**Date**: 22.11.19

**Course Project – Assignment Number 1**

1. **ERD – presented in next page.**
2. **Explanation of how we have handled given constraints**

We have handled the next constraints, via these appropriate ways:

|  |  |  |
| --- | --- | --- |
| **ID** | **Constraint Description** | **How we took care of it** |
| **1** | An Employee can’t manage more than 2 Departments | Creating a "Head Of" relationship between Employee entity and Department entity. Then, we defined appropriate cardinal of the relationship, according to the constraint: (0,2) - since an employee can be a head of 0 to 2 Departments |
| **2** | A Car can't park twice in the same StartTime | Creating a "CarParking" weak entity, which has as keys: StartTime and CID. Using that, we take care a Car can’t park twice in the same StartTime, because every single tuple in the table has its unique key (StartTime and CID). |
| **3** | An Employee can be an OfficialEmployee or a ConstructorEmployee, but not both of them | Creating an Exclusive and Covering "ISA" relationship between the entities. Then, We marked "Exclusive" with a "X" sign and "Covering" with 2 lines connecting the relation to Employee entity. |
| **4** | A ConstructorEmployee can be registered to 5 Projects maximum | Creating an "Allocated For" relationship between ConstructorEmployee and Project entities. Then, the defined that a ConstructorEmployee can be registered for 0 to 5 Projects, by marking the cardinality: (0,5). |
| **5** | A Resident can't possess more than 3 TrachCans | Creacting a "Possesses" relationship between Resident and TrashCan entities. Then, we defined that a Resident can't possess more than 3 TrachCans, by marking the cardinality of (0,3). I.e, a Resident can possess 0 to 3 TrashCans. |

