Московский Энергетический Институт

Технический Университет

Лабораторная работа по курсу БД.

№ 3

Проектирование правил целостности БД и физической модели БД**.**

Выполнил студент группы

А-05-18

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Краткое описание предметной области:

Предметная область представляет собой учет клиентов ремонтной мастерской. Каждый клиент делает один или несколько заказов на починку изделий, для которого, возможно, необходимо заказать комплектующие. Заказы выполняются исполнителем.

Правила целостности

ID всех объектов – уникальны. Максимальная длина всех строковых переменных – 100.

При изменении клиента, исполнители или заказа данные каскадно изменяются во всех таблицах.

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| **Relationship** |

|  |  |  |  |
| --- | --- | --- | --- |
| **FK Name** | **Type** | **Cardinality** | **Referential Integrity** |
| client | Non-identifying | One-to-One-or-More (P) |  |
| Dishes\_to\_Dishes\_and\_Ingredients | Identifying | One-to-Zero-One-or-More |  |
| Dishes\_to\_Dishes\_andOrders | Identifying | One-to-Zero-One-or-More |  |
| Ingredient\_to\_Dishes\_and\_Ingredients | Identifying | One-to-Zero-One-or-More |  |
| Order\_to\_Dishes\_and\_Orders | Identifying | One-to-Zero-One-or-More |  |
| executive\_staff | Non-identifying | One-to-One-or-More (P) |  |

| **Relationship** |
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| **Relationship** | | |
| --- | --- | --- |
| **FK Name** | **Type** | **Cardinality** |
| client | Non-identifying | One-to-One-or-More (P) |
| R\_16 | Non-identifying | One-to-Zero-One-or-More |
| Ordered\_dishes | Non-identifying | One-to-Zero-One-or-More |
| executive\_staff | Non-identifying | One-to-One-or-More (P) |

| **Referential Integrity(s) of "client" Relationship** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade |  | No Action | No Action |

| **Referential Integrity(s) of "R\_16" Relationship** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade |  | No Action | No Action |

| **Referential Integrity(s) of "Ordered\_dishes" Relationship** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade |  | No Action | No Action |

| **Referential Integrity(s) of "executive\_staff" Relationship** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | No Action |  | No Action | No Action |

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| **Referential Integrity(s) of "client" Relationship** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade |  | No Action | No Action |

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| **Referential Integrity(s) of "Dishes\_to\_Dishes\_and\_Ingredients" Relationship** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade | Cascade | Cascade | Cascade |

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| **Referential Integrity(s) of "Dishes\_to\_Dishes\_andOrders" Relationship** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade | Cascade | Cascade | Cascade |

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| **Referential Integrity(s) of "Ingredient\_to\_Dishes\_and\_Ingredients" Relationship** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade | Cascade | Cascade | Cascade |

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| **Referential Integrity(s) of "Order\_to\_Dishes\_and\_Orders" Relationship** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | Cascade | Cascade | Cascade | Cascade |

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| **Referential Integrity(s) of "executive\_staff" Relationship** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parent Update** | **Parent Insert** | **Parent Delete** | **Child Insert** | **Child Update** | **Child Delete** |
| Cascade | Cascade | No Action |  | No Action | No Action |