

# OpenAPI Contract – Phase 1 (Verbatim)

This document contains the full OpenAPI 3.0.3 contract for Phase 1 pantry and recipe CRUD, including shared error models and schemas.

## OpenAPI 3.0.3 YAML

```
openapi: 3.0.3
info:
  title: Meal Planning App API
  version: 1.0.0-phasel
  description: >
    Phase 1 API contract for pantry and recipe CRUD.
    Spring Boot is system of record. MongoDB is canonical store.
servers:
  - url: http://localhost:8080
    description: Local development
tags:
  - name: Health
  - name: Pantry
  - name: Recipes

paths:
  /api/health:
    get:
      tags: [Health]
      summary: Health check
      operationId: getHealth
      responses:
        "200":
          description: Service is healthy
          content:
            application/json:
              schema:
                $ref: "#/components/schemas/HealthResponse"

  /api/pantry:
    get:
      tags: [Pantry]
      summary: List pantry lots
      operationId: listPantryLots
      parameters:
        - in: query
          name: type
          required: false
          schema:
            $ref: "#/components/schemas/PantryLotType"
          description: Optional filter by lot type
        - in: query
          name: name
          required: false
          schema:
            type: string
            description: Optional substring match on name (simple contains)
        - in: query
          name: limit
          required: false
```

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schema:
    type: integer
    minimum: 1
    maximum: 200
    default: 50
- in: query
  name: offset
  required: false
  schema:
    type: integer
    minimum: 0
    default: 0
responses:
  "200":
    description: Pantry lots
    content:
      application/json:
        schema:
          type: object
          properties:
            items:
              type: array
              items:
                $ref: "#/components/schemas/PantryLot"
            total:
              type: integer
            required: [items, total]
  "400":
    $ref: "#/components/responses/BadRequest"
  "500":
    $ref: "#/components/responses/InternalError"

post:
  tags: [Pantry]
  summary: Create pantry lot
  operationId: createPantryLot
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/PantryLotCreateRequest"
  responses:
    "201":
      description: Created pantry lot
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/PantryLot"
  "400":
    $ref: "#/components/responses/BadRequest"
  "409":
    $ref: "#/components/responses/Conflict"
  "500":
    $ref: "#/components/responses/InternalError"

/api/pantry/{id}:
get:
  tags: [Pantry]
  summary: Get pantry lot by id
  operationId: getPantryLot
  parameters:
    - $ref: "#/components/parameters/IdPathParam"
  responses:

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    "200":
      description: Pantry lot
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/PantryLot"
    "404":
      $ref: "#/components/responses/NotFound"
    "500":
      $ref: "#/components/responses/InternalError"

  put:
    tags: [Pantry]
    summary: Update pantry lot
    operationId: updatePantryLot
    parameters:
      - $ref: "#/components/parameters/IdPathParam"
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/PantryLotUpdateRequest"
    responses:
      "200":
        description: Updated pantry lot
        content:
          application/json:
            schema:
              $ref: "#/components/schemas/PantryLot"
      "400":
        $ref: "#/components/responses/BadRequest"
      "404":
        $ref: "#/components/responses/NotFound"
      "409":
        $ref: "#/components/responses/Conflict"
      "500":
        $ref: "#/components/responses/InternalError"

  delete:
    tags: [Pantry]
    summary: Delete pantry lot (manual only)
    operationId: deletePantryLot
    parameters:
      - $ref: "#/components/parameters/IdPathParam"
    responses:
      "204":
        description: Deleted
      "404":
        $ref: "#/components/responses/NotFound"
      "500":
        $ref: "#/components/responses/InternalError"

/api/recipes:
  get:
    tags: [Recipes]
    summary: List recipes
    operationId: listRecipes
    parameters:
      - in: query
        name: tag
        required: false
        schema:
          type: string

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        description: Optional filter by single tag
- in: query
  name: name
  required: false
  schema:
    type: string
    description: Optional substring match on name (simple contains)
- in: query
  name: limit
  required: false
  schema:
    type: integer
    minimum: 1
    maximum: 200
    default: 50
- in: query
  name: offset
  required: false
  schema:
    type: integer
    minimum: 0
    default: 0
responses:
  "200":
    description: Recipes
    content:
      application/json:
        schema:
          type: object
          properties:
            items:
              type: array
              items:
                $ref: "#/components/schemas/Recipe"
            total:
              type: integer
            required: [items, total]
  "400":
    $ref: "#/components/responses/BadRequest"
  "500":
    $ref: "#/components/responses/InternalError"

post:
  tags: [Recipes]
  summary: Create recipe
  operationId: createRecipe
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/RecipeCreateRequest"
  responses:
    "201":
      description: Created recipe
      content:
        application/json:
          schema:
            $ref: "#/components/schemas/Recipe"
  "400":
    $ref: "#/components/responses/BadRequest"
  "409":
    $ref: "#/components/responses/Conflict"
  "500":
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$ref: "#/components/responses/InternalError"

/api/recipes/{id}:
get:
tags: [Recipes]
summary: Get recipe by id
operationId: getRecipe
parameters:
- $ref: "#/components/parameters/IdPathParam"
responses:
"200":
description: Recipe
content:
application/json:
schema:
$ref: "#/components/schemas/Recipe"
"404":
$ref: "#/components/responses/NotFound"
"500":
$ref: "#/components/responses/InternalError"

put:
tags: [Recipes]
summary: Update recipe
operationId: updateRecipe
parameters:
- $ref: "#/components/parameters/IdPathParam"
requestBody:
required: true
content:
application/json:
schema:
$ref: "#/components/schemas/RecipeUpdateRequest"
responses:
"200":
description: Updated recipe
content:
application/json:
schema:
$ref: "#/components/schemas/Recipe"
"400":
$ref: "#/components/responses/BadRequest"
"404":
$ref: "#/components/responses/NotFound"
"409":
$ref: "#/components/responses/Conflict"
"500":
$ref: "#/components/responses/InternalError"

delete:
tags: [Recipes]
summary: Delete recipe
operationId: deleteRecipe
parameters:
- $ref: "#/components/parameters/IdPathParam"
responses:
"204":
description: Deleted
"404":
$ref: "#/components/responses/NotFound"
"500":
$ref: "#/components/responses/InternalError"

components:

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parameters:
  IdPathParam:
    in: path
    name: id
    required: true
    schema:
      type: string
    description: MongoDB ObjectId string

responses:
  BadRequest:
    description: Bad request
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/ErrorResponse"
  NotFound:
    description: Not found
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/ErrorResponse"
  Conflict:
    description: Conflict
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/ErrorResponse"
  InternalError:
    description: Internal server error
    content:
      application/json:
        schema:
          $ref: "#/components/schemas/ErrorResponse"

schemas:
  HealthResponse:
    type: object
    properties:
      status:
        type: string
        enum: ["ok"]
      version:
        type: string
      time:
        type: string
        format: date-time
    required: [status, time]

  ErrorResponse:
    type: object
    properties:
      code:
        type: string
        description: Machine-readable error code
      message:
        type: string
        description: Human-readable error message
      details:
        type: object
        additionalProperties: true
        description: Optional structured details (field errors, etc.)
      traceId:
        type: string

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    description: Correlation ID for logs
    required: [code, message]

PantryLotType:
  type: string
  enum: ["INGREDIENT", "PACKAGED"]

PantryLot:
  type: object
  properties:
    id:
      type: string
    name:
      type: string
    type:
      $ref: "#/components/schemas/PantryLotType"
    quantity:
      type: number
      format: double
      minimum: 0
    unit:
      type: string
      description: User-entered unit (e.g., g, oz, lb, ml, count)
    metadata:
      type: object
      additionalProperties: true
    createdAt:
      type: string
      format: date-time
    updatedAt:
      type: string
      format: date-time
  required: [id, name, type, quantity, unit, createdAt, updatedAt]

PantryLotCreateRequest:
  type: object
  properties:
    name:
      type: string
      minLength: 1
    type:
      $ref: "#/components/schemas/PantryLotType"
    quantity:
      type: number
      format: double
      minimum: 0
    unit:
      type: string
      minLength: 1
    metadata:
      type: object
      additionalProperties: true
  required: [name, type, quantity, unit]

PantryLotUpdateRequest:
  type: object
  properties:
    name:
      type: string
      minLength: 1
    type:
      $ref: "#/components/schemas/PantryLotType"
    quantity:
      type: number

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    format: double
    minimum: 0
  unit:
    type: string
    minLength: 1
  metadata:
    type: object
    additionalProperties: true
  required: [name, type, quantity, unit]

RecipeIngredient:
  type: object
  properties:
    name:
      type: string
      minLength: 1
    quantity:
      type: number
      format: double
      minimum: 0
    unit:
      type: string
      minLength: 1
  required: [name, quantity, unit]

Recipe:
  type: object
  properties:
    id:
      type: string
    name:
      type: string
    ingredients:
      type: array
      items:
        $ref: "#/components/schemas/RecipeIngredient"
    instructions:
      type: array
      items:
        type: string
    servings:
      type: integer
      minimum: 1
    tags:
      type: array
      items:
        type: string
    embedding:
      type: object
      description: Optional back-reference for vector indexing
      properties:
        qdrantCollection:
          type: string
        vectorId:
          type: string
        embeddedAt:
          type: string
          format: date-time
        additionalProperties: false
    createdAt:
      type: string
      format: date-time
    updatedAt:
      type: string
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    format: date-time
required: [id, name, ingredients, instructions, servings, tags, createdAt, updatedAt]

RecipeCreateRequest:
  type: object
  properties:
    name:
      type: string
      minLength: 1
    ingredients:
      type: array
      minItems: 1
      items:
        $ref: "#/components/schemas/RecipeIngredient"
    instructions:
      type: array
      minItems: 1
      items:
        type: string
    servings:
      type: integer
      minimum: 1
    tags:
      type: array
      items:
        type: string
  required: [name, ingredients, instructions, servings]

RecipeUpdateRequest:
  type: object
  properties:
    name:
      type: string
      minLength: 1
    ingredients:
      type: array
      minItems: 1
      items:
        $ref: "#/components/schemas/RecipeIngredient"
    instructions:
      type: array
      minItems: 1
      items:
        type: string
    servings:
      type: integer
      minimum: 1
    tags:
      type: array
      items:
        type: string
  required: [name, ingredients, instructions, servings]
```