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UNIT 3 : BUSINESS PROCESS AUTOMATION

- **Business process automation (BPA)** is the use of technology to complete business processes with minimal human intervention. A business process is an activity or a set of activities used to accomplish a specific organizational goal, such as delivering a product to a customer or bringing on a new employee.

- A <u>business process</u> often begins with an action -- for example, the filing of an employee expense report. The filed report triggers a set of predefined workflow steps that conclude with the employee being reimbursed. The goal of BPA is not only to replace manual labor with automation but also to simplify and improve the workflow steps that make up the process: When a business process is automated, steps in the existing workflow -- emails chains and document transfer.

Benefits of business process automation

There are many benefits of automating business processes, and we can define the main ones as:

1. Make processes more efficient and effective
2. Facilitate monitoring and management
3. Assist in decision making
4. Enable continuous process improvement
5. Improved customer service
6. Replace or control human tasks with automation
7. Allow more transparency and agility in the flow of information
8. Deliver products and services with more value to the customer
9. Reduces costs
10. Decreases risk
11. Meet the organization's strategic objectives

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Organizational Structure

- An organizational structure is a system that outlines how certain activities are directed in order to achieve the goals of an organization. These activities can include rules, roles, and responsibilities.
- The organizational structure also determines how information flows between levels within the company. For example, in a centralized structure, decisions flow from the top down, while in a decentralized structure, decision-making power is distributed among various levels of the organization.
- Having an organizational structure in place allows companies to remain efficient and focused.

Types of Organizational Structures

i) Functional Structure

- This is the first and most common type of organizational structure. This is also referred to as a bureaucratic organizational structure and breaks up a company based on the specialization of its workforce.
- Most small-to-medium-sized businesses implement a functional structure. Dividing the firm into departments consisting of marketing, sales, and operations is the act of using a bureaucratic organizational structure.

ii) Divisional or Multidivisional Structure

- The second type is common among large companies with many business units.
- The company that uses this method structures its leadership team based on the products, projects, or subsidiaries they operate.
- A good example of this structure is Johnson & Johnson. With thousands of products and lines of business, the company structures itself so each business unit operates as its own company with its own president.

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iii) Flatarchy Structure

- Flatarchy, a newer structure, is the third type and is used among many startups. As the name alludes, it flattens the hierarchy and chain of command and gives its employees a lot of autonomy. Companies that use this type of structure have a high speed of implementation.

iv) Matrix Structure

- The fourth and final organizational structure is a matrix structure. It is also the most confusing and the least used.
- This structure matrixes employees across different superiors, divisions, or departments. An employee working for a matrixed company, for example, may have duties in both sales and customer service.

WORKFLOWS

How Is Workflow Automation Used

Workflow use cases to give us an idea of what's possible with workflow automation software. This downloadable resource provides a wide variety of workflow examples that show the ways people have used automation to improve their business processes and increase efficiency throughout the organization.

Workflow Process Components

Each workflow process is defined by one or more of the following components. These components are discussed at greater length below.

I. **Activity**– Represents a single, logical step in the process.
II. **Action**– Defines how an activity is accomplished. An action can be a simple expression evaluation or a call to a complex Java class.
III. **Transition**– Defines the movement from one activity to the next.
IV. **Split**– Defines the movement from a single activity to more than one activity. Splits are further defined as:

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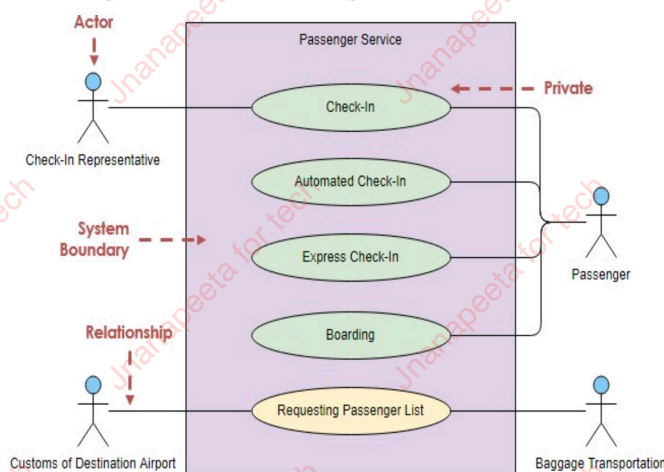LETS DREAM IT.

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- o **OR Split**– Tests each transition path. The first path with a value of TRUE is taken.
- o **AND Split**– Takes each transition path.
- V) **Join**– Defines the movement from multiple activities to a single activity. Join components are further defined as:
  - o **OR Join**– Specifies that the first path to complete causes the next activity to begin.
  - o **AND Join**– Specifies that the next activity cannot begin until all paths are complete.
- Vi) **Subprocess**– Defines a set of activities, actions, and transitions that can be called from other activities in the process.

What is a Use Case?

A use case is a methodology used in system analysis to identify, clarify, and organize system requirements.

Use Case Diagram

- A use case diagram models different types of users interact with the system to solve a problem. As such, it describes the goals of the users, the interactions between the users and the system, and the required behavior of the system in satisfying these goals.

- Use cases define interactions between external actors and the system to attain particular goals. A use case diagram contains four main components

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i)Actor

- Actors are usually individuals involved with the system defined according to their roles. The actor can be a human or other external system.

ii)Use Case

- A use case describes how an actor uses a system to accomplish a particular goal. Use cases are typically initiated by a user to fulfill goals describing the activities and variants involved in attaining the goal.

iii)Relationship

- The relationships between and among the actors and the use cases.

iv)System Boundary

- The system boundary defines the system of interest in relation to the world around it.

Use Case Characteristics

A use case (or set of use cases) has following characteristics:

- Organizes functional requirements

- Models the goals of system/actor (user) interactions

- Records paths (called *scenarios*) from trigger events to goals

- Describes one main flow of events (also called a basic course of action), and possibly other ones, called *exceptional* flows of events (also called alternate courses of action)

- Is multi-level, so that one use case can use the functionality of another one.

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Enterprise Resource Planning

- Enterprise resource planning (ERP) is a process used by companies to manage and integrate the important parts of their businesses.

- Many ERP software applications are important to companies because they help them implement resource planning by integrating all of the processes needed to run their companies with a single system.

- An ERP software system can also integrate planning, purchasing inventory, sales, marketing, finance, human resources, and more.

- ERP applications also allow the different departments to communicate and share information more easily with the rest of the company. It collects information about the activity and state of different divisions, making this information available to other parts, where it can be used productively.

- ERP applications can help a corporation become more self-aware by linking information about the production, finance, distribution, and human resources together. Because it connects different technologies used by each part of a business, an ERP application can eliminate costly duplicate and incompatible technology.

- The process often integrates accounts payable, stock control systems, order-monitoring systems, and customer databases into one system.

- ERP offerings have evolved over the years from traditional software models that make use of physical client servers to cloud-based software that offers remote, web-based access.

ERP systems typically include the following characteristics:

- An integrated system
- Operates in (or near) real time
- A common database that supports all the applications
- A consistent look and feel across modules

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- Installation of the system with elaborate application/data integration by the Information Technology (IT) department, provided the implementation is not done in small steps.
- Deployment options include: on-premises, cloud hosted, or SaaS

What is ERP software?

Enterprise resource planning or ERP software is a suite of applications that manage core business processes, such as sales, purchasing, accounting, human resources, customer support, CRM, and inventory. It's an integrated system as opposed to individual software designed for specific business processes.

Different types of ERP software are

- JD Edwards EnterpriseOne. ...
- SAP Business ByDesign. ...
- Sage Business Cloud X3.
- SYSPRO.
- **Dynamics 365** ERP.
- SyteLine. ...
- IQMS. ...
- NetSuite OneWorld.
- ERP next

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ERPNext

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- **ERPNext** is a free and open-source integrated Enterprise Resource Planning (ERP) software developed by Frappé Technologies Pvt. Ltd. and is built on MariaDB database system using a Python based server-side framework.
- ERPNext is a generic ERP software used by manufacturers, distributors and services companies. It includes modules like accounting, CRM, sales, purchasing, website, e-commerce, point of sale, manufacturing, warehouse, project management, inventory, and services. Also, it has domain specific modules like schools, healthcare, agriculture, and non-profit.

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