NBD-Project Data-Model

Description:

* One client can have many projects but a project can only have one client (1:M).
* Similarly, a project can have multiple bids(1:M).
* Staff can be assigned to multiple projects and meanwhile the projects can also have number of staff based on their roles (such as designer, production, associate etc.). Thus, Staff and Project tables represent many-to-many relationship(M:M).
* Staff and Role tables are used to store the staff data for tracking the bid.
* INV\_TYPE table helps to select from inventory types from Plants/Pottery/Materials.
* Bid table is in many-to-many(M:M) relationship with Labour and Inventory tables.
* LABOUR\_TYPE table describe the types of labour.

Code First Entities:

|  |  |  |
| --- | --- | --- |
| Property | Type/Validation | Format/Notes |
| CLIENT |  |  |
| ID | Int | Identity PK |
| cltFName | Required string, max length 30 |  |
| cltMName | Required string, max length 30 |  |
| cltLName | Required string, max length 30 |  |
| cltAddress | Required string, max length 100 |  |
| cltCity | Required string, max length 30 |  |
| cltPostal | Required string, max length 7 |  |
| cltProvince | Required string, max length 25 |  |
| cltPhNum | Required string, exactly 10 digits |  |
| cltContact | Required string, max length 70 |  |
|  |  |  |
| PROJECT |  |  |
| ID | Int | Identity PK |
| projName | Required string, max length 50 |  |
| projBeginDate | Required DateTime |  |
| projCompDate | Required DateTime |  |
| projSite | Required string, max length 100 |  |
| ClientID | Required Int | Foreign Key |
| StaffID | Required Int | Foreign Key |
|  |  |  |
| BID |  |  |
| ID |  | Identity PK |
| bidDate | Required DateTime |  |
| bidAmount | Required Decimal |  |
| InvID  ProjectID | Required Int  Required Int | Foreign Key  Foreign Key |
|  |  |  |
| INVENTORY |  |  |
| ID | Int | Identity PK |
| invDesc | Required string, max length 60 |  |
| invQty | Required int |  |
| invSize | Required string, max length 30 |  |
| invList$/ invUnitPrice | Required decimal |  |
| invTypeID | Required Int | Foreign Key |
|  |  |  |
| INV\_TYPE |  |  |
| ID | Int | Identity PK |
| invType | Required string, max length 9 |  |
|  |  |  |
| BID\_INVENTORY |  |  |
| ID | Int | Composite PK |
| BidID | Required Int | Foreign Key |
| InvID | Required Int | Foreign Key |
|  |  |  |
| STAFF |  |  |
| ID | Int | Identity PK |
| staffFName | Required string, max length 30 |  |
| staffMName | Required string, max length 30 |  |
| staffLName | Required string, max length 30 |  |
| staffPhNum | Required string, exactly 10 digits |  |
| staffEmail | Required string, max length 255 |  |
| staffAddress | Required string, max length 100 |  |
| staffCity | Required string, max length 30 |  |
| staffPostal | Required string, max length 7 |  |
| staffProvince | Required string, max length 25 |  |
| RoleID | Required Int | Foreign Key |
|  |  |  |
| PROJECT\_STAFF |  |  |
| ID | Int | Composite PK |
| ProjectID | Required Int | Foreign Key |
| StaffID | Required Int | Foreign Key |
|  |  |  |
| ROLE |  |  |
| ID | Int | Identity PK |
| roleDesc | Required string, max length 50 |  |
|  |  |  |
| LABOUR |  |  |
| ID | Int | Identity PK |
| labHours | Required double |  |
| labUnitPrice | Required decimal |  |
| labExtendedPrice | Required decimal |  |
| labTypeID | Required int | Foreign Key |
|  |  |  |
| LABOUR\_TYPE |  |  |
| ID | Int | Identity PK |
| labType | Required string, max length 70 |  |
|  |  |  |
| BID\_LABOUR |  |  |
| ID | Int | Composite PK |
| BidID | Required int | Foreign Key |
| LabourID | Required int | Foreign Key |

CLIENT

ID\*

cltFName

cltMName

cltLName

cltAddress

cltCity

cltPostal

cltProvince

cltPhNum

cltContact

LABOUR\_TYPE

ID\*

labType

LABOUR

ID\*

labHours

labUnitPrice

labExtendedPrice

labTypeID

PROJECT

ID\*

projName

projBeginDate

projCompDate

projSite

ClientID

StaffID

BID\_LABOUR

ID\*

BidID

LabourID

BID

ID\*

bidDate

bidAmount

ProjectID

InvID

xx

ROLE

ID\*

roleDesc

INV\_TYPE

ID\*

invType

BID\_INVENTORY

ID\*

BidID

InvID

INVENTORY

ID\*

invItemDesc

invQty

invSize

invList$/invUnitPrice

invTypeID

PROJECT\_STAFF

ID\*

StaffID

ProjectID

STAFF

ID\*

staffFName

staffMName

staffLName

staffAddress

staffCity

staffPostal

staffProvince

staffPhNum

staffEmail

RoleID