



HRM/MAN 679 Management Information Systems

Louis Coraggio Ph.D., Associate Professor

Troy State University

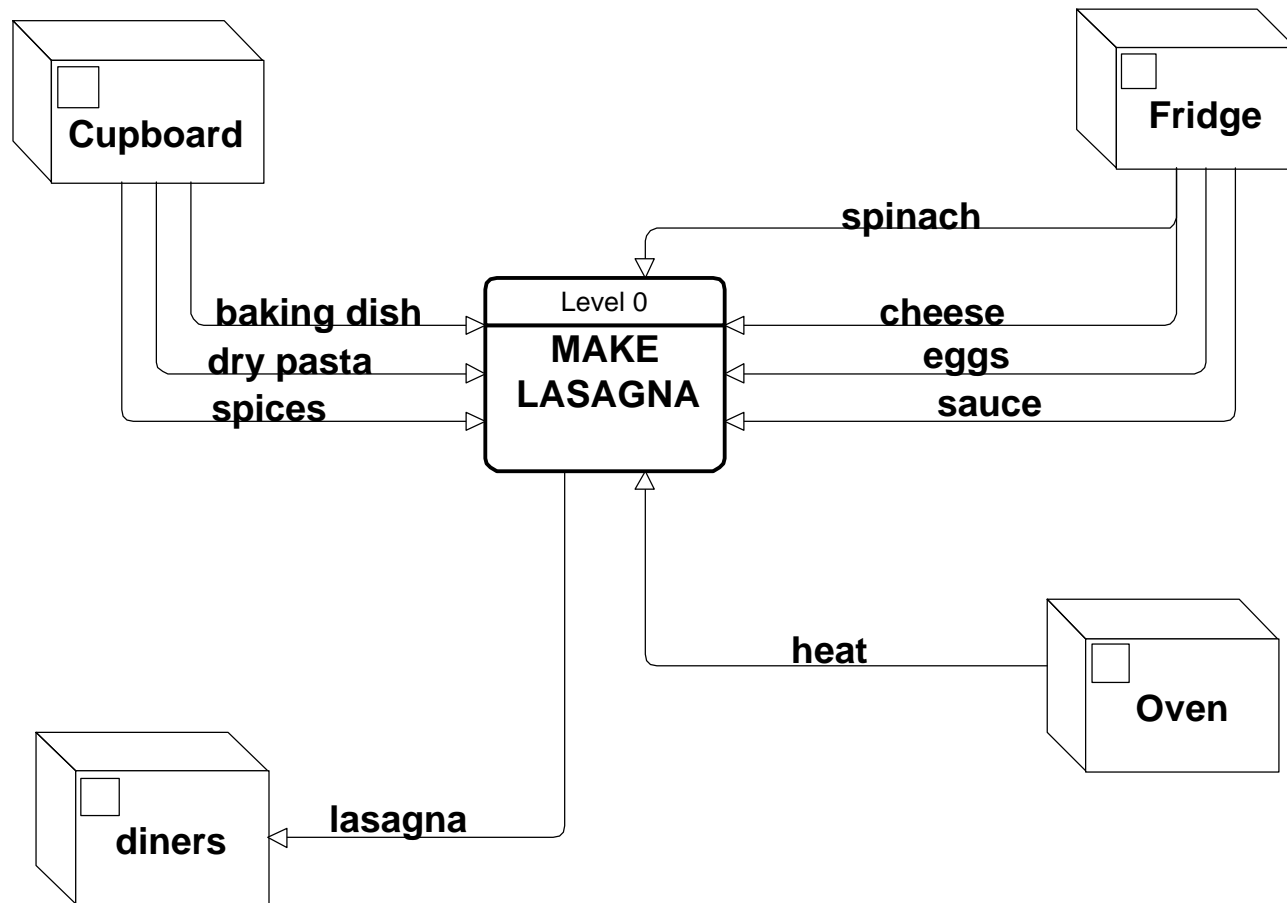
Systems Analysis Class Notes “B”

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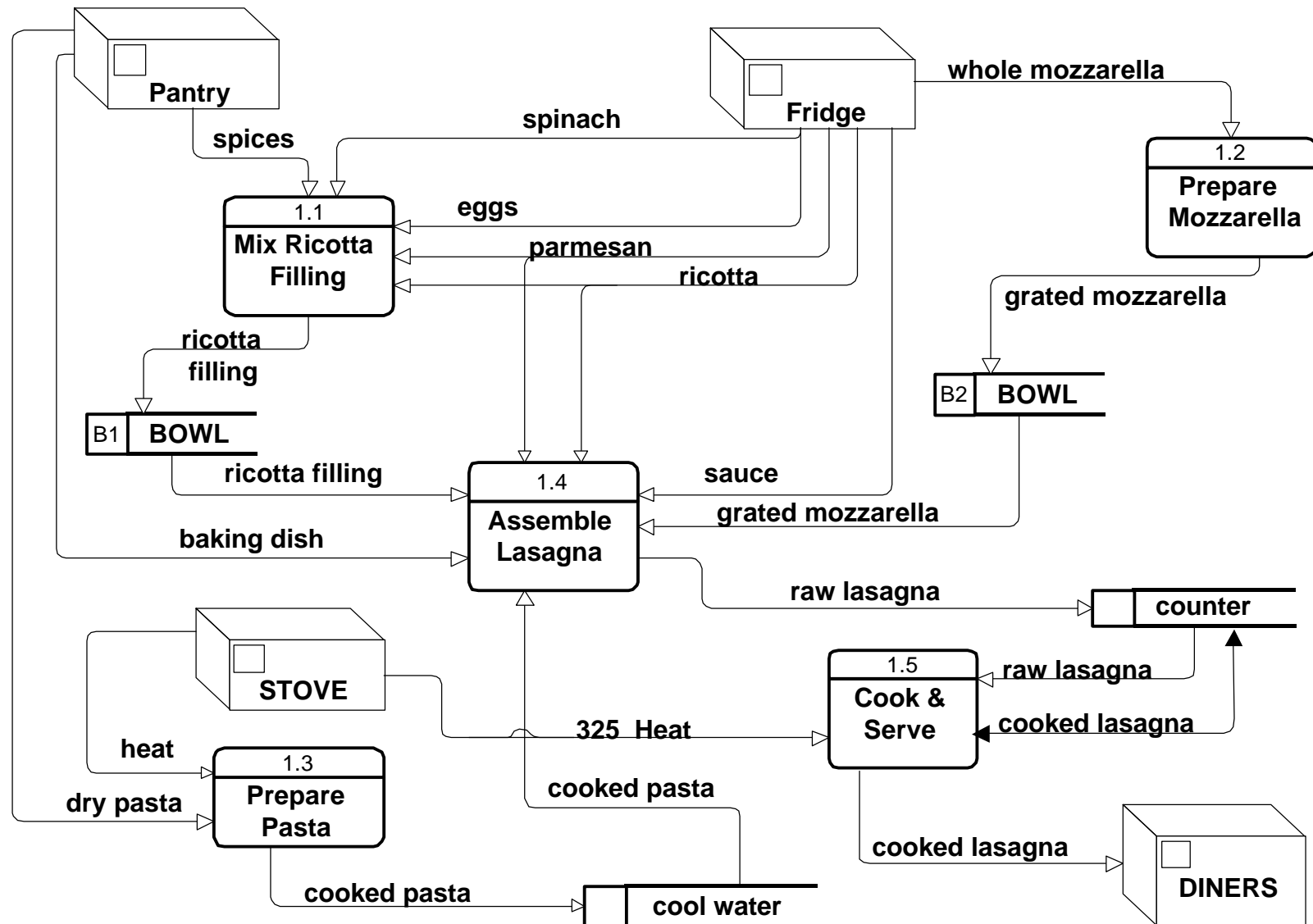
REVIEW FROM LAST TIME ON DATA FLOW DIAGRAMS

- DATA FLOW DIAGRAMS INDICATE PATHS FOR INFORMATION
 - DFD DOES NOT HANDLE ISSUES OF:
 - HOW MANY (LBS OF LASAGNA)
 - HOW OFTEN (# OF LAYERS)
 - WHAT IS MEANT BY ... ("COATED DISH")
 - NOT ALWAYS CLEAR WHAT TO INCLUDE OR EXCLUDE
 - NECESSARY CONDITIONS OR IMPLEMENTS ("KNIFE")
 - NOT EASY TO KEEP INDEPENDENT OF SYSTEM
 - TOUGH TO DECIDE ON LEVELS OF DETAIL
 - AS MANY INTERPRETATIONS AS ANALYSTS
 - CAN BE CONVERTED TO HIERARCHY RATHER EASILY
- «» ASIDE FROM STYLISTIC DISPUTES (AND SOME RATHER VALID CRITICISMS AS WELL) WE NEED TO REVISIT OUR LASAGNE PROCESS AGAIN.
- «» CLEAN UP SOME INCONSISTENCIES AND HANDLE SOMETHING WE FORGOT
- «» WHAT DIDN'T WE CONSIDER LAST TIME?
* HOW DOES ONE PERSON COMPLETE THE PROCESS!
- «» ANSWER ==> WE NEED SOME STORES TO DECOUPLE THE PROCESSES

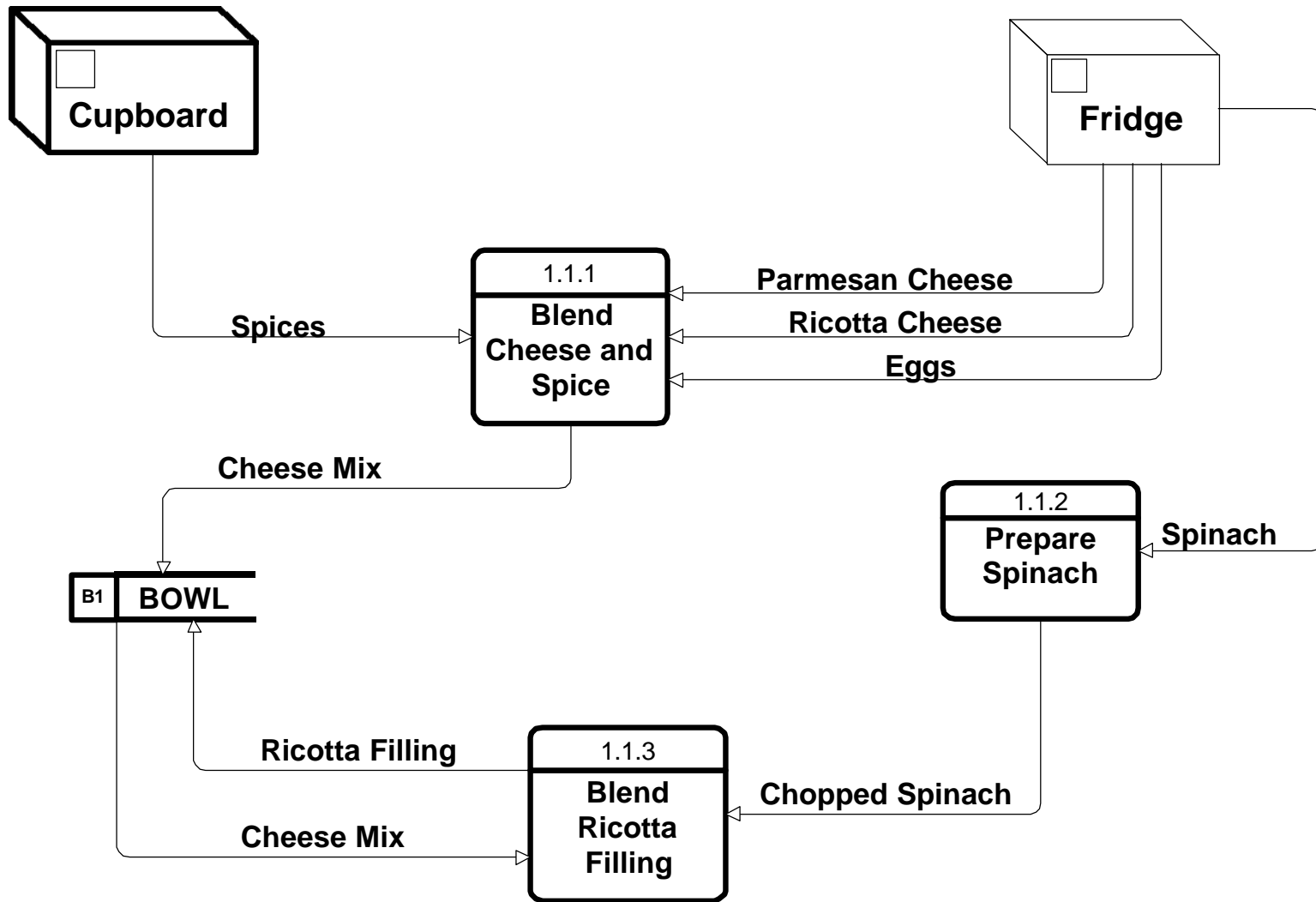
Level 0 Lasagna System Overview



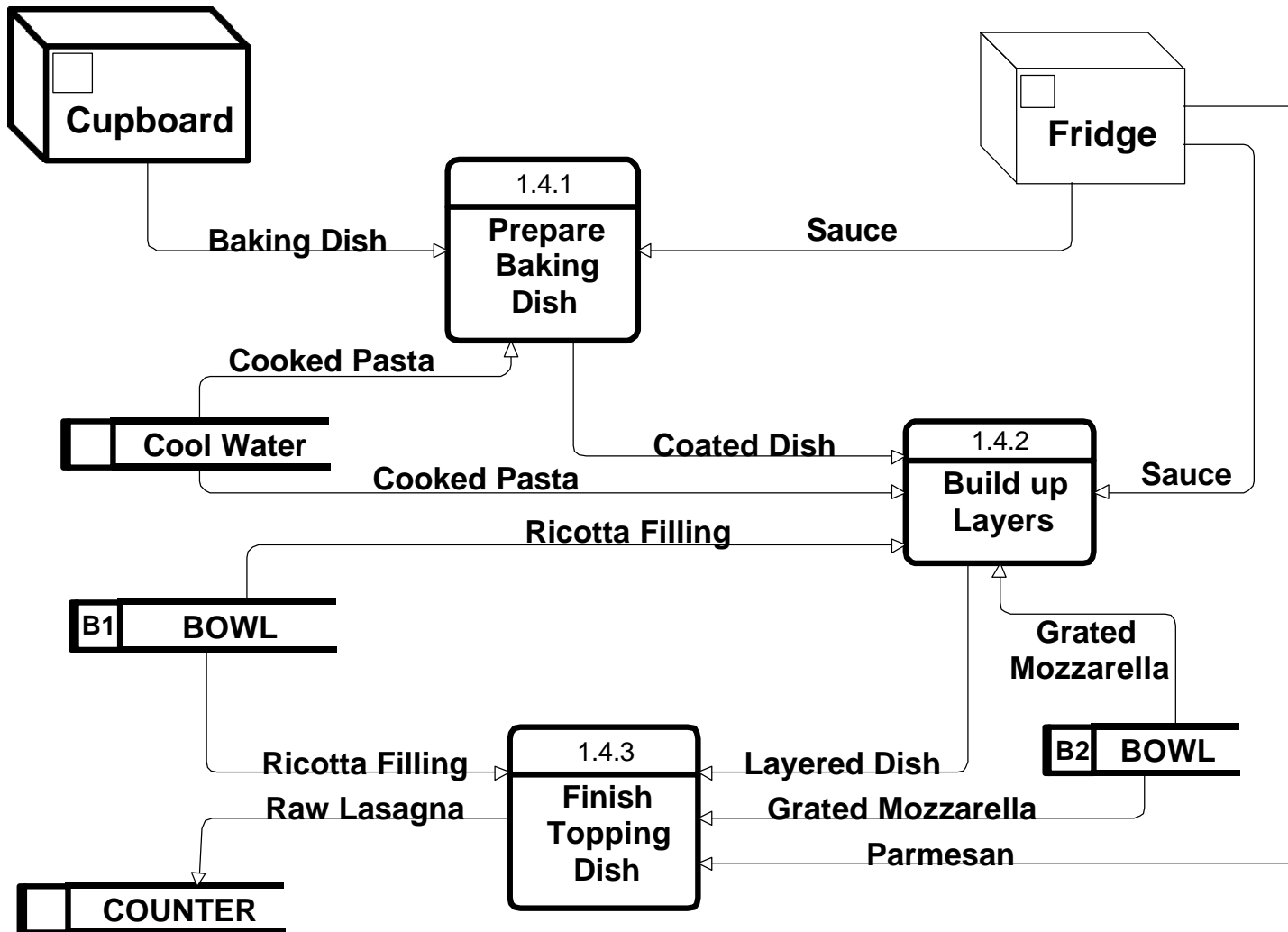
Level 1 All Lasagna Sub Processes



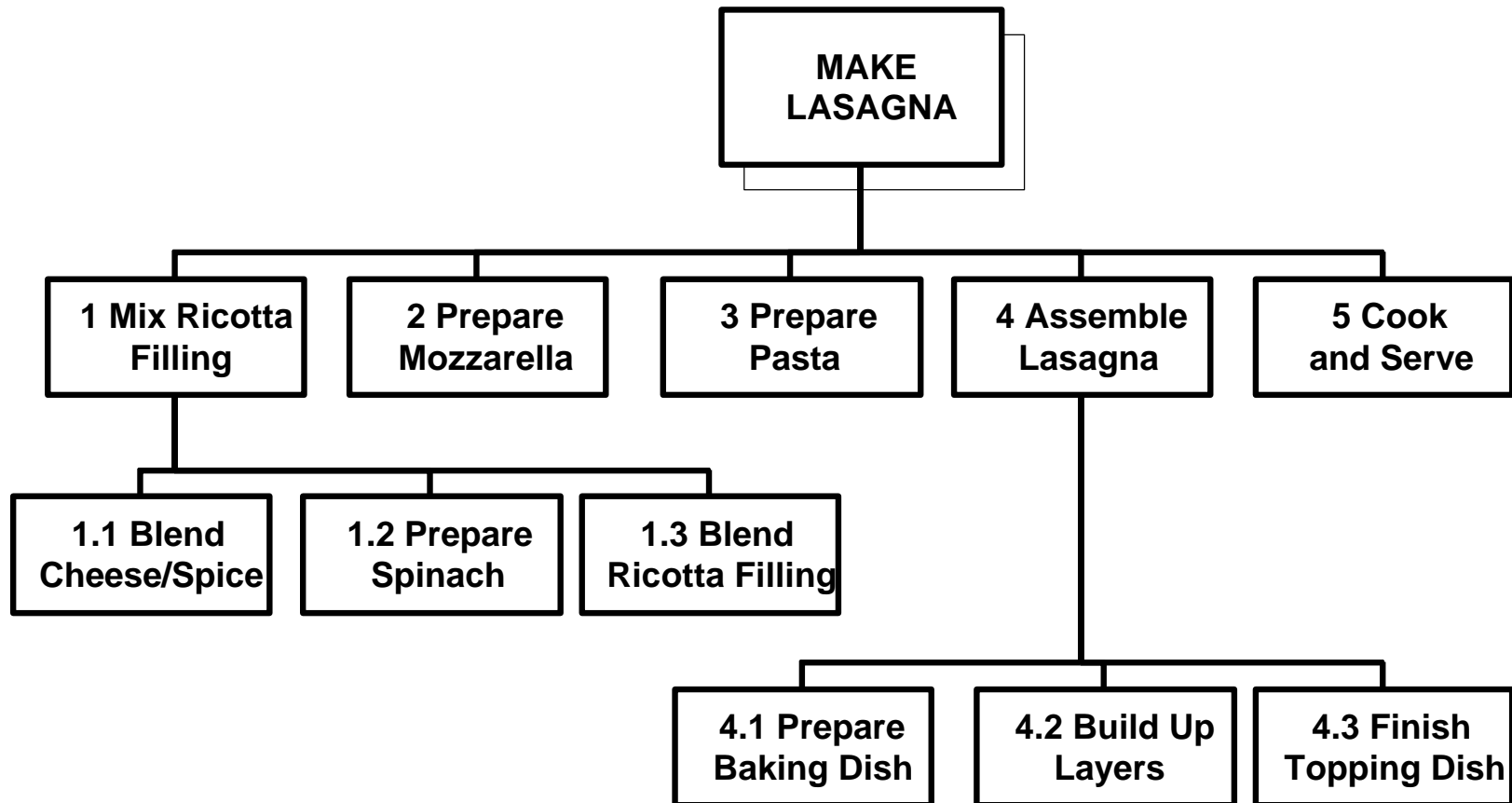
Level 2 Prepare Ricotta Mix



Level 2 Assemble Lasagna



Make Lasagna HIPO Chart



--> SPECIFICATION FOR PROCESS MAKE-LASAGNE <--

INPUTS: Cheese, Sauce, (Spinach), Eggs, Pasta,
Spices, Baking_Dish, Heat

OUTPUTS: Lasagne

COMMENTS: PROCESSES 1, 2, 3, ARE NOT SEQUENCE
DEPENDENT AND MAY BE DONE IN ANY ORDER

1, 2, & 3 MUST PRECEED 4, 4 MUST PRECEED 5

1. PREPARE-RICOTTA-MIX (CHILD PROCESS)

2. PREPARE-MOZARELLA

FOR EACH PIECE OF MOZARELLA
GRATE UNTIL GONE
PLACE IN BOWL

3. PREPARE-PASTA

PREPARE WATER
OBTAIN LARGE COOKING VESSEL
FILL WITH WATER
ADD 2 TBLSP OIL
APPLY High_Heat UNTIL
BOILING
ADD Pasta TO VESSEL
BOIL UNTIL
Pasta IS TENDER BUT NOT STICKY
REMOVE VESSEL FROM High_Heat
SEPARATE WATER FROM Cooked_Pasta
PLACE Cooked_Pasta IN COOL WATER UNTIL
READY TO ASSEMBLE-LASAGNE

4. ASSEMBLE-LASAGNE (CHILD PROCESS)

5. COOK/SERVE LASAGNE

PLACE Raw_Lasagne INTO OVEN
APPLY 325_Heat UNTIL
Lasagne IS BUBBLING ALL THE WAY THRU
LET Hot_Lasagne COOL 10 MINUTES ON COUNTER
SERVE Lasagne

-> SPECIFICATION FOR PROCESS 4 ASSEMBLE-LASAGNE <-

INPUTS: Baking_Dish, Cooked_Pasta, Ricotta_Mix,
Grated_Mozarella, Parmesan_Cheese

OUTPUTS: Raw_Lasagne

COMMENTS: OPERATION SEQUENCE IS IMPORTANT

4.1 PREPARE-BAKING-DISH

USE 1/2 QUART Sauce TO COAT Baking_Dish

COVER BOTTOM OF Coated_Dish WITH Cooked_Pasta

4.2 BUILD-UP-LAYERS

BUILD UNTIL Layers ARE 1/2 INCH FROM DISH TOP

FOR EACH Layer

SPREAD A 1/4 INCH THICK COATING OF
Ricotta_Mix ON Cooked_Pasta

SPRINKLE 1/2 CUP OF Grated_Mozarella
OVER Ricotta_Mix

TOP WITH SINGLE LAYER OF Cooked_Pasta

4.3 FINISH-TOPPING

COVER FINAL LAYER COMPLETELY WITH Sauce

DOLLOP WITH ANY REMAINING Ricotta_Mix

SPRINKLE WITH 1/2 CUP Parmesan_Cheese

> SPECIFICATION FOR PROCESS 2 PREPARE-RICOTTA-MIX <

INPUTS: Ricotta_Cheese, Parmesan_Cheese, Eggs,
(Spinach), Spices

OUTPUTS: Ricotta_Mix

COMMENTS: 1.1 PREPARE SPINACH AND 1.2 BLEND-CHEESE
/SPICE ARE NOT SEQUENCE DEPENDENT.
EITHER CAN BE DONE FIRST

Spinach IS OPTIONAL IN RECIPE

1.1 PREPARE-SPINACH

FOR EACH Spinach LEAF
THOROUGHLY WASH
REMOVE STEM
DRY

BUNDLE Spinach

CHOP FINE (2-4 mm SIZE)

1.2 BLEND-CHEESE-SPICE

IN A LARGE VESSEL COMBINE
Ricotta_Cheese
Eggs
Parmesan_Cheese
Spices

BLEND BY HAND UNTIL THOROUGHLY MIXED

1.3 BLEND-RICOTTA-MIX

TO VESSEL CONTAINING Cheese_Mix ADD
Prepared_Spinach

BLEND BY HAND UNTIL THOROUGHLY MIXED

«» BEFORE REVISING THE LASAGNE PROCESS LET'S
LOOK AT SOME SYNTAX FOR DATA DICTIONARIES

DATA DICTIONARIES HAVE MANY FORMATS --

-- EACH HAS SPECIFIC ADVANTAGES AND DRAWBACKS

-- ALL SHARE SOME COMMON SYNTAX

IRRESPECTIVE OF METHOD USED WE NEED SOME SHORTHAND TO
MAKE THE JOB OF DATA DEFINITION LESS TEDIOUS.

SPECIFICALLY WE NEED TO DEFINE SOME SIMPLE SYMBOLS TO
INDICATE WHAT IS GOING ON. LET'S BEGIN WITH THE
YOURDAN METHOD FOR DATA DEFINITION.

SYMBOL DEFINITION

- = "IS COMPOSED OF"
- + "AND"
- [] "MAY BE ONE OF THESE"
- { } "SHOULD BE REPEATED"
- () "OPTIONAL" (MAY OR MAY NOT BE THERE)
- * * COMMENT OR NOTE

WE WILL ADD TO THESE OUR CONVENTIONS FOR A
Formally_Defined_Dataflow AND
PROCESS-OR-TURNFORM

--> DATA DICTIONARY FOR "MAKE LASAGNE" PROCESS <--

- Baking_Dish * should be approximately 12 x 16 x 3 inches, glass or enameled *
- Cheese [Ricotta | Parmesan | Mozzarella]
- Cheese_Mix = 2 lb Ricotta_Cheese + 2 Eggs + 1/4 cup Parmesan_Cheese + Spices
- Coated_Dish = Baking_Dish + Sauce + Cooked_Pasta
- Cooked_Pasta = Pasta + Water + High_Heat
* boil 2 lb till flexible but not sticky, drain *
- Grated_Mozarella * Mozzarella_Cheese grated or thinly sliced, about 2 lbs *
- Heat [High | 325]
- Hot_Lasagne = Raw_Lasagne + 325_Heat
* cook 20 to 40 minutes until bubbling *
- Lasagne = Hot_Lasagne + 10 minutes cooling time
- Layered_Dish = Coated_Dish + 2(Layers)4
- Layers = Cooked_Pasta + Ricotta_Mix + Grated_Mozarella
- (Prepared_Spinach) = * washed Spinach with stems removed, and chopped fine, about 1/2 lb *
- Raw_Lasagne = Layered_Dish + 1 quart Sauce + 1/2 cup Parmesan + (Ricotta Mix)
- Ricotta_Mix = Cheese_Mix + (Prepared_Spinach)
- Sauce * 2 quarts prepared red spaghetti sauce *
- Spices = 1/4 cup fresh Parsley + 2 tblsp dry Basil
- Topping = 1 qt Sauce + 1/4 cup Parmesan + (Ricotta_Mix)

ALTERNATIVE DATA DICTIONARY FORMAT

<u>GRP</u>	<u>REPS</u>	<u>COMPONENTS</u>	<u>COMMENT</u>
		STRUCTURE NAME: Lasagne Raw_Lasagne 325_Heat	
		STRUCTURE NAME: Raw_Lasagne Topping Sauce Parmesan (Ricotta_Mix) Layered_Dish	1 quart 1/2 cup use excess
		STRUCTURE NAME: Layered_Dish Coated_Dish Sauce Baking_Dish Cooked_Pasta 2-4 Layers C Ricotta_Mix C Grated_Mozarella Cooked_Pasta	1/2 quart 12x16x3 glass to cover bottom 2 lb
		STRUCTURE NAME: Ricotta_Mix Cheese_Mix Ricotta_Cheese S Spices Eggs Parmesan_Cheese 0-1 Prepared_Spinach	2 lb 2 1/2 cup cleaned/chopped
		STRUCTURE NAME: Cooked_Pasta Pasta High_Heat	2 lbs boil until tender
		STRUCTURE NAME: Spices S Parsley S Basil	1/4 cup fresh 2 tblsp dry
		STRUCTURE NAME: Cheese C [Parmesan C Ricotta C Mozarella]	