



TEXAS HUNGER INITIATIVE PROJECT



MARCH 23, 2023
GROUP 09

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SDLC Description:

1. Planning:

In this phase of the SDLC, we need to gather information about the organizations participating in the Summer Feeding Service Program (SFSP) as sponsors and sites and the type of organization they are, such as government, private, or public. We need to collect information through forms about the costs the sponsors will incur which will include, administration costs, transportation costs, office supplies costs, equipment costs, utility costs, etc. We need to document the budget so that we can consolidate the projected costs with the actual cost at the end of the year. Then, we need to determine the number of meals and menus. We will name the planned meal/menu, include food items for a meal/menu, store these menus in database. We should also track the number of meals at each site by meal types and service types. The meal types include *Breakfast (B)*, *Lunch (L)*, *Snack (SN)*, or *Supper (SU)*. The service types include *1st* (first meal served to children 18 and under), *2nd* (second meal served to children 18 and under), *PA* (meals served to a program adult involved in serving the meals), *NPA* (meals served to a non-program adult who is not involved in the food service operation) Lastly, we should plan to store data for reimbursement claims. Total Reimbursement for each meal type needs to be stored in the database. The reimbursement rates are \$2.52 for breakfast, \$3.95 lunch/supper, \$0.95 snacks, \$5.75 for all. These rates will be stored separately in a table.

2. Analysis:

In this phase of the SDLC, we will analyze the conceptual data model that will be used in this case. We have constructed an ERD for all the business entities that are involved for the overall project. 14 business entities have been defined and designed. These entities include SPONSOR, SITE, SCHOOL, PRIVATE NONPROFIT ORGANIZATION, BUDGET, PROJECTED OPERATING COST, PROJECTED ADMINISTRATIVE COST, ACTUAL COST, MENU, MEAL, MEAL DISTRIBUTION, DAILY MEAL COUNT, REIMBURSEMENT, and REIMBURSEMENT RATE.

3. Design:

In this phase of the SDLC, we will design the physical database aspect of the project. We will create an excel spreadsheet to document the data dictionary and input all the specific information we need for each attribute of each entity. For each entity, we convert it into a

normalized table and document the following: table description, attribute name, attribute description, type, max length, digits past decimal, valid values, required, default value, PK or FK, and FK referenced table. These columns each depicts the characteristics and requirements of the given entity.

4. Implementation:

In this phase of the SDLC, we will implement this designed database into practice by using SQL. We will need to create, load, test, and evaluate our low-level database.

However, we will not start this part of the project until the part 2 of the project.

Project Plan:

Task	Planned Completion Date	Actual Completion Date	Completed (Yes or No)	Team Member Assigned
<i>Planning (S):</i>				
Documentation for planning	March 18, 2023	March 18, 2023	Yes	Lee Zhang
Documentation for analysis	March 18, 2023	March 18, 2023	Yes	Lee Zhang
Documentation for design	March 18, 2023	March 18, 2023	Yes	Lee Zhang
Documentation for implementation	March 18, 2023	March 18, 2023	Yes	Lee Zhang
Documentation for project plan	March 22, 2023	March 25, 2023	Yes	Lee Zhang
<i>Analysis (D):</i>				
Determine entities in ERD	March 18, 2023	March 25, 2023	Yes	Sen Jamir, Sambhav Jain
Determine attributes for each entity	March 25, 2023	March 25, 2023	Yes	Sen Jamir, Sambhav Jain
Determine entity types	March 25, 2023	March 25, 2023	Yes	Sen Jamir, Sambhav Jain
Document referential integrity	March 25, 2023	March 25, 2023	Yes	Sen Jamir, Sambhav Jain
<i>Design (L):</i>				
Determine table name, field name, description, appropriate data types and length	March 26, 2023	March 26, 2023	Yes	Nhu Pham, Lee Zhang
Determine valid values, default values, and other values	March 26, 2023	March 26, 2023	Yes	Nhu Pham, Lee Zhang
Document these values in Excel spreadsheet template	March 26, 2023	March 26, 2023	Yes	Nhu Pham, Lee Zhang
<i>Implementation (S):</i>				
Create the SQL database	May 1, 2023	TBD	No	Lee Zhang
Translate all relations into SQL code	May 1, 2023	TBD	No	Nhu Pham
Test the functionality of database	May 1, 2023	TBD	No	Sen Jamir
Adjust to improve database quality	May 1, 2023	TBD	No	Sambhav Jain

ERD:

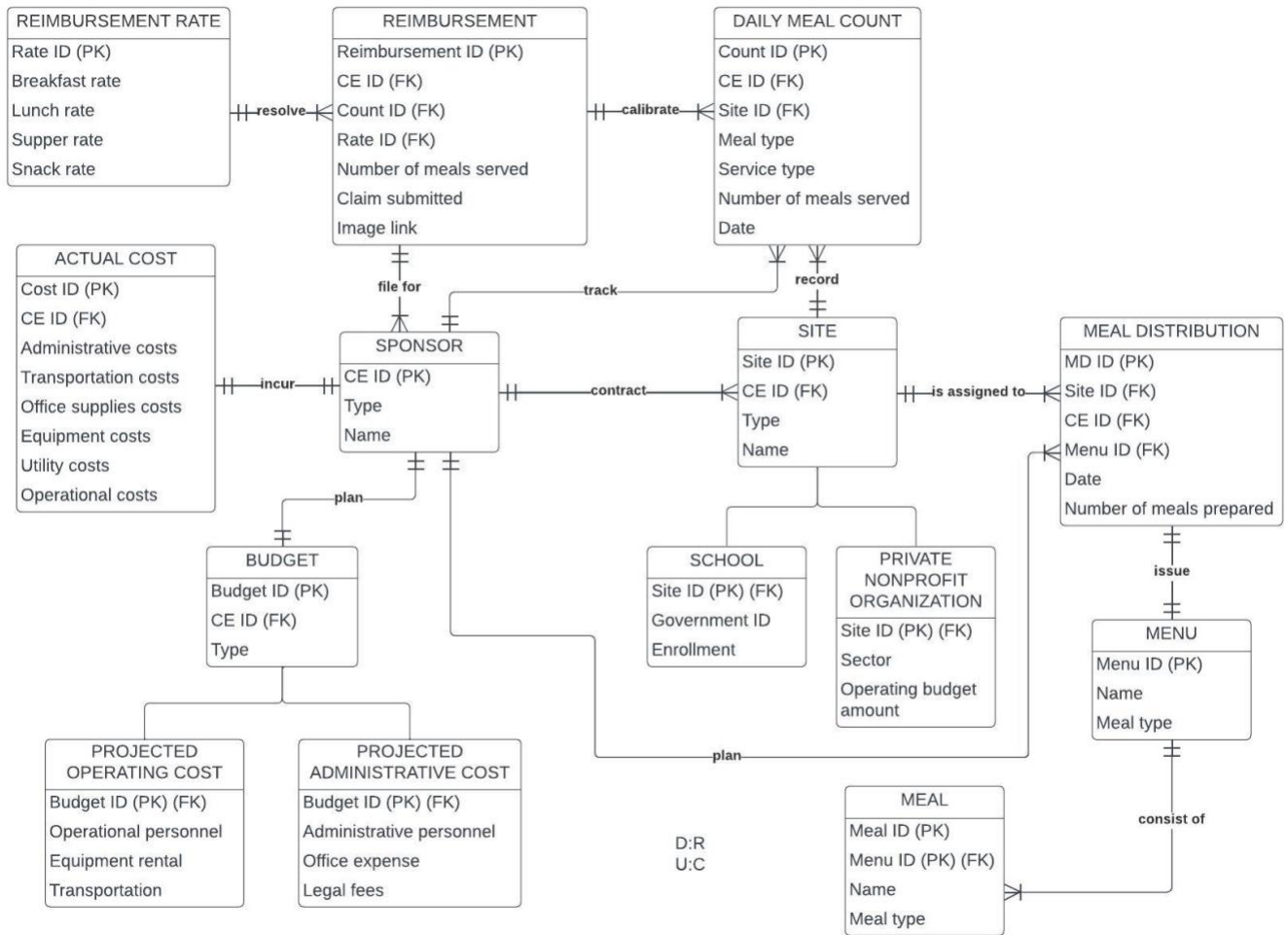


Table Name	Table Description	Attribute Name	Attribute Description	Type	Max Length	Digits past decimal	Valid Values	Required	Default Value	PK or FK	FK Referenced Table
SPONSOR	Describes every organization registered as sponsors as part of the SFSP and its type	CE ID	Identifies each contracting entity	NUMERIC	10	0		Y	N/A	PK	
		Type	Describes the type of contracting entity	VARCHAR	50		governmental entity, public non-profit school, private non-profit school, public non-profit residential camp, private non-profit residential camp, private non-profit organization	Y	N/A		
		Name	Describes the name of the contracting entity	VARCHAR	50			Y	N/A		
SITE	Describes the location where the meal is offered	Site ID	Identifies each site	NUMERIC	10	0		Y	N/A	PK	
		CE ID	Identifies the contracting entity with the specific site	NUMERIC	10	0		Y	N/A	FK	SPONSOR
		Type	Describes the type of site	VARCHAR	50	0	school, private non-profit organization	Y	N/A		
		Name	Describes the name of site	VARCHAR	50	0		Y	N/A		
SCHOOL (SITE)	Describes the type of location where the meal is offered	Site ID	Identifies each site	NUMERIC	10	0		Y	N/A	PK/FK	SITE
		Government ID	Describes the school's registration with government	NUMERIC	10	0		Y	N/A		
		Enrollment	Number of students enrolled	NUMERIC	6	0		Y	N/A		
PRIVATE NONPROFIT ORGANIZATION (SITE)	Describes the type of location where the meal is offered	Site ID	Identifies each site	NUMERIC	10	0		Y	N/A	PK/FK	SITE
		Sector	Describes the type of nonprofit organization	VARCHAR	50	0		Y	N/A		
		Operating budget amount	Budget amount for operation	NUMERIC	10	2		Y	N/A		

Table Name	Table Description	Attribute Name	Attribute Description	Type	Max Length	Digits past decimal	Valid Values	Required	Default Value	PK or FK	FK Referenced Table
BUDGET	Provide information of the budget planned by the sponsor	Budget ID	Identifies each budget	NUMERIC	10	0		Y	N/A	PK	
		CE ID	Identifies the contracting entity with the specific budget	NUMERIC	10	0		Y	N/A	FK	SPONSOR
PROJECTED OPERATING COST (BUDGET)	Provide information of the budget for operating cost	Budget ID	Identifies each budget	NUMERIC	10	0		y	N/A	PK/FK	BUDGET
		Operational personnel	Budget amount for operational personnel	NUMERIC	10	2		y	N/A		
		Equipment rental	Budget amount for equipment rental	NUMERIC	10	2		y	N/A		
PROJECTED ADMINISTRATIVE COST (BUDGET)	Provide information of the budget for administrative cost	Budget ID	Identifies each budget	NUMERIC	10	0		y	N/A	PK/FK	BUDGET
		Administrative personnel	Budget amount for administrative personnel	NUMERIC	10	2		y	N/A		
		Office expense	Budget amount for office expense	NUMERIC	10	2		y	N/A		
ACTUAL COST	Describes the actual cost	Cost ID	Identifies each cost	NUMERIC	10	0		y	N/A	PK	
		CE ID	Identifies the contracting entity with the specific budget	NUMERIC	10	0		y	N/A	FK	SPONSOR
		Administrative costs	Actual amount for administrative cost	NUMERIC	10	2		y	N/A		
		Transportation costs	Actual amount for transportation cost	NUMERIC	10	2		y	N/A		
		Office supplies costs	Actual amount for office supplies cost	NUMERIC	10	2		y	N/A		
		Equipment costs	Actual amount for equipment cost	NUMERIC	10	2		y	N/A		
		Utility costs	Actual amount for utility cost	NUMERIC	10	2		y	N/A		
MENU	Describes the menu of food served	Menu ID	Identifies each menu	NUMERIC	10	0		y	N/A	PK	
		Name	Describes the name of the menu	VARCHAR	50	0		y	N/A		
MEAL	Describes the meal served	Meal ID	Identifies each meal	NUMERIC	10	0		y	N/A	PK	
		Menu ID	Identifies each menu with the specific meal	NUMERIC	10	0		y	N/A	FK	MENU
		Name	Describes the name of the meal	VARCHAR	50	0		y	N/A		

Table Name	Table Description	Attribute Name	Attribute Description	Type	Max Length	Digits past decimal	Valid Values	Required	Default Value	PK or FK	FK Referenced Table
MEAL DISTRIBUTION	Describes how meals are being distributed	MD ID	Identifies each meal distribution	NUMERIC	10	0		y	N/A	PK	
		Site ID	Identifies each site with the specific meal distribution	NUMERIC	10	0		y	N/A	FK	SITE
		CE ID	Identifies each contracting entity with the specific meal distribution	NUMERIC	10	0		y	N/A	FK	SPONSOR
		Menu ID	Identifies each menu with the specific meal distribution	NUMERIC	10	0		y	N/A	FK	MENU
		Date	Date the meal distribution is conducted	DATE				y	N/A		
DAILY MEAL COUNT	Describes the information of daily meal count form	Count ID	Identifies each meal count daily	NUMERIC	10	0		y	N/A	PK	
		CE ID	Identifies each contracting entity with the specific daily meal count	NUMERIC	10	0		y	N/A	FK	SPONSOR
		Site ID	Identifies each site with the specific daily meal count	NUMERIC	10	0		y	N/A	FK	SITE
		Meal type	Describes the specific meal type	VARCHAR	2	0	B, L, SN, SU	y	N/A		
		Service type	Describes the specific service type	VARCHAR	3	0	"1", "2", PA, NPA	y	N/A		
		Number of meals served	Number of meals that has been served	NUMERIC	10	0		y	N/A		
REIMBURSEMENT	Describes the information related to reimbursement claims	Reimbursement ID	Identifies each reimbursement being filed	NUMERIC	10	0		y	N/A	PK	
		CE ID	Identifies each contracting entity with the specific reimbursement	NUMERIC	10	0		y	N/A	FK	SPONSOR
		Count ID	Identifies each meal count with the specific reimbursement	NUMERIC	10	0		y	N/A	FK	DAILY MEAL COUNT
		Rate ID	Identifies each reimbursement rate with the specific reimbursement	NUMERIC	10	0		y	N/A	FK	REIMBURSEMENT RATE
		Number of meals served	Number of meals that are served	NUMERIC	10	0		y	N/A		
		Claim submitted	If a claim has been submitted or not	VARCHAR	3	0	yes, no	y	N/A		
REIMBURSEMENT RATE	Describes all the reimbursement rates related to reimbursement claims	Rate ID	Identifies each reimbursement rate	NUMERIC	10	0		y	N/A	PK	
		Breakfast rate	Rate for breakfast reimbursement	NUMERIC	5	2		y	N/A		
		Lunch rate	Rate for lunch reimbursement	NUMERIC	5	2		y	N/A		
		Supper rate	Rate for supper reimbursement	NUMERIC	5	2		y	N/A		

