Normalisation process

#To the first normal form (1NF):

In our DB we have single-valued entries in each column, which is related to column's datatype.

And each row is uniquely identified by the Primary Key Except the weak entity “room”.

For ex:

member

|  |  |
| --- | --- |
| event\_id | #id |
| 5 | 1 |
| 7 | 3 |

facilitator

|  |  |
| --- | --- |
| qualification | #id |
| Experienced Practioner Accreditation | 1 |
| Practioner Accreditation | 3 |

assistant

|  |  |
| --- | --- |
| training | #id |
| Ratio of health=0.85 | 1 |
| Ratio of succeeded events=0.7 | 3 |

open-to-public\_event

|  |
| --- |
| #id |
| 1 |
| 3 |

exclusive-to-business\_event

|  |  |  |
| --- | --- | --- |
| name\_of\_business | assistant\_id | #id |
| Quality of foods | 5 | 1 |
| How to upgrade your productivity | 7 | 3 |

Venue

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Street\_info | city | country | Number\_of\_rooms | name | #id |
| Abbey Road(63),near to subway rest | London | UK | 5 | Fx conference | 1 |
| Oxford street(55) | London | UK | 7 | Alpha | 3 |

#To the second normal form (2NF):

In our DB ,all attributes (non unique attribute) of each table depend on the key attribute (PK/FK) whose name is “id” .

For ex:

Venue

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Street\_info | city | country | Number\_of\_rooms | name | #id |

#To the third normal form (3NF):

In our DB, all attributes in actors’ tables in the DB depend only on the Key except the weak entity “ room” which doesn’t have any key, and we don’t have any non-key field depends on another non-key field.

-In tables of actors and participated entities in the agency ,ONLY the key attribute (id) can access all data for an instance of the same type.

Main actors and entities from EERD mapping:

member

|  |  |
| --- | --- |
| event\_id | #id |

facilitator

|  |  |
| --- | --- |
| qualification | #id |

assistant

|  |  |
| --- | --- |
| training | #id |

open-to-public\_event

|  |
| --- |
| #id |

exclusive-to-business\_event

|  |  |  |
| --- | --- | --- |
| name\_of\_business | assistant\_id | #id |

venue

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Street\_info | city | country | Number\_of\_rooms | name | #id |

---------------------------------------------------------------------------------------------------------------------------

-The “id” of member,facilitator and assistant is a foreign key which can access only the same person\_id ‘PK’ in person’s table (person is not a real actor in the DB):

person

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| actor\_type | combined\_data | birth\_date | last\_name | first\_name | info | #person\_id |

- we have separated facilitator,assistant and member tables because person’s table had had attributes related to facilitator and member.

------------

-The “id” of open-to-public event and exclusive-to-business event is a foreign key which can access only the same id ‘PK’ in event’s table (event is not a real actor in the DB “the agency has only op&eb events”):

Event

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| event\_info | type | date\_time | room\_id | venue\_id | facilitator\_id | #id |

- we have separated op&eb events’ tables because event’s table had had attributes related to exclusive to business.

---------------------------------------------------------------------------------------------------------------------------

#Thoughts for further improvement:

-Adding new attributes like “email&password” for each person in the agency (member,assistant,facilitator) if the agency wants to provide a login &register form for each actor.

For ex: each member can manage his booking of events,each facilitator can manage his event’s facilitation,each assistant can request assisting in a specific event.

-Adding new types of events.

-adding new actors for new events if it’s required.

-enhancing the DB with PL/SQL to add views or funcnctions/procedures which can replace the behaviour of (combined\_data) in person’s table or (event\_info) in event’s table to control the data before inserting it.