Assignment 1

Normalization report

# 0NF:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Employees | | | | | | | | | |
| Bsn | Name | Surname | Adress | | | | | | Positions |
| Country | Postal\_code | City | Street | Nr. | Residence | Position\_name |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employees | | | | | |
| Positions | | | | | |
| Pdescription | Phour\_fee | Amount\_of\_hours | project | | |
| Pr\_id | Pr\_budget | Pr\_allocated\_hours |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employees | | | | | |
| Positions | | | Degrees | | |
| project | | | Course | School | level |
| Headquarter | Nr\_of\_rooms | Monthly\_rent |

|  |  |  |
| --- | --- | --- |
| Employees | | |
| Building\_name | Nr\_rooms | Monthly\_rent |

# 1NF:

All tables are en 1NF because all attributes are atomic.

|  |  |  |  |
| --- | --- | --- | --- |
| Employees | | | |
| Bsn | Name | surname | Main\_headquarters |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Adress | | | | | | |
| bsn | Country | Postalcode | City | Street | Nr. | residence |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Positions | | | | | |
| Bsn | Position\_name | Description | Hour\_fee | Amount\_of\_hours | Project\_id |

|  |  |  |  |
| --- | --- | --- | --- |
| Projects | | | |
| Id | budget | Allocated\_hours | headquarters |

|  |  |  |
| --- | --- | --- |
| Headquarters | | |
| Building\_name | Nr\_rooms | Monthly\_rent |

|  |  |  |  |
| --- | --- | --- | --- |
| Degrees | | | |
| Bsn | Course | School | level |

## 2NF:

All tables are in 2NF because all attributes are atomic and there are no non-key attributes that are functionally dependent on a part of the primary key.

The functional dependencies are:

Country, postal\_code 🡪 city, street, nr.

Position\_name 🡪 description, hour\_fee

|  |  |  |  |
| --- | --- | --- | --- |
| Employees | | | |
| Bsn | Name | Surname | Main\_headquarters |

|  |  |  |  |
| --- | --- | --- | --- |
| Residence | | | |
| bsn | Country | Postalcode | residence |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Adress | | | | |
| Country | Postalcode | City | Street | Nr. |

|  |  |  |  |
| --- | --- | --- | --- |
| Work\_as | | | |
| Bsn | Position\_name | Amount\_of\_hours | Project\_id |

|  |  |  |
| --- | --- | --- |
| Positions | | |
| Position\_name | Description | Hour\_fee |

|  |  |  |  |
| --- | --- | --- | --- |
| Projects | | | |
| Id | budget | Allocated\_hours | headquarters |

|  |  |  |
| --- | --- | --- |
| Headquarters | | |
| Building\_name | Nr\_rooms | Monthly\_rent |

|  |  |  |  |
| --- | --- | --- | --- |
| Degrees | | | |
| Bsn | Course | School | level |

## 3NF:

All tables are in 3NF because all attributes are atomic and there are no non-key attributes that are dependent on a part of the primary key and no functional dependencies X🡪A where X is not a superkey of the table.

|  |  |  |  |
| --- | --- | --- | --- |
| Employees | | | |
| Bsn | Name | Surname | Main\_headquarters |

|  |  |  |  |
| --- | --- | --- | --- |
| Residence | | | |
| bsn | Country | Postalcode | residence |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Adress | | | | |
| Country | Postalcode | City | Street | Nr. |

|  |  |  |  |
| --- | --- | --- | --- |
| Work\_as | | | |
| Bsn | Position\_name | Amount\_of\_hours | Project\_id |

|  |  |  |
| --- | --- | --- |
| Positions | | |
| Position\_name | Description | Hour\_fee |

|  |  |  |  |
| --- | --- | --- | --- |
| Projects | | | |
| Id | budget | Allocated\_hours | headquarters |

|  |  |  |
| --- | --- | --- |
| Headquarters | | |
| Building\_name | Nr\_rooms | Monthly\_rent |

|  |  |  |  |
| --- | --- | --- | --- |
| Degrees | | | |
| Bsn | Course | School | level |

# ERD:

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The headquarters has also the attributes country and postal\_code that are foreign keys to country and postal\_code to adresses. But they are not implemented in this assignment. It has no influence on anything, so the software still works without it. The only thing is that the headquarters do not have addresses. Oh and adresses is spelled wrong(addresses) in this assignment…….

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