**A5: Esquema relacional, validação e melhoramento**

Este artefacto contém o esquema relacional obtido através do mapeamento do modelo conceptual de dados. O esquema relacional inclui o esquema de relações, atributos, domínios, chaves primárias, chaves estrangeiras e outras regras de integridade: UNIQUE, DEFAULT, NOT NULL, CHECK.

**Esquema Relacional**

|  |  |
| --- | --- |
| R01 | user(id, username **UK NN**, password **NN**, email **UK NN**, registDate **NN DF** Today,  firstName **NN**, lastName **NN**, image, city\_id → city **NN**) |
| R02 | event(id, name **NN**, date **NN** date > Today, description **NN**, owner\_id → user **NN**, localization\_id → localization **NN**, image\_id → image,  type **NN CK** type IN Types, category **NN CK** category IN Categories) |
| R03 | done(event\_id → event **NN**, rating **NN CK** rating > 0 AND rating < = 5) |
| R04 | notDone(event\_id → event **NN**) |
| R05 | paticipant(user\_id → user **NN,** event\_id → event **NN**) |
| R06 | owner(user\_id → user **NN,** event\_id → event **NN**) |
| R07 | image(id, path **NN UK**) |
| R08 | location(id, name, address **NN**, latitude, longitude, city\_id → city **NN**) |
| R09 | city(id, name **UK NN**, country\_id → country **NN**) |
| R10 | country(id, name **UK NN**) |
| R11 | post(id, description **NN**, date **NN DF** Today, event\_id → event **NN**,  user\_id → user **NN**, image\_id → image) |
| R12 | poll(id, post\_id → post **NN**) |
| R13 | option(id, description **NN**, poll\_id → poll **NN**) |
| R14 | admin(id, username **UK NN**, password **NN**, email **UK NN**) |
| R15 | friendRequest(id, answer, sender\_id → user **NN,** receiver\_id → user **NN**) |
| R16 | friendActivity(id, sender\_id → participant **NN,** receiver\_id → user **NN**,  event\_id → event **NN**) |
| R17 | eventInvite(id, answer, event\_id → notDone **NN**, owner\_id → owner **NN**,  receiver\_id → user **NN**) |

**Domínios**

|  |  |
| --- | --- |
| Today | DATE DEFAULT CURRENT\_DATE |
| Types | ENUM(‘Public’, Private’) |
| Categories | ENUM(‘Music’, ‘Sports’, ‘Entertainment’, ‘Educational’, ‘Business’, ‘Other’) |

**Dependências funcionais e validação do esquema**

|  |  |
| --- | --- |
| **Table R01** (user) | |
| **Keys:** {id}, {username}, {email} | |
| **Dependências Funcionais** | |
| FD0101 | {id} → {username, email, password, registDate, firstName, lastName, image, city} |
| FD0102 | {username} → {id, email, password, registDate, firstName, lastName, image, city} |
| FD0103 | {email} → {id, username, password, registDate, firstName, lastName, image, city} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R02** (event) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD0201 | {id} → {name, date, type, category, description, localization, owner, image\_id} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R03** (done) | |
| **Keys:** {event\_id} | |
| **Dependências Funcionais** | |
| FD0301 | {event\_id} → {rating} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R04** (notDone) | |
| **Keys:** {event\_id} | |
| **Dependências Funcionais** | |
| (none) | |
| **Forma Normal** | BCNF |

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| --- | --- |
| **Table R05** (participant) | |
| **Keys:** {user\_id, event\_id} | |
| **Dependências Funcionais** | |
| (none) | |
| **Forma Normal** | BCNF |

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| --- | --- |
| **Table R06** (owner) | |
| **Keys:** {user\_id, event\_id} | |
| **Dependências Funcionais** | |
| (none) | |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R07** (image) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD0701 | {id} → {path} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R08** (location) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD0801 | {id} → {name, address, latitude, longitude, city\_id} |
| **Forma Normal** | BCNF |

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| --- | --- |
| **Table R09** (city) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD0901 | {id} → {name, country\_id} |
| **Forma Normal** | BCNF |

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| --- | --- |
| **Table R10** (country) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1001 | {id} → {name} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R11** (post) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1101 | {id} → {description, date, event, user\_id, image} |
| **Forma Normal** | BCNF |

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| --- | --- |
| **Table R12** (poll) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1201 | {id} → {post} |
| **Forma Normal** | BCNF |

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| --- | --- |
| **Table R13** (option) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1301 | {id} → {description, poll} |
| **Forma Normal** | BCNF |

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| **Table R14** (admin) | |
| **Keys:** {id}, {username}, {email} | |
| **Dependências Funcionais** | |
| FD1401 | {id} → {username, email, password} |
| FD1402 | {username} → {id, email, password} |
| FD1403 | {email} → {id, username, password} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R15** (friendRequest) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1501 | {id} → {answer, sender\_id, receiver\_id} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R16** (friendActivity) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1601 | {id} → {sender\_id, receiver\_id, event\_id} |
| **Forma Normal** | BCNF |

|  |  |
| --- | --- |
| **Table R17** (eventInvite) | |
| **Keys:** {id} | |
| **Dependências Funcionais** | |
| FD1701 | {id} → {answer, event\_id, owner\_id, receiver\_id } |
| **Forma Normal** | BCNF |

**SQL código**

**GRUPO1765, 21/03/2018**

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