**Instructor Teaching Tracker Database**

**Business Rules:**

1. A section may hire zero or more Instructors, but an Instructor must belong to only one section.
2. A section may own zero or more courses, but a course must be owned by only one section.
3. A course may generate zero or more classes, but a class can only be generated from one course.
4. An Instructor may teach zero or more classes, but a class must be taught by only one Instructor.
5. A schedule may be generated for zero or more classes, but a class must only have one schedule.

**Entities:**

|  |  |  |
| --- | --- | --- |
| Section\_Info | | |
| Section\_Num | INTEGER | Not null - pk |
| Section\_Name | VARCHAR(100) |  |
| Section\_Address | VARCHAR(100) |  |
| Section\_FoS | VARCHAR(100) |  |
| Section\_ZipCode | VARCHAR(10) |  |

|  |  |  |
| --- | --- | --- |
| Course\_List | | |
| Course\_Num | INTEGER | Not null – pk |
| Course\_Name | VARCHAR(100) |  |
| Course\_Author\_FName | VARCHAR(20) |  |
| Course\_Author\_LName | VARCHAR(20) |  |
| Course\_Desc | VARCHAR(1000) |  |
| Course\_Hours | INTEGER |  |
| Section\_Num | INTEGER | Not null - fk |

|  |  |  |
| --- | --- | --- |
| Instr\_Info | | |
| Instr\_Num | INTEGER | Not null – pk |
| Instr\_Address | VARCHAR(100) |  |
| Instr\_PhoneNum | VARCHAR(20) |  |
| Section\_Num | INTEGER | Not null - fk |
| Instr\_LName | VARCHAR(20) |  |
| Instr\_FName | VARCHAR(20) |  |
| Instr\_ZipCode | VARCHAR(10) |  |

|  |  |  |
| --- | --- | --- |
| Class\_Sched | | |
| Sched\_Num | INTEGER | Not null - pk |
| Sched\_Day | VARCHAR(100) |  |
| Sched\_Time | VARCHAR(10) |  |
| Sched\_Day\_Off | VARCHAR(100) |  |
| Sched\_Notes | VARCHAR(1000) |  |

|  |  |  |
| --- | --- | --- |
| Instr\_Classes | | |
| Instr\_Num | INTEGER | Not null – pk/fk |
| Sched\_Num | INTEGER | Not null – pk/fk |
| Course\_Num | INTEGER | Not null - fk |
| Class\_Notes | VARCHAR(1000) |  |
| Class\_Room | VARCHAR(5) |  |

**Relationships:**

1. Section\_Info has a one-to-many relationship to Course\_List
2. Section\_Info has a one-to-many relationship to Instr\_Info
3. Instr\_Info has a one-to-many relationship to Instr\_Classes
4. Course\_List has a one-to-many relationship to Instr\_Classes
5. Class\_Sched has a one-to-many relationship to Instr\_Classes

**Cardinalities:**

1. Section\_Info has a cardinality of (1,1) to Course\_List, while Course\_List has a cardinality of (0,N) to Section\_Info.
2. Section\_Info has a cardinality of (1,1) to Instr\_Info, while Instr\_Info has a cardinality of (0,N) to Section\_Info.
3. Course\_List has a cardinality of (1,1) to Instr\_Classes, while Instr\_Classes has a cardinality of (0,N) to Course\_List.
4. Instr\_Info has a cardinality of (1,1) to Instr\_Classes, while Instr\_Classes has a cardinality of (0,N) to Instr\_Info.
5. Class\_Sched has a cardinality of (1,1) to Instr\_Classes, while Instr\_Classes has a cardinality of (0,N) to Class\_Sched.