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Platform: SAP Business Technology Platform

Area/Technology: Cloud, AI and Process Automation

1. Order Management Automation using SAP Cloud and Business Process Automation

Order management in SAP Build Process Automation (BPA) automates the end-to-end order processing workflow, from order intake to fulfilment, minimizing manual effort and ensuring accuracy.

By integrating seamlessly with ERP systems like SAP S/4HANA, CRM, and WMS, it ensures data consistency and real-time visibility across processes. BPA automates tasks such as order validation, inventory checks, payment processing, and shipping, while also managing exceptions like low inventory or payment issues. Its analytics provide insights to optimize workflows, improve efficiency, and reduce costs. The solution enhances customer satisfaction by accelerating response times and streamlining operations.

Advantages

- **Data Integration** - Seamlessly connects with ERP, CRM, and WMS systems to ensure data consistency and real-time updates across departments.
- **Accuracy** - Minimizes errors by standardizing workflows and eliminating manual data entry in critical order management steps.
- **Analytics and Insights** - Provides performance metrics to optimize processes and improve decision-making.
- **Scalability** - Handles increasing order volumes efficiently, enabling businesses to grow without operational bottlenecks.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- SAP AI (Artificial Intelligence)
- SAP BPA - Desktop Agent
- Application Programming Interfaces (APIs)
- Google Tools

2. Sales Order Process Automation using SAP Cloud and Process Automation

The Sales Order Business Process in SAP Build Process Automation (BPA) automates and streamlines order management from creation to fulfilment. Orders are captured through various channels, validated for accuracy, and processed seamlessly, reducing errors and delays. Automated checks for pricing, availability, and credit ensure quick validation, while issues trigger notifications for swift resolution.

BPA also generates order confirmations and invoices, saving time and improving transparency. Integration with existing systems enhances data consistency and efficiency, leading to reduced costs and improved customer satisfaction. This process optimizes the sales order lifecycle, driving operational excellence and business success.

Advantages

- Efficient Document Generation - Automates the creation of confirmations and invoices, saving time and minimizing errors.
- System Integration - Seamlessly connects with ERP, CRM, and other systems, ensuring data consistency and smooth workflows.
- Streamlined Order Capture - Automates the intake of orders from multiple channels, reducing manual errors and accelerating the process.
- Faster Issue Resolution - Triggers notifications for stakeholders when discrepancies occur, ensuring quick resolution.
- Automated Validation - Ensures accuracy by checking pricing, product availability, and customer credit status automatically.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- SAP AI & ML (Artificial Intelligence & Machine Learning)
- Application Programming Interfaces (APIs) □ SAP BPA - Desktop Agent

3. Automate Windows Applications using the SAP Cloud and Process Automation

In the digital transformation era, SAP Build Process Automation (BPA) streamlines operations by automating tasks, such as using the Windows Calculator. SAP BPA's Recorder feature captures user interactions with desktop applications, enabling the automation of repetitive tasks, improving efficiency, and reducing manual errors.

By recording actions like input values and operation types, the Recorder generates scripts to automate calculations without further intervention. Conditional logic can be added to handle various scenarios, making automation adaptable for diverse needs

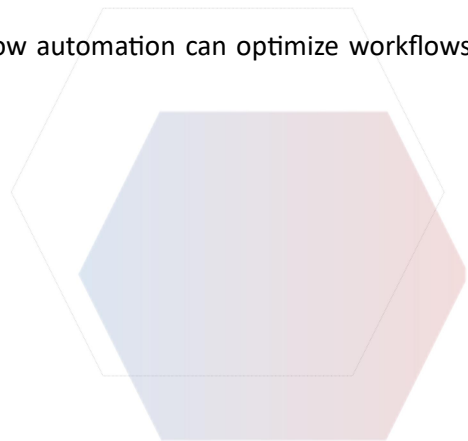
This automation reduces employee training time, allowing staff to focus on strategic tasks, boosting productivity. Automating the Windows Calculator with SAP BPA exemplifies how automation simplifies workflows, increases accuracy, and supports innovation in organizational processes.

Advantages

- Elimination of Manual Errors - Automates calculations to reduce human mistakes, ensuring accurate and reliable results.
- Time Efficiency - Records and replicates repetitive tasks, saving significant time in performing frequent calculations.
- Conditional Logic for Flexibility - Handles varied scenarios by applying logic to adapt calculations based on inputs.
- Enhanced Operational Consistency - Automating repetitive processes ensures uniformity and standardization across calculations.
- Supports Digital Transformation - Demonstrates how automation can optimize workflows, streamline operations, and drive innovation.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- Robotic Process Automation (RPA)
- Windows Operating System
- Scripting Languages
- User Interface Automation Frameworks



4. Automate Windows Clock application using SAP Cloud and Process Automation

In today's fast-paced business environment, automating the Windows Clock application with SAP Build Process Automation (BPA) enhances productivity and streamlines time management. Using BPA's Recorder, user actions like setting alarms, timers, and reminders are captured and converted into reusable automation scripts, eliminating manual effort and errors.

This simplifies tasks such as managing alarms, tracking project durations, and synchronizing time settings across devices. Automation also generates reports on time usage, providing insights to optimize workflows and improve efficiency. By leveraging SAP BPA, organizations can save time, boost accuracy, and enhance overall productivity.

Advantages

- Supports Digital Transformation - Demonstrates automation's potential to optimize time management and align with broader efficiency goals.
- Enhanced Productivity - Frees users from routine clock tasks, allowing focus on more critical activities.
- Integration with Business Processes - Connects time-related outputs to broader workflows, such as task reminders or shift schedules.
- Streamlined Time Management - Automates tasks like setting alarms, timers, or world clocks, ensuring efficient time tracking
- Error Reduction - Eliminates manual errors in configuring alarms or time zones, improving accuracy.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- User Interface Automation Technologies
- Monitoring and Analytics Tools



5. Invoice Payment Integration Automation using SAP AI, Cloud and Process Automation

Automating invoice detail extraction with SAP Build Process Automation (BPA) streamlines financial operations by reducing manual effort and errors. Using OCR, BPA captures data from invoices, identifying key elements like invoice numbers, vendor details, and amounts. Predefined workflows validate the data against SAP S/4HANA, flagging discrepancies for review.

Machine learning enhances accuracy and speeds up processing, enabling faster payment cycles and better vendor relationships. This automation improves efficiency, saves costs, and positions businesses for growth in the digital era.

Advantages

- Enhanced Accuracy - Automates data extraction using OCR and validation workflows, reducing manual errors in processing invoices.
- Streamlined Workflows - Automates end-to-end processes, minimizing delays and allowing finance teams to focus on exceptions.
- Machine Learning Integration - Learns from historical data to continuously improve extraction accuracy and adapt to new invoice formats.
- Streamlined Time Management - Automates tasks like setting alarms, timers, or world clocks, ensuring efficient time tracking
- Increased Efficiency - Speeds up the processing of large volumes of invoices, enabling faster payment cycles and improved vendor relations.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- Application Programming Interfaces (APIs)
- Document Management
- User Interface Automation Technologies



6. Product Management using Barcode – SAP AI, Cloud and Process Automation

The integration of barcode scanning in SAP Build Process Automation (BPA) enhances product selection, streamlining inventory management and order processing. Users can scan barcodes to automatically retrieve product data from backend systems like SAP S/4HANA, eliminating manual entry and reducing errors. This feature speeds up order entry and inventory tasks, ensuring realtime updates and accuracy in stock levels.

It also facilitates product tracking, verifying order fulfilment and initiating inventory audits. With SAP BPA's low-code environment, developers can seamlessly incorporate barcode scanning into apps, improving efficiency and decision-making.

Advantages

- Enhanced Inventory Management - Barcode scanning allows for quick inventory checks, product tracking, and stock audits, improving inventory accuracy and reducing discrepancies.
- Seamless Integration - The barcode scanning feature integrates smoothly with existing SAP systems like SAP S/4HANA, enabling efficient data synchronization and consistency across platforms.
- Real-Time Updates - Scanning barcodes provides instant access to up-to-date product information, ensuring stock levels, availability, and order details are always accurate.
- Improved Accuracy - By automatically retrieving product data from backend systems, barcode scanning minimizes the risk of human errors associated with manual input.
- Increased Efficiency - Barcode scanning eliminates manual data entry, speeding up the product selection and order entry process, thus saving time and reducing operational delays.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- Mobile Device Capabilities □ SAP S/4HANA

7. Automate Gmail, Google Sheets and Drive using SAP AI, Cloud and Process Automation

Integrating Google Sheets with SAP Build Process Automation (BPA) streamlines data management by automating the creation, modification, and sharing of spread sheets. This reduces manual data entry and enhances accuracy. The integration allows for seamless data flow from SAP systems into Google Sheets, providing real-time insights. Teams can collaborate in real-time, improving communication across regions.

Additionally, Google Sheets' features like conditional formatting and data visualization improve data analysis and reporting. Overall, this integration boosts productivity, accuracy, and collaboration in data management tasks.

Advantages

- Automation- Automates data entry and updates, reducing manual effort and errors.
- Data Integration - Seamlessly integrates with SAP and other systems, ensuring up-to-date and consistent data across platforms.
- Cloud-Based - Scanning barcodes provides instant access to up-to-date product information, ensuring stock levels, availability, and order details are always accurate.
- Advanced Features - Leverages Google Sheets' features like formulas, conditional formatting, and data visualization for better analysis.
- Improved Productivity - Streamlines workflows by automating repetitive tasks and providing easy access to data for decision-making.

Technologies Involved

- SAP BTP(Business Technology Platform) – Cloud
- SAP Build Process Automation (BPA)
- Google Workspace
- Google APIs
- Application Programming Interfaces (APIs)



Platform: SAP Business Technology Platform

8. Invoice Generation and Payment Automation using SAP Automation, AI and Cloud

The project focuses on creating an efficient and streamlined invoice generation and management system leveraging the SAP Cloud Application Programming Model (CAPM). Users can seamlessly input invoice details, which are then processed to generate a professional PDF invoice using the jsPDF library. A predefined template ensures uniform formatting and adherence to branding standards, providing a polished and consistent output. The solution is deployed on the SAP Business Technology Platform (BTP), ensuring scalability and integration with enterprise-grade tools and services.

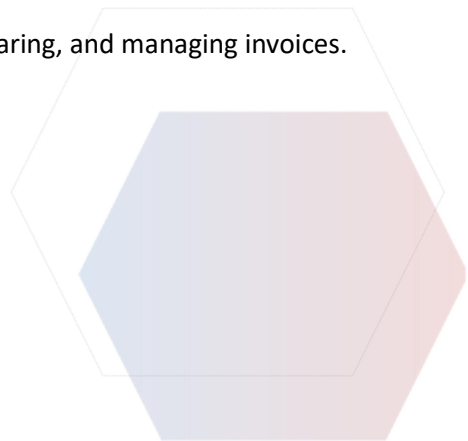
To further optimize workflows, the project integrates PDF Extraction Service from BTP, enabling the automatic extraction of data from uploaded invoices or related PDFs. The extracted information is then stored in the SAP HANA Database, facilitating data analysis, reporting, and compliance tracking. This integration of modern tools and technologies not only automates the invoicing process but also ensures high data accuracy, operational efficiency, and seamless management of invoice data in a centralized system

Advantages

- Automation: Reduces manual effort in invoice generation and data handling.
- Consistency: Ensures all invoices adhere to a predefined template for uniformity.
- Integration: Combines email functionality and data extraction seamlessly into one platform.
- Scalability: Built on SAP CAPM and deployed on BTP, making it scalable for enterprise use.
- Data Accuracy: Extracted data from PDFs is stored directly in the HANA database, minimizing human error.
- User-Friendly: Simplifies the process of creating, sharing, and managing invoices.

Technologies Involved

- SAP CAPM
- SAP BTP (Business Technology Platform)
- PDF Extraction Service
- SAP HANA Database
- Email Integration
- BAS (Business Application Studio)



9. Employee Leave Management using SAP Cloud and Fiori (UI5)

The project is a Leave Application Management System developed using SAP CAPM for backend logic and SAP Fiori/SAPUI5 for the front-end interface. Employees can apply for leave by providing their employee code, date, and time details through a user-friendly UI. The application allows users to edit their leave applications before approval, ensuring flexibility in the process. Submitted leave requests are stored in SAP HANA Database, ensuring secure and efficient data management. The system also includes a dedicated Leave Status Table, where employees can track the status of their applications, indicating whether their leave has been approved or rejected.

For administrators or managers, the application provides a centralized Approval Dashboard that displays all pending leave applications. Authorized users can review and approve or reject leave requests directly through the interface. This comprehensive system simplifies leave application and approval workflows while ensuring transparency and streamlined communication between employees and approvers.

Advantages

- **Streamlined Workflow:** Automates the leave application and approval process, reducing manual effort and errors.
- **Real-Time Updates:** Employees can track the current status of their leave applications in real-time.
- **Flexibility:** Users can edit their leave requests before approval, accommodating changes.
- **Transparency:** Approval decisions and their history are clearly visible, fostering better communication.
- **Efficient Data Management:** Storing leave data in SAP HANA Database ensures scalability, reliability, and quick retrieval.
- **User-Friendly Interface:** Intuitive SAPUI5/Fiori design enhances the user experience for both employees and approvers.

Technologies Involved

- SAP CAPM (Cloud Application Programming Model)
- SAPUI5/SAP Fiori
- SAP HANA Database
- BTP Deployment
- Role-Based Access Control

10. Requirement – Indent Management using SAP Cloud and Fiori (UI5)

The Indent Application project is a comprehensive solution developed entirely using SAPUI5/Fiori in SAP Business Application Studio (BAS). The application implements full CRUD (Create, Read, Update, Delete) operations, enabling efficient management of indent requests. Designed with a Master-Detail Page architecture, it provides a user-friendly interface for seamless navigation and interaction. The application includes multiple calculations and robust validation mechanisms to ensure the accuracy and integrity of the data entered by users.

This project emphasizes efficient data management and validation, offering a streamlined approach to handle indent processes in an organization. By leveraging SAPUI5/Fiori capabilities, it delivers a responsive, intuitive, and visually appealing front-end experience. With its structured design and error-checking functionality, the application ensures a smooth user experience and enhances productivity in handling indent workflows.

Advantages

- **End-to-End Functionality:** Supports complete CRUD operations, ensuring comprehensive management of indent requests.
- **Accurate Data Handling:** Includes built-in validation to maintain data quality and prevent errors.
- **Enhanced User Experience:** Master-Detail Page layout ensures easy navigation and clarity in workflows.
- **Dynamic Calculations:** Automates complex calculations to simplify user input and processing.
- **Consistency Across Devices:** Responsive SAPUI5/Fiori design ensures seamless operation on desktops, tablets, and mobiles.
- **Modern Development:** Built in BAS, enabling integration with SAP's cloud ecosystem.

Technologies Involved

- SAPUI5/Fiori
- SAP Business Application Studio (BAS)
- JavaScript
- OData Services
- Validation Frameworks

11. Electronic Tender Management System in SAP Cloud, BPA and Workflow

The E-Tender Process project is a comprehensive solution designed to streamline and automate the tendering process. The system consists of five key applications: Purchase Order Creation, Order Details Management (CEG), Single Tender Document Handling, Tender Document Input Screen, and Price Bid Opening Form. Each application is built using SAPUI5 for the front-end and SAP Cloud Application Programming Model (CAPM) for backend development, ensuring a robust and scalable architecture. The applications facilitate CRUD operations, validate inputs, and support file attachments and line items, delivering a seamless user experience with features like formatting, busy indicators, grid tables, object page layouts, and message popovers for validation alerts.

By integrating modern SAP elements and practices, the project enhances the tendering workflow by automating data handling, ensuring data accuracy, and providing real-time feedback. The combination of intuitive UI/UX design and backend efficiency simplifies complex processes like bid submission and price evaluation while maintaining compliance and standardization throughout the tendering lifecycle.

Advantages

- Streamlined Workflow: Simplifies and automates the end-to-end tendering process.
- Error Prevention: Built-in validations and message popovers ensure data accuracy and completeness.
- Enhanced User Experience: Modern SAPUI5 elements like grid tables, object page layouts, and busy indicators improve navigation and responsiveness.
- Comprehensive Functionality: Supports file attachments, line item management, and detailed formatting.
- Scalability: Backend development in CAPM ensures seamless integration and performance for large-scale operations.
- Real-Time Feedback: Immediate validation feedback and processing enhance user productivity and reduce delays.

Technologies Involved

- SAP Cloud Application Programming Model (CAPM)
- SAPUI5
- File Attachment Handling
- SAP Elements
- SAP BTP (Business Technology Platform)

12. Purchase Order Management System in SAP Cloud

The Purchase Order (PO) application is a robust solution designed to streamline the management of purchase orders, offering end-to-end functionalities for creating, editing, deleting, and saving POs. Built using SAP CAPM as the backend, the app incorporates annotations to simplify the UI design and ensure consistency. Users can manage both header and line item details seamlessly, with features like saving drafts for later completion, applying filters to refine search results, and accessing contextual information through value helps. The app is tailored to enhance user productivity, reduce errors, and improve data accuracy with its user-friendly interface and dynamic interactions.

Key highlights of the PO application include CRUD operations for headers and line items, real-time validations, and intuitive navigation. With advanced features like dropdowns, fragments, and customizable filters, users can interact efficiently with the application. The use of annotations further enhances the development process, ensuring a consistent and standardized layout while allowing flexibility for customizations. This comprehensive approach delivers a scalable solution for procurement teams to manage purchase orders effectively.

Advantages

- Streamlined Process - Simplifies PO management with end-to-end CRUD operations.
- Enhanced Usability - Intuitive interface with value helps, dropdowns, and fragments for better user interaction.
- Data Accuracy - Validations and real-time error handling reduce manual errors. □
- Customizability - Filters and annotations enable personalized user experiences.
- Productivity Boost - Save as draft feature allows users to complete POs at their convenience.

Technologies Involved

- SAP Cloud Application Programming Model (CAPM)
- SAPUI5
- SAP BTP (Business Technology Platform)
- Annotations Mechanisms



13. Weather Report and Prediction using SAP Cloud and AI

The Weather Report application leverages SAP Fiori and SAP UI5 technologies to provide users with an intuitive and interactive interface for accessing real-time weather information. Integrated with OpenWeather and WeatherAPI, along with Google Maps, the application displays a map where users can click on any location to retrieve detailed weather data such as temperature, wind speed, and humidity. The application seamlessly processes latitude and longitude data from the selected location to fetch accurate weather conditions. Additionally, it offers a prediction feature that provides weather forecasts for the next four days, enhancing user experience and decision-making.

This innovative solution is designed to cater to diverse user needs, such as travel planning, logistics, and event management, by providing accurate and up-to-date weather information. The Google Maps integration adds a visually appealing and user-friendly interface, while the predictive functionality empowers users with insights into future weather trends. This application demonstrates the versatility of SAP Fiori and SAP UI5 in integrating APIs and creating feature-rich applications.

Advantages

Real-Time Weather Insights - Provides accurate and up-to-date weather information for any location selected on the map.

- Future Predictions - Includes a four-day weather forecast for informed planning and decision-making.
- Interactive Map Interface - Google Maps integration offers a visually engaging way to select locations and access weather details.
- User-Friendly Design - Simplified navigation and data presentation enhance the user experience.
- Seamless API Integration - Combines OpenWeather and WeatherAPI for comprehensive weather data.

Technologies Involved

- SAP Fiori and SAP UI5
- BAS (Business Application Studio)
- Javascript
- OpenWeather API, WeatherAPI and Google Maps API
- SAP BTP

14. Contract Timesheet using SAP Cloud, Fiori (UI5), BPA and Workflow

The Contract Time Sheet Application is a comprehensive SAP Fiori-based solution developed to manage and streamline contractor time sheet creation and approval processes. The application features an intuitive three-screen design — the first screen allows users to filter and view contractor details using various parameters such as location, contractor name, and date range. The second screen provides an overview of the selected contractor, displaying essential details and enabling users to initiate a new contract. Upon pressing the Create button, users are navigated to the third screen, where they can fill in contract-specific details and submit the contract for approval through a workflow process.

Built with SAP CAPM (Cloud Application Programming Model) on the backend and integrated with SAP BPA (Business Process Automation) workflow, the application ensures seamless handling of approval and rejection flows. The interface leverages key SAPUI5 controls such as Calendar Date Interval, Dialogs, Fragments, and Smart Form elements to enhance user experience. It also supports role-based authentication, providing secure access for different user types like Admin, Contractor, and Selector, and includes robust CRUD operations and error handling mechanisms for reliable performance.

Advantages:

- Streamlined Contract Management: Automates the entire contract creation and approval workflow, reducing manual intervention.
- Role-Based Access Control: Ensures data security and controlled access based on user roles.
- User-Friendly Interface: Provides a smooth and intuitive experience with Fiori design principles and responsive SAPUI5 controls.
- Efficient Approval Workflow: Integration with SAP BPA enables real-time approval and rejection tracking.

Technologies Used:

- SAP Fiori / SAPUI5 – Frontend framework for building the UI.
- SAP CAPM (Cloud Application Programming Model) – Backend service layer for data modeling and business logic.
- SAP BTP (Business Technology Platform) – Deployment and runtime environment.
- SAP BPA Workflow – For managing contract approval and rejection processes.
- OData Services – For seamless communication between frontend and backend.

15. Product DB Migration using SAP Cloud

The Product DB Migration Application is a TypeScript framework-based SAP Fiori application designed to manage and migrate product data efficiently. It allows users to create and maintain detailed product information, including Product Name, Internal Name, Description, Excluded Countries, Area of Use, and Geometry Details in multiple languages. The application supports line-level data entry, providing flexibility for handling complex product hierarchies. Key UI elements such as Rich Text Editor for descriptions, Switches, Select controls, Dialogs with multi-select and delete functionality, and various Buttons ensure a dynamic and user-friendly experience.

A key highlight of the application is the Publish feature, which allows users to publish all the details of a specific Product ID directly to the company's product website with a single click. The backend is developed using SAP CAPM (Cloud Application Programming Model) on SAP BTP, ensuring robust data handling and smooth integration. The system also implements role-based authentication to provide secure access for different user roles such as Admin, User, and Selector, along with comprehensive CRUD operations, error handling, and data validation for reliable data management.

Advantages:

- **Centralized Product Management:** Simplifies product data creation, updates, and publishing through a single unified interface.
- **Multi-Language Support:** Enables maintaining product details across multiple languages, improving global accessibility.
- **Seamless Website Integration:** The publish functionality ensures that the latest product data is reflected instantly on the product website.
- **Enhanced Security and Access Control:** Role-based authentication guarantees controlled access and data integrity.

Technologies Used:

- **TypeScript Framework (SAPUI5 + TypeScript)** – For building a modular and type-safe frontend.
- **SAP CAPM (Cloud Application Programming Model)** – For backend data modeling and business logic.
- **SAP BTP (Business Technology Platform)** – As the deployment and service runtime environment.
- **OData Services** – For communication between the frontend and backend.
- **SAP Fiori Elements / UI5 Controls** – Including Dialogs, Fragments, Select, Switch, and Rich Text Editor for enhanced UI interaction.