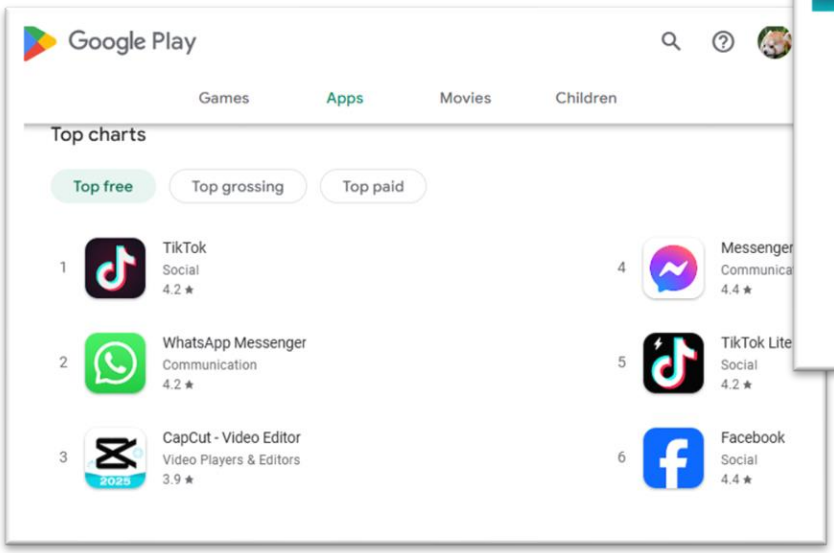
**Characteristics of Software**

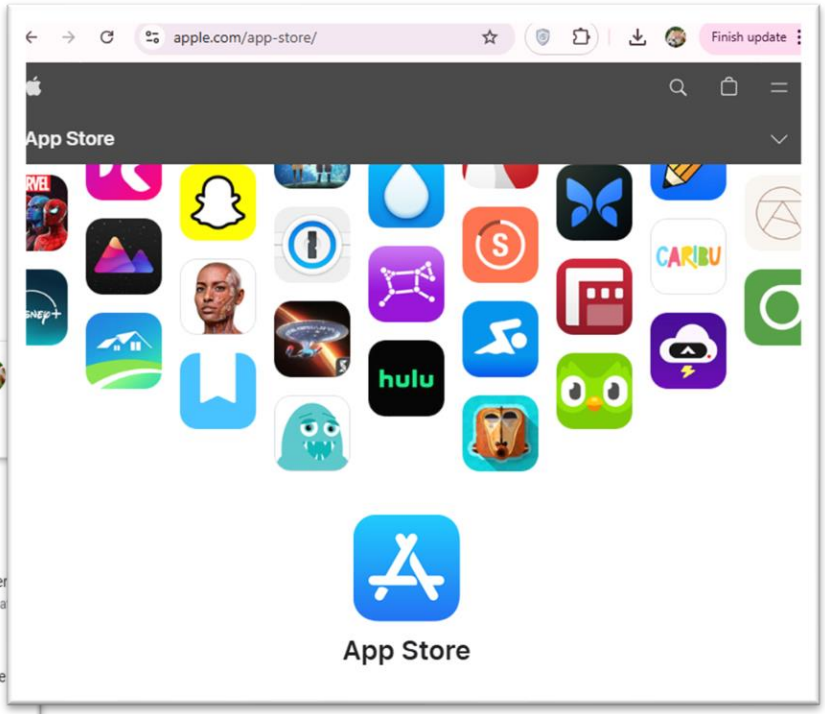
1. **Intangible**:
   - Unlike hardware, software cannot be physically touched.
   - Example: A mobile app downloaded online.
2. **Customizable**:
   - Software can be tailored to meet specific needs.
   - Example: Custom ERP solutions for businesses.
3. **Development Process**:
   - Created through systematic methodologies like SDLC (Software Development Life Cycle).
   - Example: Agile development for quick delivery.
4. **Complexity**:
   - High complexity due to interdependent modules.
   - Example: An operating system managing various hardware and applications.
5. **Maintenance**:
   - Requires regular updates and bug fixes to remain functional.

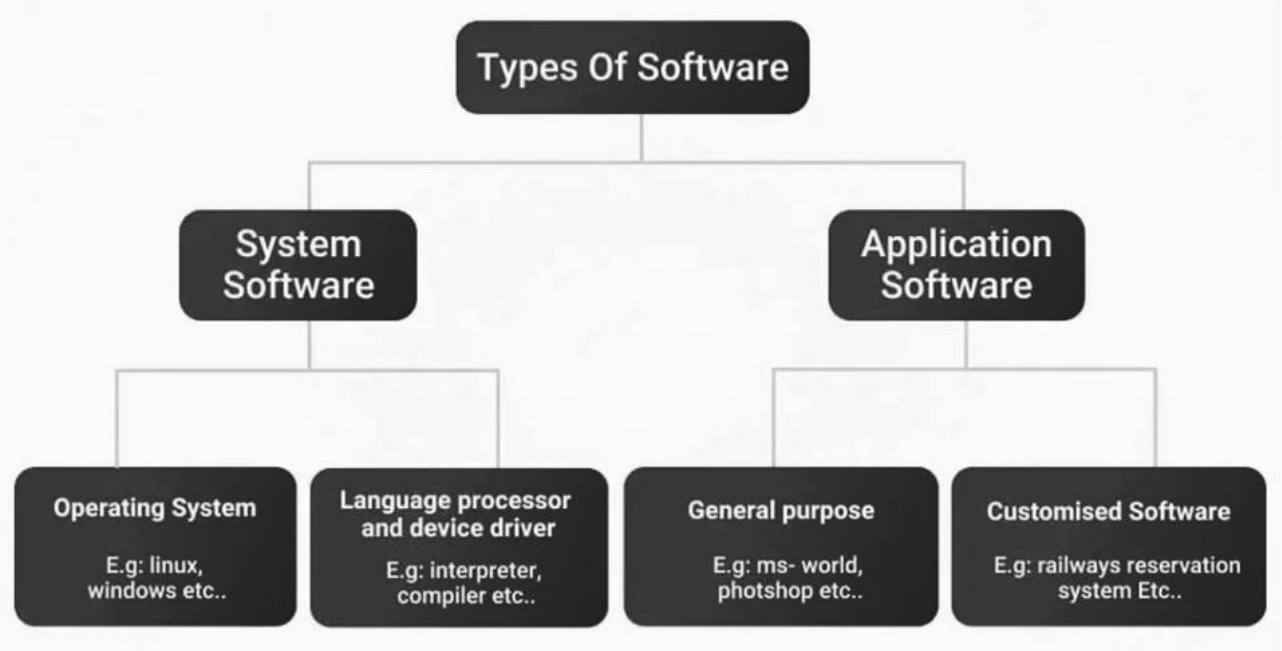



- Example: Antivirus software updating virus definitions.

6. **Scalability**:
   - Designed to handle growth in user base or data size.
   - Example: Cloud applications scaling as users increase.
7. **Dependence on Hardware**:
   - Requires compatible hardware to function.
   - Example: Games needing specific graphic card configurations.






## 3.2 System Software (Operating Systems and Utility software)

**Definition**:
System software provides the platform and environment for other software to function, managing hardware and basic system operations.



### 1. Operating Systems (OS)

**Role**:

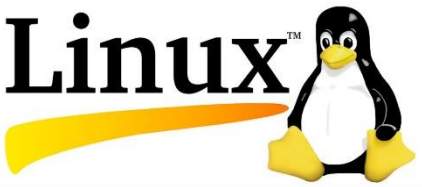
- Acts as an interface between users and hardware.
- Manages hardware resources and provides essential services.

**Examples**:

- *Windows, macOS, Linux, Android.*

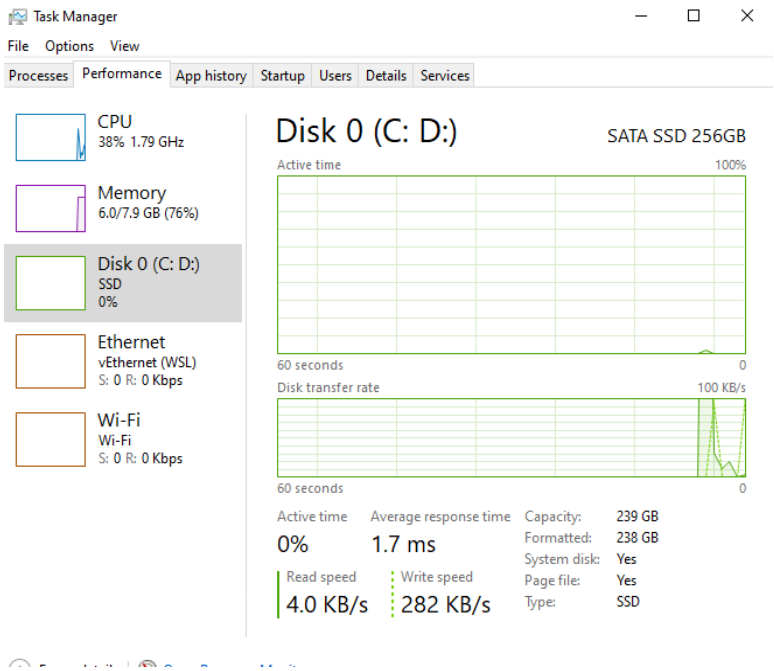
**Key Functions**:

1. **Process Management**: Allocates CPU time to various tasks.
    - Example: Running multiple applications simultaneously.
2. **Memory Management**: Controls RAM allocation.



- Example: Avoiding memory overload during multitasking.

3. **File System Management**: Organizes files into directories.
    - Example: Saving and retrieving documents.
4. **Device Management**: Handles input/output devices.
    - Example: Printer and mouse operations.



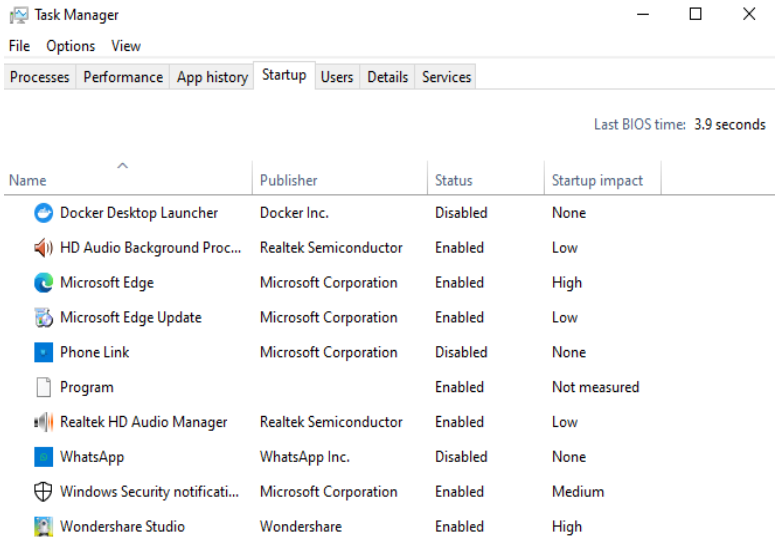

## 2. Utility Software

**Role**:

- Provides specialized tools for system maintenance and performance enhancement.

**Examples**:

- Antivirus software, Disk Cleanup, Backup tools.



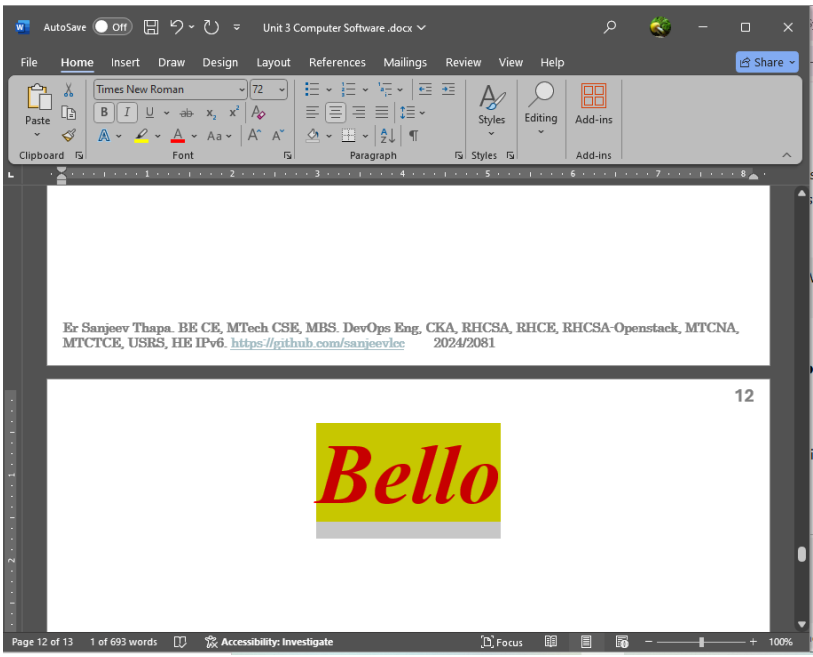

**Key Functions**:

1. **System Security**: Protects from malware.
    - Example: Norton Antivirus.
2. **Disk Management**: Optimizes storage.
    - Example: Defragmentation tools.
3. **Data Backup**: Creates data copies to prevent loss.
    - Example: Acronis True Image.
4. **Performance Monitoring**: Tracks system health.
    - Example: Task Manager in Windows.

# 3.3 Application Software (Word Processors, Spreadsheets, Business Applications)

**Definition**:
Application software is designed to perform specific user-oriented tasks, such as document creation, data analysis, or business management.

## 1. Word Processors




**Role**:

- Helps users create, edit, and format text documents.

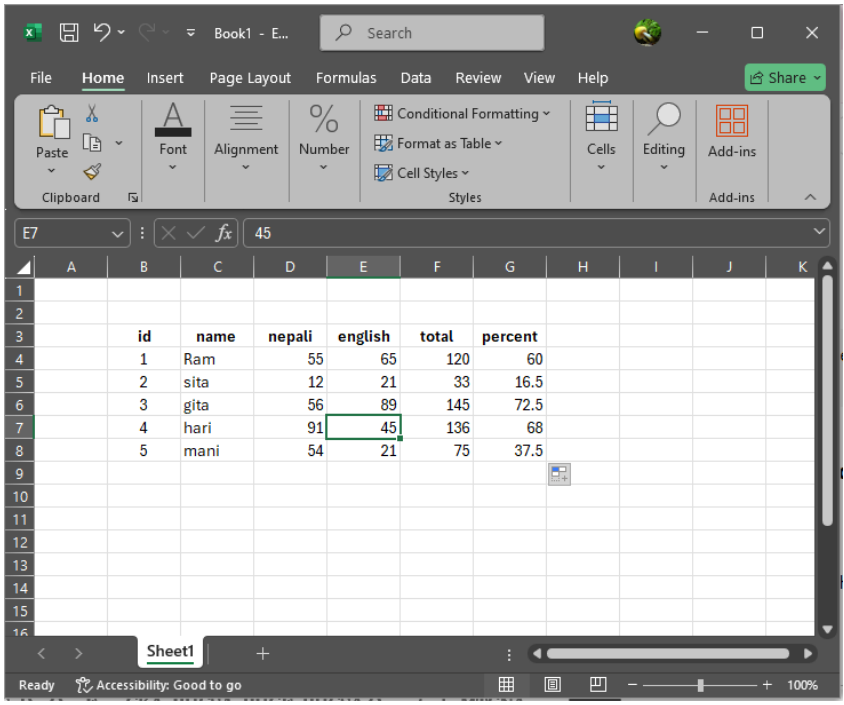
**Examples**:

- Microsoft Word, Google Docs, LibreOffice Writer.

**Key Features**:

- Text formatting (fonts, styles).
- Spell check and grammar correction.
- Table and image insertion.
- Example Use Case: Drafting a report for a business meeting.

## 2. Spreadsheets




**Role**:

- Used for numerical data analysis and visualization.

**Examples**:

- Microsoft Excel, Google Sheets, LibreOffice Calc.

**Key Features**:

- Functions and formulas for calculations.
- Data sorting and filtering.

- Charts and graphs for visualization.
- Example Use Case: Creating a budget plan for a project.

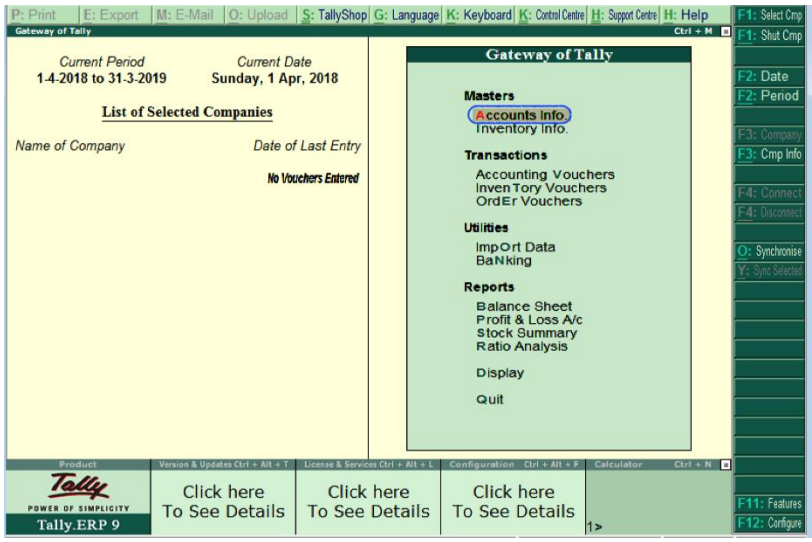
### 3. Business Applications

**Role**:

- Specialized software to manage business operations.

**Examples**:

- ERP (Tally ERP), CRM (Salesforce), SCM (SAP).




**Key Features**:

- Automates workflows.
- Real-time data tracking.
- Integration with other business tools.
- Example Use Case: Managing customer relations with Salesforce.

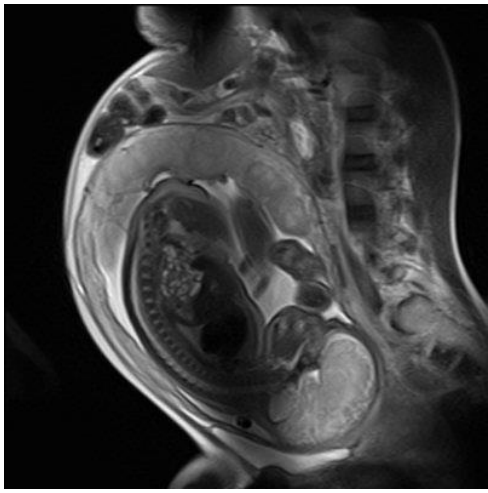
## 3.4 Application of Software Across Industries

Software is essential in various industries, enhancing efficiency, accuracy, and innovation. Below are examples of how software is applied across industries:

### 1. Healthcare

**Applications**:

- **EHR Systems**: Patient record storage and sharing.
  - Example: Epic Systems, Cerner.
- **Diagnostic Tools**: AI and machine learning for medical imaging.
  - Example: IBM Watson Health, Zebra Medical Vision, ***MRI***



- **Telemedicine**: Remote diagnosis and consultations.
    - Example: Teladoc, Practo.
- **Pharmaceutical Research**: Drug discovery and trials.
    - Example: Schrodinger, ChemDraw.

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## 2. Education

**Applications**:


- **LMS Platforms**: For course management and student tracking.
    - Example: Canvas, Moodle.
- **Virtual Labs**: Interactive experiments in science and engineering.
    - Example: Labster, MATLAB Online.
- **E-learning Platforms**: For skill development.
    - Example: Coursera, Udemy.

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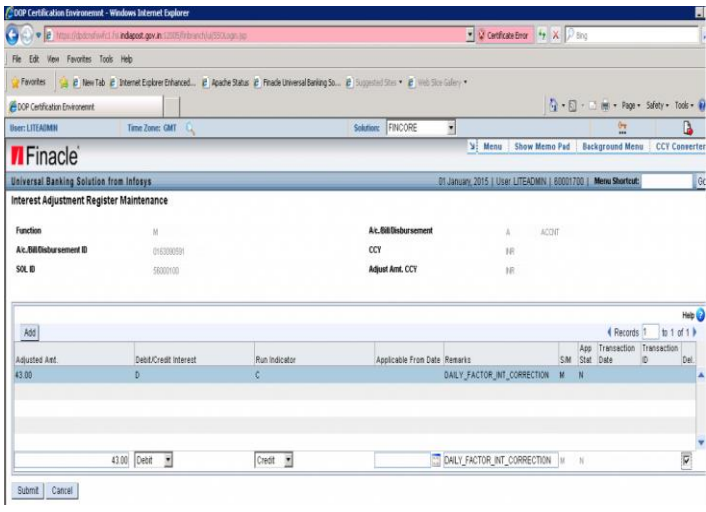
## 3. Finance

**Applications**:




- **Accounting Software**: For financial management.
    - Example: QuickBooks, Xero, ***Finacle***
- **Trading Platforms**: For stock market analysis and trading.
    - Example: MetaTrader, E*TRADE.
- **Fraud Detection**: AI-based systems for identifying anomalies.
    - Example: FICO, SAS Fraud Management.

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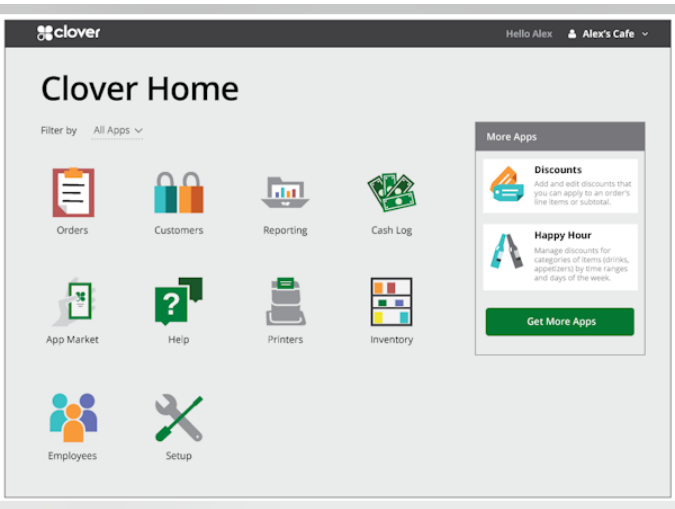
## 4. Retail

**Applications**:

- **POS Systems**: Sales, inventory, and payment processing.
  - Example: Square, ***Clover***.
- **Inventory Management**: Automates stock control.
  - Example: TradeGecko, SAP Inventory.
- **E-commerce Platforms**: For online shopping and logistics.
  - Example: Shopify, WooCommerce.

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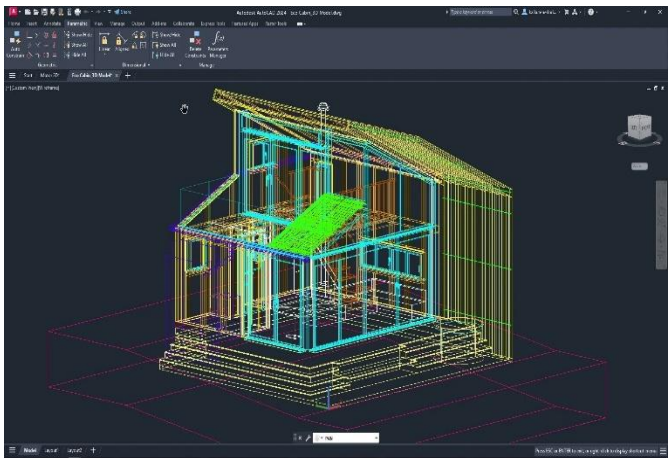
## 5. Engineering

**Applications**:

- **CAD Software**: For design and modeling.
  - Example: ***AutoCAD***, SolidWorks.
- **Simulation Tools**: For testing prototypes virtually.
  - Example: ANSYS, Simulink.
- **Project Management**: Tracks engineering projects.
  - Example: Primavera, Microsoft Project.



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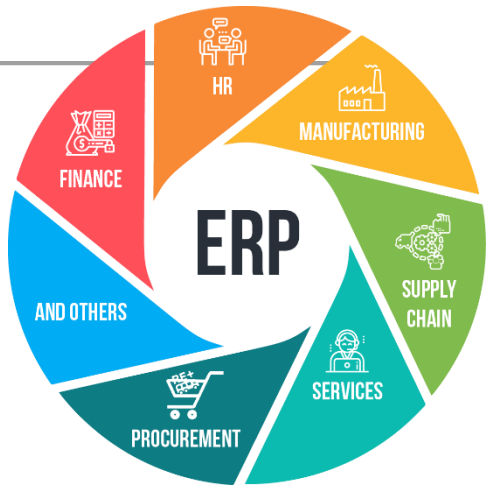
## 6. Management

**Applications**:

- **ERP Systems**: Streamlines operations across departments.
  - Example: SAP ERP, Oracle ERP.
- **CRM Software**: Manages customer relationships and sales pipelines.



- Example: Salesforce, Zoho CRM.

- **HR Management**: For recruitment and employee tracking.
  - Example: BambooHR, Workday.

## 3.5 Enterprise Software:

Enterprise software is designed to manage core business processes and improve efficiency across large organizations.

### 1. ERP Systems (Enterprise Resource Planning)

**Definition**:
ERP integrates various business processes like finance, HR, manufacturing, and supply chain into one unified system.

**Applications**:

1. **System Application Products (SAP) ERP**:
   - Used for automating financials, procurement, and HR processes.
   - System Application and Product in Data Processing is the short used for SAP. They are called as the developers for software that manages the business processes and customer relations.
   - SAP provides software solutions to the businesses to automate their process of distribution and logistic indexes.
   - **Example**: A manufacturing company using SAP to manage inventory and production.

2. **Oracle ERP**:
    - Focuses on cloud-based solutions for scalability and advanced analytics.
    - Example: Retailers using Oracle ERP for financial reporting and supply chain optimization.


**Benefits**:

- Centralized data management.
- Improved decision-making with real-time analytics.
- Streamlined workflows across departments.

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## 2. CRM Software (Customer Relationship Management)

***https://www.eclincher.com/articles/crm-tools***

**Definition**:
CRM software helps manage customer interactions, sales, and support services.

**Applications**:

1. **Salesforce**:
    - Tracks customer interactions and automates sales pipelines.
    - Example: A service-based company using Salesforce to manage client leads and support tickets.
2. **HubSpot CRM**:
    - Provides marketing and customer engagement tools.
    - Example: Small businesses using HubSpot to streamline marketing campaigns.

**Benefits**:

- Enhanced customer retention.
- Personalized marketing and service delivery.
- Real-time insights into customer behavior.

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### 3. Supply Chain Management (SCM) Software

***https://www.thirdstage-consulting.com/top-10-supply-chain-management-systems-scm/***

**Definition**:
SCM software manages the flow of goods, data, and finances across the supply chain.

**Applications**:

1. **SAP SCM**:
   - For demand planning, inventory optimization, and logistics.
   - **Example**: A logistics company using SAP SCM to track shipments in real-time.
2. **Blue Yonder (JDA Software)**:
   - For warehouse and transportation management.
   - **Example**: E-commerce platforms optimizing delivery routes.


**Benefits**:

- Reduced costs through efficient logistics.
- Improved inventory management and demand forecasting.
- Enhanced collaboration with suppliers and distributors.

## 3.6 Web Based Software Applications:

Web-based applications run on web browsers and are accessible via the internet, eliminating the need for installation on devices.

### 1. E-Commerce Platforms

**Definition**:
Web applications that enable online buying and selling of goods and services.

**Examples**:

1. **Shopify**:
    - A platform for creating and managing online stores.
    - Example: A clothing retailer setting up an online storefront with payment gateways.


2. **Amazon**:
    - A global e-commerce giant offering a marketplace for various sellers.
    - Example: Small businesses listing their products for global customers.
3. **WooCommerce**:
    - A plugin for WordPress to create customized e-commerce websites.
    - Example: Entrepreneurs using WooCommerce for niche products.

**Benefits**:

- Global reach for businesses.
- Secure payment processing.
- Simplified inventory and order management.

## 2. Social Media Platforms

**Definition**:
Web applications that facilitate social networking, content sharing, and communication.

**Examples**:

1. **Facebook**:
    - Connects users through profiles, groups, and posts.
    - Example: Businesses using Facebook Ads for targeted marketing.
2. **LinkedIn**:
    - A professional networking platform.

- Example: Job seekers connecting with recruiters and showcasing their portfolios.

3. **Instagram**:
    - Focused on visual content sharing.
    - Example: Brands leveraging Instagram for influencer marketing.

Most Followed Accounts on Instagram

| Rank | Account | Current Followers |
|---|---|---|
| 1 | Instagram | **676.7 million** |
| 2 | Cristiano Ronaldo | 639.9 million |
| 3 | Leo Messi | 504 million |
| 4 | Selena Gomez | 424.3 million |

16 more rows • Dec 3, 2024

***https://www.instagram.com/kyliejenner/***

**Benefits**:

- Real-time communication and engagement.
- Wide audience reach for businesses.
- Platforms for personal branding and marketing.

## 3.7 Mobile Applications:

Mobile applications are software programs designed specifically for smartphones, tablets, or wearable devices, running on operating systems like Android and iOS.

### 1. Android Applications

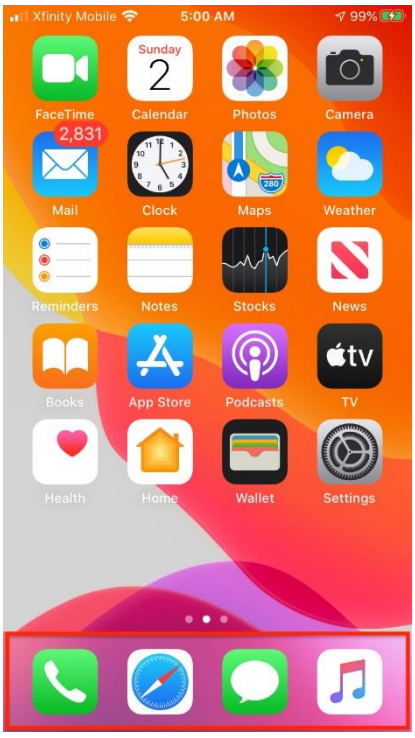
**Definition**:
Applications developed for devices running the Android operating system.

**Examples and Uses**:

1. **Google Maps**:
    - Navigation and real-time traffic updates.
    - Example: Commuters use it to find the fastest routes.
2. **WhatsApp**:
    - Messaging, calling, and file sharing.
    - Example: Small businesses use WhatsApp Business for customer communication.
3. **Paytm**:
    - Mobile payments and financial transactions.
    - Example: Used for online shopping and bill payments in India.

## 2. iOS Applications

**Definition**:
Applications developed for devices running the iOS operating system, such as iPhones and iPads.




**Examples and Uses**:

1. **Apple Wallet**:
    - Stores payment cards, tickets, and boarding passes.
    - Example: Used for contactless payments and digital ticketing.
2. **FaceTime**:
    - Video and voice calling.
    - Example: Professionals use it for quick team discussions.
3. **GarageBand**:
    - Music creation and editing.

- Example: Musicians use it to produce songs directly on their iPhones.

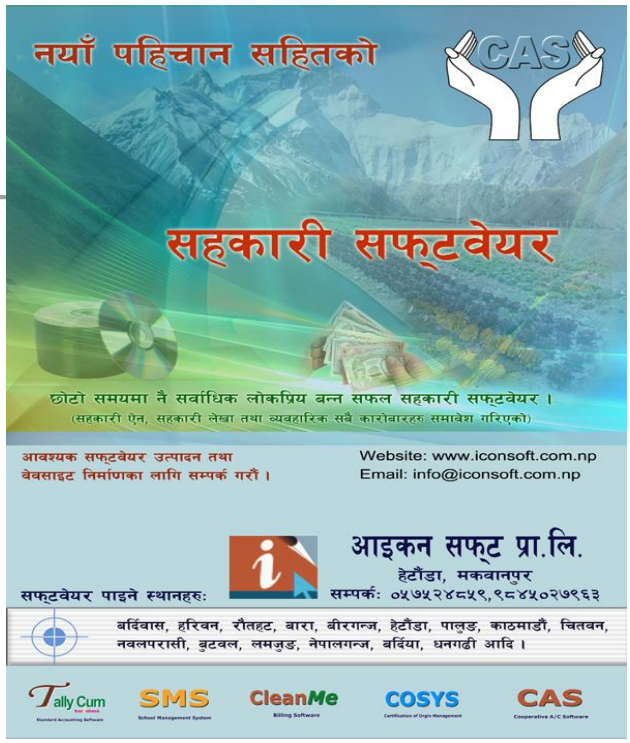
### 3. Mobile Applications (General Use)

**Categories and Examples**:

- **Social Media**: Facebook, Instagram.
  - Use: Connect and share content with friends and followers.
- **E-Commerce**: Amazon, Flipkart,Daraz
  - Use: Shop and manage orders directly from mobile devices.
- **Health and Fitness**: MyFitnessPal, Fitbit.
  - Use: Track workouts, calorie intake, and health metrics.
- **Education**: Duolingo, Khan Academy.
  - Use: Learn languages and academic subjects.
- **Gaming**: PUBG Mobile, Candy Crush.
  - Use: Entertainment and competitive gaming.

## 3.8 Custom vs. Off-the-Shelf Software:

Custom and off-the-shelf software are two approaches to meeting software needs, each with unique characteristics, advantages, and use cases.




### 1. Custom Software

**Definition**:
Software developed specifically to meet the unique requirements of a particular organization or user.

**Characteristics**:

- Tailored functionality to meet specific needs.

- Requires significant development time and cost.
- Ownership of the software resides with the business.

**Examples**:

1. A banking application designed exclusively for a financial institution.
2. A custom ERP system for a manufacturing company to handle complex workflows.

**Advantages**:

- Exact fit for business needs.
- Competitive advantage through unique features.
- Scalable and adaptable to future needs.

**Disadvantages**:

- High initial cost and longer development time.
- Requires ongoing maintenance and updates.

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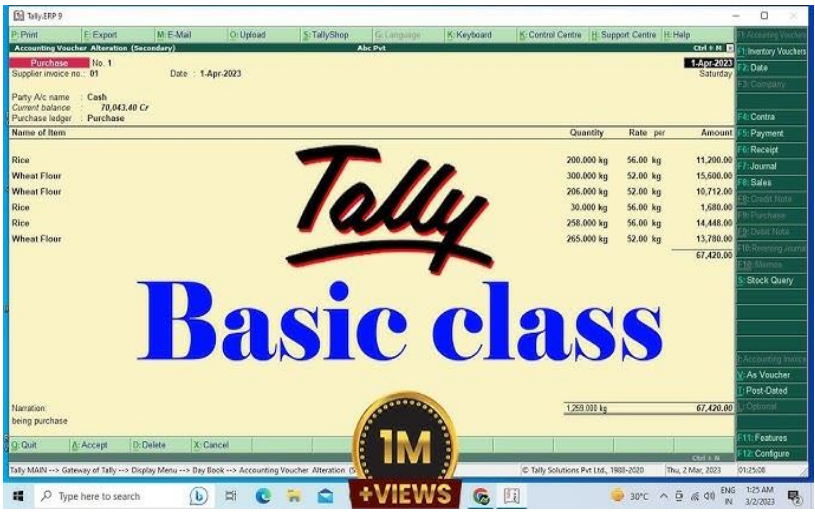
## 2. Off-the-Shelf Software

**Definition**:
Pre-built, ready-to-use software that caters to general needs across industries.




**Characteristics**:

- Developed for mass use with standard functionalities.
- Quick implementation and lower cost.
- Usually offered as licensed or subscription-based solutions.

**Examples**:

1. Microsoft Office for productivity tasks.
2. Salesforce for customer relationship management.

**Advantages**:

- Cost-effective and readily available.

- Regular updates and support from the vendor.
- Tested and reliable for general use cases.

**Disadvantages**:

- Limited customization.
- May include unnecessary features.
- Dependency on the vendor for updates and changes.

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**Key Comparison**

| Feature | Custom Software | Off-the-Shelf Software |
|---|---|---|
| **Development Time** | Long | Short |
| **Cost** | High upfront cost | Lower initial cost |
| **Customization** | Fully customizable | Limited |
| **Scalability** | High | Moderate |
| **Examples** | Custom ERP system | Microsoft Office, SAP |

# 3.9 Off-the-shelf solutions for general use (e.g., Microsoft Office, Open Office).

Off-the-shelf solutions are pre-built software designed for widespread, general-purpose applications. These solutions cater to a broad range of users and are often easy to implement and use.

## Examples of Off-the-Shelf Solutions

### 1. Microsoft Office

**Description**:
A suite of productivity tools for document creation, data analysis, presentations, and communication.

**Components**:

- **Microsoft Word**: Word processing.
- **Microsoft Excel**: Spreadsheet analysis and data management.
- **Microsoft PowerPoint**: Presentation creation.
- **Microsoft Outlook**: Email and calendar management.

**Use Cases**:

- Writing reports and letters (Word).
- Financial modeling and data visualization (Excel).
- Delivering business presentations (PowerPoint).

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**2. OpenOffice**

**Description**:
An open-source productivity suite providing similar functionality to Microsoft Office.

**Components**:

- **Writer**: Word processing.
- **Calc**: Spreadsheets.
- **Impress**: Presentations.
- **Base**: Database management.

**Use Cases**:

- Creating budgets and financial records (Calc).
- Preparing slides for teaching or business (Impress).
- Managing databases for small businesses (Base).

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**Benefits of Off-the-Shelf Solutions**

1. **Ease of Use**: Pre-built templates and intuitive interfaces.
2. **Cost-Effectiveness**: Affordable licensing or free in the case of OpenOffice.

3. **Quick Implementation**: Ready for immediate use.
4. **Reliability**: Regular updates and support from large communities or vendors.

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**Comparison: Microsoft Office vs. OpenOffice**

| Feature | Microsoft Office | OpenOffice |
|---|---|---|
| **Cost** | Subscription-based | Free and open-source |
| **Compatibility** | Seamless across platforms | Moderate compatibility |
| **Support** | Extensive professional support | Community-driven support |
| **Customization** | Limited | Open for customization |

## 3.10 Choosing the Right Software for Business

Selecting the right software is critical for business efficiency, scalability, and success. The choice depends on factors like business needs, budget, and long-term goals.

### Steps to Choose the Right Software

**1. Identify Business Requirements**

- **Determine Needs**: Define the tasks the software must perform (e.g., inventory management, customer tracking).
- **Example**: A retail business may need software for point-of-sale (POS) and inventory control.

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**2. Budget and Cost Analysis**

- **Consider Initial Costs**: Compare the purchase or subscription price.

- **Evaluate ROI**: Assess potential returns from improved efficiency or revenue generation.
- **Example**: A startup might opt for free tools like OpenOffice to minimize costs.

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**3. Custom vs. Off-the-Shelf**

- **Custom Software**: Tailored to specific needs but expensive and time-consuming.
- **Off-the-Shelf Software**: Affordable and quick to implement but may lack customization.
- **Example**: Choose Microsoft Office for general productivity needs or build a custom CRM for niche industries.

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**4. Scalability and Flexibility**

- **Ensure Growth Support**: The software should scale as the business expands.
- **Example**: Cloud-based ERP systems like SAP or Oracle can handle increasing users and data.

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**5. Integration Capabilities**

- **Check Compatibility**: The software should integrate seamlessly with existing systems.
- **Example**: A business using Salesforce may require integration with email tools like Outlook.

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**6. User Experience and Training**

- **Ease of Use**: Intuitive software reduces the learning curve.
- **Training and Support**: Look for training resources and vendor support.
- **Example**: Small businesses often choose QuickBooks for its simple interface and extensive tutorials.

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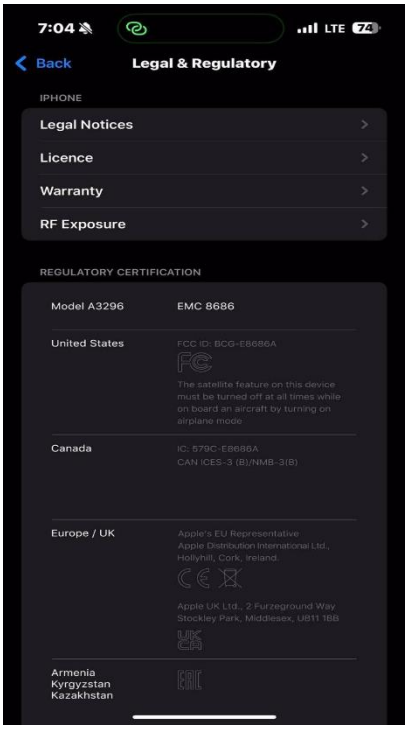
**7. Security and Compliance**

- **Ensure Data Security**: Look for features like encryption and access control.

- **Compliance**: Ensure adherence to industry regulations.
- **Example**: Healthcare businesses choose software like Epic Systems for HIPAA compliance.

## 3.11 Software license types and legal use of software




A software license defines how a software program can be used, distributed, or modified by end-users. Proper licensing ensures legal compliance and avoids penalties.

### Types of Software Licenses

#### 1.1 Proprietary License

- **Definition**: The software is owned by the developer or company, and users must purchase a license to use it.
- **Examples**: Microsoft Office, Adobe Photoshop.
- **Legal Use**:
    - Users must adhere to terms like one license per device or limited installations.
    - Unauthorized copying or distribution is prohibited.

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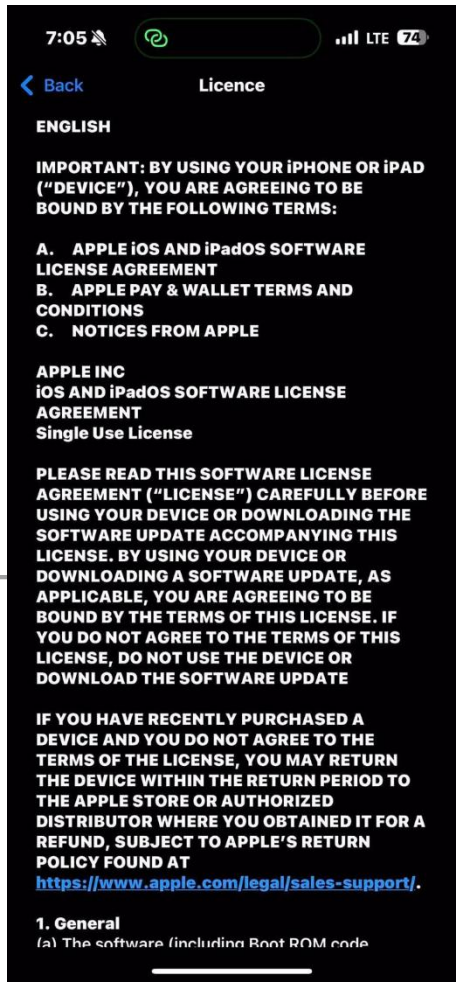
#### 1.2 Open-Source License

- **Definition**: The source code is freely available for use, modification, and distribution.
- **Examples**: Linux, Apache.
- **Legal Use**:
    - Users must comply with license terms like GPL (General Public License), which requires modifications to be shared under the same license.
    - Free usage but credits to original developers are mandatory.

### 1.3 Freeware




- **Definition**: Software available for free use but often with restricted rights for modification.
- **Examples**: Skype, Adobe Reader.
- **Legal Use**:
    - Permitted for personal use; commercial usage may require permission.
    - Distribution without altering the software is allowed.

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### 1.4 Shareware

- **Definition**: Software distributed for free on a trial basis, with payment required for full functionality.
- **Examples**: WinRAR, Adobe Acrobat (trial versions).
- **Legal Use**:
    - Users can test features during the trial but must pay to unlock full access.
    - Sharing trial versions is typically allowed, but the full version cannot be distributed.

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### 1.5 Cloud-Based License (SaaS)

- **Definition**: Users pay a subscription fee for access to software hosted on the cloud.
- **Examples**: Microsoft 365, Google Workspace.
- **Legal Use**:
    - Requires active subscription.
    - Limited to the number of users or devices specified in the agreement.

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### 1.6 Legal Use of Software

1. **Purchase or License Agreement**: Always acquire software through legal means like purchasing or subscribing.
2. **Avoid Piracy**: Using unlicensed or cracked software is illegal and can lead to fines or security risks.
3. **Read License Terms**: Understand usage limits, such as user count, devices, or modification rights.
4. **Keep Documentation**: Maintain proof of purchase or licensing agreements for audits.

## Software's:

***screen video recorder:*** *https://www.faststone.org/FSCaptureDownload.htm*

***Tally****:https://tallysolutions.com/global/download/?srsltid=AfmBOor7nVXZ7lmKVH7AC5XqZ6HsnEfxVbVqFvWGcv_q3ISJ2xl3K-c4*

***RouterOS****: https://mikrotik.com/download*

# CASE(English):

**Legal Battle Between Apple and Samsung (2011-2018)**

***https://www.law.uci.edu/centers/korea-law-center/news/klc-samsung-apple.pdf***

The legal dispute between **Apple** and **Samsung** began in 2011 when Apple filed a lawsuit against Samsung, accusing it of copying the design and features of the iPhone in its Galaxy series smartphones. Over the years, this battle became one of the most high-profile patent lawsuits in tech history.

Below is a summary of key events and outcomes.

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**Timeline and Key Events**

**1. Initial Lawsuit (2011)**

- **Claim**: Apple accused Samsung of copying the **iPhone's design** and **user interface**, including features like pinch-to-zoom and swipe gestures.

- **Legal Grounds**: Apple filed the lawsuit in the U.S. District Court for the Northern District of California, alleging Samsung infringed on **Apple's patents** related to the design and utility of the iPhone.

**2. First Verdict (2012)**

- **Decision**: The jury ruled in favor of Apple, awarding the company **$1.05 billion** in damages.
- **Reason**: The jury found that Samsung had infringed on Apple's design and utility patents.
- **Samsung's Response**: Samsung denied the claims and filed an appeal, arguing that Apple's patents were not valid.

**3. Appeal and Retrial (2013-2014)**

- **Outcome**: The damages were reduced to **$930 million** after retrial, but the core issue—whether Samsung had infringed on Apple's patents—remained unresolved.

**4. Further Legal Struggles (2016)**

- **Legal Strategy**: Apple sought even larger damages, while Samsung continued to challenge Apple's patents and the verdict.
- **Counterclaims**: Samsung countered by accusing Apple of infringing on its own patents.

**5. Final Resolution (2018)**

- **Outcome**: The U.S. Supreme Court ruled in favor of Samsung, reducing the amount it had to pay Apple. In 2018, **Samsung agreed to settle**, paying **$539 million** in damages, significantly less than the original judgment.
- **Reason**: The Supreme Court found that the damages in patent infringement cases should not be based solely on the entire device but rather the specific components that were infringed upon.

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**Summary of Reasons for the Case and Final Outcome**

- **Core Issue**: The case primarily focused on Apple's claims that Samsung had copied the look, feel, and features of the iPhone in its smartphones.
- **Apple's Argument**: Apple argued that its innovations in design and technology were being illegally copied by Samsung, thus violating its intellectual property rights.

- **Samsung's Defense**: Samsung claimed that its products were developed independently and did not infringe Apple's patents. They also argued that some of Apple's patents were not valid.
- **Final Outcome**: The legal battle was settled in 2018, with Samsung paying Apple **$539 million**. The case highlighted the importance of design and utility patents in the tech industry and led to stricter scrutiny of patent claims and damages in such cases.

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**Q/A**

**Q1**: Who won the case between Apple and Samsung?
**A**: Apple initially won, but the final settlement in 2018 saw Samsung paying **$539 million** in damages after appeals and legal proceedings.

**Q2**: What was the main reason for the legal case?
**A**: Apple accused Samsung of copying the iPhone's design and user interface features, including pinch-to-zoom and swipe gestures.

**Q3**: Why was the final settlement amount reduced from the initial $1 billion?
**A**: The U.S. Supreme Court determined that damages in patent cases should focus on the specific parts of the device infringed upon, not the entire device.

# CASE(Nepali):

## एप्पल र स्यामसंग बीचको कानूनी विवाद (2011-2018)

एप्पल र स्यामसंग बीचको कानूनी विवाद 2011 मा सुरु भएको थियो जब एप्पलले स्यामसंगविरुद्ध एक मुद्दा दायर गऱ्यो, जसमा यसले आईफोनको डिजाइन र विशेषताहरूलाई नक्कल गरेको आरोप लगाएको थियो। यस विवादले समयको साथ एक ठूलो पेटेन्ट कानूनी लडाइँ बन्यो। यहाँ केहि प्रमुख घटनाहरू र परिणामहरूको संक्षिप्त विवरण छ।

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### समयरेखा र प्रमुख घटनाहरू

#### 1. प्रारम्भिक मुद्दा (2011)

- **आरोप**: एप्पलले स्यामसंगलाई **आईफोनको डिजाइन** र **प्रयोगकर्ता इन्टरफेस** को नक्कल गरेको आरोप लगायो, जसमा पिन्च-टु-ज़ूम र स्वाइप जेस्चर जस्ता विशेषताहरू समावेश थिए।
- **कानूनी आधार**: एप्पलले यू.एस. जिल्ला अदालतमा मुद्धा दायर गऱ्यो र स्यामसंगको खिलाफ पेटेन्ट उल्लंघनको आरोप लगायो।

**2. पहिलो निर्णय (2012)**

- **निर्णय**: जूरीले एप्पलको पक्षमा फैसला दियो र यसलाई **$1.05 बिलियन** को क्षतिपूर्ति दिइयो।
- **कारण**: जूरीले पत्ता लगायो कि स्यामसंगले एप्पलका डिजाइन र युटिलिटी पेटेन्ट उल्लंघन गरेको थियो।
- **स्यामसंगको प्रतिक्रिया**: स्यामसंगले यी आरोपलाई अस्वीकार गऱ्यो र अपील दायर गऱ्यो, एप्पलका पेटेन्टहरू अमान्य रहेको दाबी गऱ्यो।

**3. अपील र पुनः परीक्षण (2013-2014)**

- **परिणाम**: पुनः परीक्षण पछि क्षतिपूर्ति रकमलाई **$930 मिलियन** मा घटाइयो, तर मुद्दाको मुख्य कुरा—स्यामसंगले एप्पलका पेटेन्ट उल्लंघन गरेको हो कि होइन—अब पनि निवारण भएको थिएन।

**4. थप कानूनी संघर्ष (2016)**

- **कानूनी रणनीति**: एप्पलले थप क्षतिपूर्ति माग्यो, जबकि स्यामसंगले एप्पलका पेटेन्टहरूको चुनौती जारी राख्यो।
- **विपरीत दाबी**: स्यामसंगले एप्पलको पेटेन्ट उल्लंघनको आरोप लगायो।

**5. अन्तिम समाधान (2018)**

- **परिणाम**: यू.एस. सुप्रीम कोर्टले स्यामसंगको पक्षमा फैसला दियो र यसले एप्पललाई तिर्नुपर्ने रकम घटायो। 2018 मा **स्यामसंगले $539 मिलियन** को क्षतिपूर्ति भुक्तान गर्न सहमति जनायो।
- **कारण**: सुप्रीम कोर्टले पेटेन्ट उल्लंघन मामिलामा क्षतिपूर्ति रकम डिवाइसको पूर्ण मूल्यमा होइन, उल्लंघन भएका विशेष भागहरूको आधारमा निर्धारण गर्नुपर्ने भनी निर्णय गऱ्यो।

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## कानूनी मुद्दाको कारण र अन्तिम परिणामको संक्षिप्त विवरण

- **मुख्य मुद्दा**: यस मुद्दामा एप्पलले आरोप लगायो कि स्यामसंगले आईफोनको डिजाइन, विशेषताहरू, र प्रयोगकर्ता इन्टरफेसको नक्कल गरेको छ।

- **एप्पलको तर्क**: एप्पलले आफ्नो डिजाइन र प्रविधिमा भएका नवाचारहरूको उल्लंघन भएको दाबी गऱ्यो।
- **स्यामसंगको बचाव**: स्यामसंगले भन्यो कि यसका उत्पादनहरू स्वतन्त्र रूपमा विकास गरिएको हो र एप्पलका पेटेन्टहरू अमान्य थिए।
- **अन्तिम परिणाम**: कानूनी लडाइँ 2018 मा समाधान भएको थियो, र स्यामसंगले **$539 मिलियन** तिर्ने सहमति जनायो। यसले प्रविधि उद्योगमा पेटेन्ट र डिजाइनको महत्त्वलाई पुनः प्रकट गऱ्यो र पेटेन्ट दावी र क्षतिपूर्ति निर्धारणमा कडा निरीक्षणको आवश्यकता देखायो।

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**प्रश्न/उत्तर**

**Q1**: एप्पल र स्यामसंग बीचको कानूनी विवादमा को जीत्यो?
**A**: एप्पलले प्रारम्भिक रूपमा जीत्यो, तर अन्तिम समाधानमा स्यामसंगले **$539 मिलियन** क्षतिपूर्ति तिर्ने सहमति जनायो।

**Q2**: कानूनी मुद्दा के बारेमा थियो?
**A**: एप्पलले आरोप लगायो कि स्यामसंगले आईफोनको डिजाइन र प्रयोगकर्ता इन्टरफेसको नक्कल गरेको छ।

**Q3**: किन क्षतिपूर्ति रकम सुरुमा $1 बिलियन बाट घटाएर कम गरियो?
**A**: सुप्रीम कोर्टले निर्णय गऱ्यो कि पेटेन्ट उल्लंघन मामिलामा क्षतिपूर्ति रकम सम्पूर्ण डिवाइसको मूल्यमा होइन, केवल उल्लंघन भएका विशेष भागहरूको आधारमा निर्धारण गर्नुपर्छ।

# Q/A

## Fill in the Blanks

1. _____ software manages hardware resources and provides a platform for running application software.
2. The main purpose of _____ software is to help users perform specific tasks, such as creating documents or calculating numbers.
3. _____ software is essential for managing the fundamental functions of a computer, like memory, file management, and hardware control.
4. _____ software refers to tools like operating systems and utility programs that are used to manage and support the computer system.
5. _____ systems help companies automate business functions like finance, human resources, and supply chain management.
6. _____ software is used to manage relationships with customers and track sales, marketing, and customer service activities.
7. A _____ is a type of business software used to manage the flow of goods and services from suppliers to consumers.
8. _____ platforms allow users to buy and sell goods or services online and facilitate secure transactions.
9. _____ software enables people to communicate, share content, and engage with each other over the internet.
10. _____ apps are designed to work on mobile devices such as smartphones and tablets, typically using operating systems like Android or iOS.
11. _____ software is built specifically to meet the unique needs of a business or organization.
12. _____ software is available for purchase off-the-shelf, providing general-purpose tools that meet most users' needs.
13. _____ is an example of an off-the-shelf software that allows users to create documents and presentations.
14. _____ licenses provide users with the right to use the software but may impose limitations on distribution or modification.

15._____ software is customized and specifically tailored for an organization's particular requirements.

16.A key advantage of _____ software is that it can be deployed quickly and typically costs less than custom-built software.

17._____ software helps businesses automate processes in areas such as manufacturing, logistics, and human resources.

18._____ apps allow users to browse the internet, use social networks, and access other web-based services.

19._____ is a type of software license that allows the software to be freely used, modified, and distributed.

20._____ software is often deployed in large businesses or enterprises to improve productivity, communication, and data management.

## Multiple Choice Questions (MCQ)

1. What type of software is primarily used to manage hardware and provide an environment for running applications?
    - a) Application Software
    - b) Utility Software
    - c) System Software
    - d) Enterprise Software
2. Which of the following is an example of a utility software?
    - a) Microsoft Word
    - b) Windows Defender
    - c) SAP
    - d) Adobe Photoshop
3. Which of the following is NOT an example of a business application?
    - a) Microsoft Excel
    - b) Oracle ERP

- c) Google Chrome
- d) Salesforce

4. ERP systems are primarily designed to manage:
   - a) Social media marketing
   - b) Internal business processes
   - c) Web-based applications
   - d) Mobile apps
5. Which of the following is an example of CRM software?
   - a) SAP
   - b) Oracle
   - c) Salesforce
   - d) Microsoft Office
6. Which platform is most commonly used for e-commerce transactions?
   - a) Android
   - b) Shopify
   - c) Salesforce
   - d) Excel
7. Which of the following is NOT a characteristic of mobile applications?
   - a) Can be used on smartphones
   - b) Developed for desktop computers
   - c) Available on Android or iOS
   - d) Can be accessed via app stores
8. What is the main advantage of off-the-shelf software?
   - a) Tailored to specific business needs
   - b) Lower cost and quick deployment
   - c) Greater customization options
   - d) Exclusively designed for large enterprises
9. Which of the following is an example of a general-purpose software?

- a) Microsoft Word
- b) ERP system
- c) Supply Chain Management software
- d) Salesforce

**10.** Which of the following mobile operating systems is most widely used for smartphones?

- a) Android
- b) Windows Mobile
- c) Mac OS
- d) Linux

**11.** Which software license allows users to modify and distribute software freely?

- a) Proprietary License
- b) Open Source License
- c) Trial License
- d) Enterprise License

**12.** What type of software is specifically created to address a business's unique operational requirements?

- a) Off-the-shelf Software
- b) Custom Software
- c) Utility Software
- d) System Software

**13.** Which of the following software solutions is most commonly used in social media platforms?

- a) WordPress
- b) Android OS
- c) Facebook
- d) SAP

**14.** What software is commonly used for managing financial operations in large organizations?

- a) Word Processor
- b) Spreadsheet

- c) ERP Software
- d) CRM Software

**15.** Which of the following is an example of a cloud-based e-commerce platform?

- a) Adobe Acrobat
- b) Shopify
- c) Microsoft Office
- d) Windows OS

**16.** What is the primary use of Supply Chain Management (SCM) software?

- a) Data analysis
- b) Marketing automation
- c) Inventory and logistics management
- d) Accounting

**17.** Which of the following is an operating system used for mobile applications?

- a) Linux
- b) Android
- c) macOS
- d) Windows

**18.** What distinguishes custom software from off-the-shelf software?

- a) Custom software is cheaper to develop
- b) Custom software is more general-purpose
- c) Custom software is tailored to specific business needs
- d) Off-the-shelf software is exclusive to a single user

**19.** Which software application is widely used in business settings for data analysis and number crunching?

- a) Word Processor
- b) Spreadsheet Software
- c) Presentation Software
- d) ERP Software

**20.** Which of the following best describes the relationship between CRM and ERP systems?

- a) Both are used for social media marketing
- b) ERP focuses on internal business processes, while CRM focuses on customer relationships
- c) CRM is more technical than ERP
- d) Both manage financial data

## Short Questions

1. What are the primary differences between system software and application software?
2. How does an ERP system improve business efficiency?
3. What are some examples of utility software, and what functions do they serve?
4. How does CRM software enhance customer relationship management in businesses?
5. Explain the advantages of web-based applications over traditional desktop applications.
6. What is the role of mobile applications in business operations?
7. Why is it important for businesses to choose the right software for their needs?
8. What are the key factors to consider when deciding between custom and off-the-shelf software for a business?
9. Discuss the concept of software licensing and its importance for legal use.
10. How can social media platforms be considered a type of web-based application?

## Comprehensive Questions

1. Discuss the characteristics of system software and how it differs from application software. Provide examples of each.
2. Explain the concept of ERP systems and how they are applied in businesses like manufacturing or retail.
3. Compare and contrast CRM software and SCM software in terms of their functionality and use cases.
4. Describe the types of mobile applications used in business and their impact on productivity.

5. Evaluate the advantages and disadvantages of using off-the-shelf software versus custom software in a corporate environment.
6. How has the rise of e-commerce platforms influenced business models, and what role do web-based applications play in this?
7. Describe the different types of software licenses and how they impact the distribution and usage of software.
8. How can businesses ensure they select the right software solution for their operations? Discuss the key factors involved.
9. What are the benefits of utility software for individuals and organizations? Provide examples.
10. Discuss the role of social media platforms as web-based applications and their significance for businesses in marketing and customer engagement.

# Answers

**Fill in the Blanks**

1. ***System***
2. ***Application***
3. ***System***
4. ***System***
5. ***ERP***
6. ***CRM***
7. ***Supply Chain Management (SCM)***
8. ***E-commerce***
9. ***Social media***
10. ***Mobile***
11. ***Custom***
12. ***Off-the-shelf***
13. ***Microsoft Office***
14. ***Proprietary***
15. ***Custom***
16. ***Off-the-shelf***
17. ***ERP***

***18. Web-based***

***19. Open source***

***20. Enterprise***

**Multiple Choice Questions (MCQ)**

***1.*** *c) System Software*

***2.*** *b) Windows Defender*

***3.*** *c) Google Chrome*

***4.*** *b) Internal business processes*

***5.*** *c) Salesforce*

***6.*** *b) Shopify*

***7.*** *b) Developed for desktop computers*

***8.*** *b) Lower cost and quick deployment*

***9.*** *a) Microsoft Word*

***10.*** *a) Android*

***11.*** *b) Open Source License*

***12.*** *b) Custom Software*

***13.*** *c) Facebook*

***14.*** *c) ERP Software*

***15.*** *b) Shopify*

***16.*** *c) Inventory and logistics management*

***17.*** *b) Android*

***18.*** *c) Custom software is tailored to specific business needs*

***19.*** *b) Spreadsheet Software*

**20.** *b) ERP focuses on internal business processes, while CRM focuses on customer relationships*