

USER

Field	Source	Who Provides	Notes
username	Frontend	Student / Admin	User types it
email	Frontend	Student / Admin	Text input
password	Frontend	Student / Admin	Password input
name	Frontend	Student / Admin	Full name
role	Frontend	Admin only	Dropdown → Student / Storekeeper / Admin
registrationNo	Frontend	Student	Optional for staff
year	Frontend	Student	Dropdown 1–4
isActive	Backend	Auto	Default = true
createdAt	Backend	Auto	Mongo timestamp
updatedAt	Backend	Auto	Mongo timestamp
_id	Backend	Auto	Mongo ObjectId

ITEM

Field	Source	Who Provides	Notes
name	Frontend	Storekeeper	Text input
category	Frontend	Storekeeper	Dropdown (CHEMICAL, GLASSWARE...)
unitType	Frontend	Storekeeper	Dropdown (g, mg, mL, pieces, pack...)
minThreshold	Frontend	Storekeeper	Number input
batches[].batchNo	Frontend	Storekeeper	Text input
batches[].quantity	Frontend	Storekeeper	Number input
batches[].expiryDate	Frontend	Storekeeper	Date picker
totalQuantity	Backend	Auto	Computed = sum of all batch quantities
sku	Backend	Auto	Using your Option 1 generator
createdAt	Backend	Auto	Mongo timestamp
updatedAt	Backend	Auto	Mongo timestamp
_id	Backend	Auto	Mongo ObjectId

REQUEST

Field	Source	Who Provides	Notes
user	Backend	Auto	Logged-in user ID
item	Frontend	Student	Dropdown list of items
quantityRequested	Frontend	Student	Number input
quantityApproved	Backend	Storekeeper	Filled only after review
status	Backend	Auto	Default PENDING → APPROVED/DECLINED
approvedBy	Backend	Storekeeper	Auto: current storekeeper ID
issuedAt	Backend	Auto	When storekeeper issues final item
declineReason	Backend	Storekeeper	Text input (only if declined)
createdAt	Backend	Auto	Mongo timestamp
updatedAt	Backend	Auto	Mongo timestamp
_id	Backend	Auto	Mongo ObjectId