**ITEC 3335 Database Development  
Fall 2018**

**Last Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Suggested Solution for HW #4**

This is a sample design. Other reasonable designs are acceptable.

The relation schema:

**F17**

|  |  |  |
| --- | --- | --- |
| 1 | Device(TagId, StartDate, IsActive, Model, Type, OS\_Id) | |
| Candidate Keys | | (1) TagId |
| Foreign Keys | | 1. OS\_Id references OS(OS\_Id) (Rule R1) |
| Nullable Attributes | | OS\_Id |
| Notes | | (1) Write notes about your assumptions and design here. (2) If there is no entry for a field (e.g. Foreign keys above), you may leave it blank. |
| 2 | OS(OS\_Id, Name, Version, Type) | |
| Candidate Keys | | (1) OS\_Id (Rule KC2), (2) {Name, Version, Type} |
| Foreign Keys | |  |
| Nullable Attributes | |  |
| Notes | | (1) OS\_Id is created as a surrogate primary key. (Rule KC2) |
| 3 | | Employee (Rule E1) (Emp\_Id, LName, FName, Phone, Email, SSN) (Rule A1) |
| Candidate Keys | | (1) Emp\_Id |
| Foreign Keys | |  |
| Nullable Attributes | | D, E |
| Notes | | (1) Write notes about your assumptions and design here. (2) If there is no entry for a field (e.g. Foreign keys above), you may leave it blank. |
| 4 | | Request (Rule E1)) (RequestId, Description, RequestTime) (Rule A1) |
| Candidate Keys | | (1) RequestId (Rule KC1) |
| Foreign Keys | | (1) Ex2\_E\_Id references Example1(E\_Id), (2) P references R(P) |
| Nullable Attributes | | Ex2\_E\_Id, P |
| Notes | | (1) Ex2\_Id is added as a surrogate key. It is recommended as other tables may reference it. (2) You may copy and paste to create more slotsyou’re your relations below. |
| 5 | | Technician(E\_Id, A, B, C, D, E) |
| Candidate Keys | | (1) E\_Id, (2) {A, C} |
| Foreign Keys | |  |
| Nullable Attributes | | D, E |
| Notes | | (1) Write notes about your assumptions and design here. (2) If there is no entry for a field (e.g. Foreign keys above), you may leave it blank. |
| 6 | | Expertise(Ex2\_Id, Ex2\_E\_Id, P, Q) |
| Candidate Keys | | (1) Ex2\_Id |
| Foreign Keys | | (1) Ex2\_E\_Id references Example1(E\_Id), (2) P references R(P) |
| Nullable Attributes | | Ex2\_E\_Id, P |
| Notes | | (1) Ex2\_Id is added as a surrogate key. It is recommended as other tables may reference it. (2) You may copy and paste to create more slotsyou’re your relations below. |
| 7 | | DeviceRequest(DR\_Id, TagId, RequestId) (Rule R2) |
|  | | (1) TagId, RequestId, (2) DR\_Id |
| Foreign Keys | | 1. TagId references Device(TagId), (2) REquestId references Request(RequestId) |
| Nullable Attributes | |  |
| Notes | | DR\_Id is created as a simple surrogate primary key. |
| 2 | | Example2(Ex2\_Id, Ex2\_E\_Id, P, Q) |
| Candidate Keys | | (1) Ex2\_Id |
| Foreign Keys | | (1) Ex2\_E\_Id references Example1(E\_Id), (2) P references R(P) |
| Nullable Attributes | | Ex2\_E\_Id, P |
| Notes | | (1) Ex2\_Id is added as a surrogate key. It is recommended as other tables may reference it. (2) You may copy and paste to create more slotsyou’re your relations below. |