START

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📥 [Monitor RMS for New Invoice Uploads]

└─ via RMS API or Selenium scraping

└─ Triggered every 4 days (cron/scheduler)

└─ Re-scan past 10 days for changes/deletions

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📄 [Download Invoice]

└─ Format: PDF / Excel / Image

└─ Check if already processed; if re-uploaded or modified → mark for revalidation

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📁 [Identify File Type]

├─ PDF → OCR or PDF parser

├─ Excel → OpenPyXL / Pandas

└─ Image → OCR

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🔍 [Extract Invoice Details]

└─ Invoice No, Date, Vendor Name, GSTIN, PAN, HSN/SAC, Tax, Total, Upload Timestamp

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✅ [Check Mandatory Fields]

└─ Invoice No, Date, GSTIN, PAN, HSN/SAC, Tax, Total

└─ Flag if any critical field is missing

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🔢 [Validate GSTIN & PAN Format]

└─ GSTIN = 15 characters, PAN = 10 characters

└─ PAN must match with GSTIN (chars 3-12)

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🌐 [Verify GSTIN with GST Portal API]

└─ Make API call to verify GSTIN status (active, state, legal name)

└─ MANDATORY check (no fallback)

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📋 [HSN Code + Tax Rate Check]

└─ Match HSN/SAC with expected GST %

└─ Compare with CGST/SGST/IGST values on invoice

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💰 [Recalculate Tax + Invoice Total]

└─ Subtotal + GST must match Grand Total

└─ Flag mismatch

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⏰ [Check for Late Upload (>15 Days)]

├─ Upload Date - Invoice Date > 15 → ⚠

└─ Add "Late Upload" flag in remarks

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📌 [Check for Duplicate Invoice]

└─ Match Invoice No + Vendor in prior records

└─ If already processed and now modified → mark as "Modified"

└─ If invoice missing → mark as "Deleted"

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🗃️ [Log & Audit Trail]

└─ Log filename, validation status, flags, reupload/modify status

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📊 [Generate Validation Status]

└─ VALID ✅ / INVALID ❌ / FLAGGED ⚠ / MODIFIED 🟡 / DELETED 🔴

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🖊️ [Update Invoice Status in RMS]

└─ Add status + remarks via RMS backend

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📧 [Email Summary to AP/Accounts Team]

└─ List of invalid, flagged, modified, and deleted invoices

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END