

Product DNA + Izel Code System

Product Full Jadhagam + Backend Izel Code + Simple Invoice Code

இந்த PDF-ல் Izel Product DNA concept-ஐ final-aa explain பண்ணுறோம். முக்கிய update: **Backend-la full Izel Product DNA Code** இருக்கும்; user invoice-la மட்டும் simple readable code வரும். Invoice code backend-la product DNA, stock, GST, accounting ledger எல்லாம் link ஆகும்.

ID

Product Identity

HSN + release date + group + product + style + size + colour.

LOC

Worldwide Trace

Country, state, district code மூலம் எந்த இடத்தில் release/production என்று கண்டுபிடிக்கலாம்.

INV

Simple Invoice

User-ku PURSTE001040507082026 மாதிரி readable bill code மட்டும்.

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1. Concept - Izel Product DNA DB என்றால் என்ன?

Problem

இப்போ ecommerce, inventory, accounting, manufacturing, salary workflow எல்லாத்துக்கும் தனித்தனி item code இருக்கும். அதனால் duplicate product, wrong HSN, wrong GST, stock mismatch, unit mismatch, rate mismatch வர வாய்ப்பு அதிகம்.

HSN ஒரு tax code மட்டும். Same HSN-ல் ஆயிரம் product variants இருக்கலாம்.

Solution

Izel Code product-க்கு full jadthagam மாதிரி. Product என்ன, எந்த HSN, எந்த group, style, size, colour, எங்க release ஆனது - இது backend Izel Product DNA code-ல் இருக்கும். Purchase/sales bill user-ku simple invoice code-aa வரும்; backend-la இரண்டும் link ஆகும்.

Ecommerce sale/purchase நடந்த உடனே accounting app-ல் sales/purchase entry, GST, stock, ledger mapping auto ஆகும்.

Core Principle

Rule	Meaning	Why Important
Product DNA block permanent	HSN + release date + group + product + style + size + colour.	Product identity clear-aa இருக்கும்.
Location block traceability	91IND + TN + TPR மாதிரி country/state/district.	World full production/release trace easy.
Invoice block separate	PUR/SAL + company code + daily bill no + time + date.	User-friendly invoice number. Backend-la product DNA link இருக்கும்.
Old bills safe	Product update ஆனாலும் old transaction code history சேமிக்கப்படும்.	Accounting mismatch ஆகாது.

2. Final Architecture - Backend Code vs Invoice Code

Backend-la irukkura full Izel Product DNA Code

இந்த code user invoice-la print panna thevai illa. System உள்ளே மட்டும் product identity, GST/HSN, stock, workflow, rate history, accounting mapping எல்லாம் trace பண்ண use ஆகும்.

IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR

User invoice-la varra simple invoice code

Customer / supplier-ku bill number simple-aa readable-aa இருக்கணும். Full product jadhagam invoice-la காட்ட வேண்டாம்.

PURSTE001040507082026

SALSTE001040507082026

Layer	Visible to User?	Sample	Purpose
Izel Product DNA Code	No - backend only	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR	Product/variant permanent identity. HSN, release date, style, size, colour, location, workflow, stock mapping.
Invoice Code	Yes - invoice print/app screen	PURSTE001040507082026	Purchase bill readable identity.
Invoice Code	Yes - invoice print/app screen	SALSTE001040507082026	Sales bill readable identity.
Backend Link	No - system link table	Invoice Code + Izel Product DNA Code + Qty + Rate + GST + Ledger	Accounting, stock, GST and audit auto-posting.

Final correction: Full Izel DNA code system-kulla mattum. Invoice-la simple bill code mattum. அதனால் user confuse ஆக மாட்டார்; backend traceability miss ஆகாது.

3. Invoice Code Final Format

Invoice format:

TYPE + COMPANYCODE + DAILYBILLNO + TIME + DATE

Purchase example:

PURSTE001040507082026

Sales example:

SALSTE001040507082026

Part	Example	Meaning	Rule
TYPE	PUR / SAL	PUR = Purchase, SAL = Sales	Invoice type first-la varanum. User immediately bill type purinjukanum.
COMPANYCODE	STE	Company / branch / shop random short code	Each company/branch-ku unique 3 letters. Example: Silate = STE.
DAILYBILLNO	001	அந்த நாள் அந்த shop-la podura bill number	001 முதல் 99999 வரை போகலாம். Type + branch + date wise auto-generate.
TIME	0405	Bill podum server time	HHMM 24-hour format recommended. Phone/laptop local time use panna koodathu.
DATE	07082026	Bill date	DDMMYYYY. Example: 07-08-2026.

Daily bill number rule

STE + PUR + 07082026 combo-ku purchase bill number 001, 002, 003... என்று போகும். Sales-ku separate SAL counter போகலாம். Cancel/delete ஆனாலும் gap audit-la தெரியும்.

Backend line item link

ஒரு invoice-la multiple products இருக்கலாம். Invoice header-la simple code; invoice line table-la each product-ku Izel Product DNA code link ஆகும்.

Invoice Code	Line	Backend Izel Product DNA Code	Qty	Rate	Auto Entry
SALSTE001040507082026	1	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR	10 pcs	₹140	Sales + GST + stock out + customer ledger
PURSTE001040507082026	1	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR	100 pcs	₹85	Purchase + GST input + stock in + supplier ledger

4. 8-Step Protection - Mismatch / Fraud Control

Step	Protection Rule	Why Fraud / Mismatch குறையும்
1	Izel Product DNA immutable. Once create panna edit panna koodathu; change na new version.	Old invoice product details change ஆகாது.
2	Invoice number auto-generate. 001, 002, 003... manual entry block.	Duplicate bill number / fake bill number avoid.
3	Server time only. TIME and DATE server-la irundhu varanum.	User device time change panni fraud panna mudiyathu.
4	Invoice lock after save. Edit panna direct allow panna koodathu.	Correction credit note, debit note, return bill வழியா trace ஆகும்.
5	Stock ledger auto-post. PUR stock-in, SAL stock-out auto.	Bill irukku stock illai / stock irukku bill illai mismatch catch ஆகும்.
6	Accounting ledger auto-post. Customer, supplier, GST, sales, purchase accounts auto.	Manual accounting mismatch குறையும்.
7	Audit trail compulsory. User, branch, device, IP, timestamp, cancel reason log.	Yaar enna pannanga-nu full trace இருக்கும்.
8	QR / hash verification. Invoice code + amount + GST + product DNA + timestamp hash.	Invoice tamper panna hash mismatch immediately detect ஆகும்.

Verdict: 100% fraud impossible என்று சொல்ல முடியாது. ஆனால் இந்த 8 rules implement pannina duplicate, manual edit, fake bill, stock mismatch, GST mismatch panna romba kashtam.

5. Product DNA Master - Main Fields

Field	Purpose	Example
Product Name	Base product name	Vest
HSN Code	GST/tax classification	61091000
Release Date	Product DB/release date	06-05-2004
Izel Base Code	Permanent product variant identity	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR
Izel Transaction Code	Purchase/Sales bill identity	Base Code + PUR/SAL + Bill DateTime + Serial
Group	Product family	Innerwear
Style	Design/style variation	Round Neck Rib Vest
Size	Size variant code	S / M / L / XL / XXL
Units	Sales/purchase/production units	Piece, Pack of 3, Dozen, Fabric Meter, Kg
Material	Cloth/raw material	100% cotton rib
Accessories	Labels/packing/extra inputs	Size label, wash care label, polybag, carton
Workflow	Production/service workflow	Fabric - Cutting - Stitching - QC - Packing
Stages	Step-by-step process	Order, purchase, cutting, stitching, finishing, QC
Roles	People needed	Purchase, cutting master, tailor, QC, packing, accountant
Salary	Labour/cost mapping	Per piece / monthly / per order
Service	After-sale/service offerings	Alteration, branding, replacement, private label
Current Market Rate	Dynamic sale/purchase price range	₹110 - ₹250 per piece sample range

6. Ecommerce to Accounting Automation Flow

Step	What happens	Izel DB usage
1	Customer ecommerce-la product purchase panraanga.	System product base code identify pannum.
2	SAL transaction code generate aagum.	SAL + bill datetime + serial append ஆகும்.
3	Invoice auto create.	Product name, HSN, unit, size, colour, GST, rate fetch ஆகும்.
4	Accounting entry auto post.	Sales ledger, GST ledger, customer ledger mapping.
5	Inventory reduce.	Piece/pack/dozen conversion rule apply ஆகும்.
6	Made-to-order என்றால் workflow trigger.	Cutting/stitching/QC stages open ஆகும்.
7	Salary/job work calculate.	Tailor per piece, QC per batch, packing per piece map ஆகும்.

Purchase

PUR code - supplier bill, inward stock, input GST.

Sales

SAL code - customer invoice, outward stock, output GST.

Trace

91IND-TN-TPR மூலம் location-wise production/release trace.

7. Vest - Base Product DNA

Field	Value
Product Name	Vest
HSN Code	61091000 - cotton knitted vest/singlet sample. Non-cotton variantsக்கு HSN change ஆகலாம்.
Release Date	06-05-2004 / code format: 06052004
Group	Innerwear / Menswear / Knitwear - code: INW
Base Unit	Piece
Sales Units	Piece, Pack of 2, Pack of 3, Dozen
Purchase Units	Fabric meter / Kg, Label piece, Polybag piece, Carton piece
Production Units	Piece, Bundle, Batch
Location Block	91IND - TN - TPR = India, Tamil Nadu, Tirupur
Core Workflow	Order - Design - Fabric Purchase - Fabric Inspection - Cutting - Stitching - Finishing - Label - QC - Ironing - Folding - Packing - Billing - Dispatch
Core Roles	Admin, Sales, Purchase Executive, Pattern Master, Cutting Master, Tailor, Overlock Operator, QC, Packing Staff, Store Keeper, Accountant, Delivery Staff
Services	Custom stitching, size alteration, logo branding, private label manufacturing, bulk uniform supply, repacking, return replacement

Tax note: HSN/GST live useக்கு official verification தேவை. இந்த PDF concept/demo standard.

8. Vest - 10 Colour Variant DNA - Backend Izel Base Code

Colour	Backend Izel Base Code	Style	Size	Units	Material	Accessories	Sample Rate	Colour-wise Note
 வெள்ளை WHT	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR	RN	S	Pc / Pack / Dozen	100% cotton rib, 160 GSM	White size label, wash care label, plain polybag	₹110-150/pc	Basic daily innerwear. High-volume stock.
 கருப்பு BLK	IZL-61091000-06052004-INW-VEST-GS-M-BLK-91IND-TN-TPR	GS	M	Pc / Pack / Dozen	Cotton lycra stretch rib	Black brand label, hang tag, premium polybag	₹160-220/pc	Gym/casual use. Stretch recovery QC.
 சாம்பல் GRY	IZL-61091000-06052004-INW-VEST-MC-L-GRY-91IND-TN-TPR	MC	L	Pc / Pack / Dozen	Cotton polyester melange	Grey label, barcode sticker, carton pack	₹140-190/pc	Melange shade variation track.
 நேவி நீலம் NVY	IZL-61091000-06052004-INW-VEST-SI-XL-NVY-91IND-TN-TPR	SI	XL	Pc / Pack / Dozen	Moisture-wick cotton blend	Navy label, performance tag, QR label	₹170-230/pc	Sports SKU. Colour bleeding QC.
 சிவப்பு RED	IZL-61091000-06052004-INW-VEST-AW-M-RED-91IND-TN-TPR	AW	M	Pc / Pack / Dozen	Poly cotton jersey	Red hang tag, care label, zipper pouch	₹150-210/pc	Brand/team colour orders.
 மரூன் MRN	IZL-61091000-06052004-INW-VEST-PF-L-MRN-91IND-TN-TPR	PF	L	Pc / Pack / Dozen	Combed cotton rib, enzyme washed	Premium label, butter paper, printed box	₹180-250/pc	Premium SKU. Packaging cost track.
 ஆலிவ் பச்சை OLV	IZL-61091000-06052004-INW-VEST-OU-XL-OLV-91IND-TN-TPR	OU	XL	Pc / Pack / Dozen	Cotton spandex blend	Olive label, heavy polybag, batch sticker	₹180-260/pc	Outdoor shade. Fabric recovery test.
 மஞ்சள் YLW	IZL-61091000-06052004-INW-VEST-KS-K24-YLW-91IND-TN-TPR	KS	K24	Pc / Pack / Dozen	Soft cotton jersey	Kids label, colour sticker, safety care tag	₹120-180/pc	Kids size grading and safety label.
 ஸ்கை ப்ளூ SBL	IZL-61091000-06052004-INW-VEST-SB-M-SBL-91IND-TN-TPR	SB	M	Pc / Pack / Dozen	Lightweight combed cotton	Sky label, breathable fabric tag, polybag	₹130-190/pc	Summer SKU. GSM/shrinkage QC.
 பேஜ் BGE	IZL-61091000-06052004-INW-VEST-TH-L-BGE-91IND-TN-TPR	TH	L	Pc / Pack / Dozen	Cotton modal blend	Skin tone label, comfort tag, box pack	₹150-220/pc	Skin-tone innerwear. Shade match strict.

Note: Colour/style/size ஒவ்வொன்றுக்கும் backend Izel Base Code தனி. Invoice-லா **SALSTE...** அல்லது **PURSTE...** போன்ற simple bill code மட்டும் வரும்; backend line item table-லா இந்த Izel code link ஆகும்.

Style Code Meaning

Code	Meaning	Code	Meaning	Code	Meaning
RN	Round Neck	GS	Gym Sleeveless	MC	Melange Casual
SI	Sports Inner	AW	Activewear	PF	Premium Fashion
OU	Outdoor Utility	KS	Kids Sports	SB / TH	Summer Breathable / Thermal

9. Vest Workflow + Stages + Roles + Salary Mapping

Stage No	Stage Name	Role	Salary / Cost Type	Output
1	Order / Enquiry	Sales Executive	Monthly / commission	Order confirmed with Izel base code.
2	Style + Colour Confirmation	Designer / Admin	Monthly / per design	Colour, style, size set locked.
3	Fabric Purchase	Purchase Executive	Monthly	PUR invoice code + backend Izel base link.
4	Fabric Inspection	QC Staff	Monthly / per lot	GSM, shrinkage, shade, defect check.
5	Pattern / Marker	Pattern Master	Monthly / per pattern	Size pattern ready.
6	Cutting	Cutting Master	Per piece / monthly	Cut panels bundle-wise.
7	Stitching / Overlock	Tailor / Overlock Operator	Per piece	Vest body stitched.
8	Neck & Armhole Finishing	Finishing Operator	Per piece	Clean finish with proper stretch.
9	Label Attach	Tailor / Helper	Per piece	Brand, size, wash care label attached.
10	Final QC	Quality Checker	Monthly / per batch	Measurement, stitch, shade, stain check.
11	Ironing + Folding	Finishing Staff	Per piece	Ready for packing.
12	Packing	Packing Staff	Per piece / monthly	Polybag / box / carton pack.
13	Billing + Stock Posting	Accountant / Store Keeper	Monthly	SAL code, invoice, GST, inventory entry.
14	Dispatch / Delivery	Delivery Staff / Courier	Per delivery / freight	Customer delivery with tracking.
15	Return / Service	Support Staff	Monthly	Replacement, alteration, repacking.

10. Service + Rate + Version Logic

Service Master

Service	Unit	Linked Role
Size alteration	Per piece	Tailor
Logo branding	Per piece / batch	Printing / embroidery operator
Private label manufacturing	Batch	Admin + production team
Bulk uniform supply	Dozen / batch	Sales + production
Return replacement	Ticket	Support + store keeper
Repacking	Per piece	Packing staff

Rate History Logic

Field	Example
Izel Base Code	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR
Rate Type	MRP / wholesale / purchase / online sale
Location	Tirupur / Tamil Nadu / India / online
Effective From	08-07-2026
Current Rate	Sample range, not locked tax value
Version	V1, V2, V3

Important: Izel base code permanent. Market rate, GST, material, accessory, workflow cost change ஆனால் separate version/history table-ல் update செய்ய வேண்டும். Old PUR/SAL transaction வரலாறு பாதிக்கக்கூடாது.

11. Final Build Rule + Next Plan

Area	Final Decision
Backend product identity	IZL-HSN-RELEASEDATE-GROUP-PRODUCT-STYLE-SIZE-COLOUR-COUNTRY-STATE-DISTRICT
Example backend Izel code	IZL-61091000-06052004-INW-VEST-RN-S-WHT-91IND-TN-TPR
User invoice format	TYPE + COMPANYCODE + DAILYBILLNO + TIME + DATE
Purchase invoice example	PURSTE001040507082026
Sales invoice example	SALSTE001040507082026
Daily bill no	001 to 99999. Branch + bill type + date wise auto counter. Manual edit block.
Fraud protection	Immutable product DNA, server time, invoice lock, stock ledger, accounting ledger, audit trail, hash/QR verification.

Final Thought

இந்த final architecture-ia user-ku invoice simple-aa இருக்கும். Backend-ia product full jadhagam hidden-aa இருக்கும். App, ecommerce, accounting, inventory, GST, stock ledger எல்லாம் invoice code மூலம் backend Izel Product DNA code-க்கு connect ஆகும்.

Simple invoice outside. Full product DNA inside. அதுதான் Izel DB power.