**ERD**

**Basic Entities :**

▪ **Educational centers**

**-CenterID (p.k)**

**- CenterName**

**- {Location}**

**- CenterType**

**- Email**

▪ **Course**

**- CourseID (p.k)**

**- CourseName**

**- CourseStatus ( course open or closed)**

▪**Appointment of Course**

**- Day**

**- Hour**

**- Year**

▪ **Class Room**

**- ClassID (p.k)**

**- Capacity**

▪ **Student**

**-StudentID (p.k)**

**-StudentName**

**- Email**

**-{Phone}**

**-City**

**Teacher ▪**

▪ **Payment**

**-PaymentID(p.k)**

**-Amount**

**- Received Date**

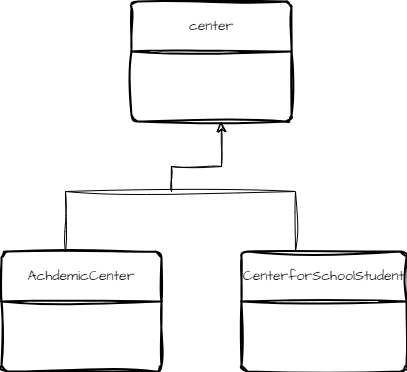
**Relationship**

**The center offers many courses, and one course is offered by more than one center. Therefore, the relationship between the center and the course is :Many to Many**

**On our website, the centers are divided into two types: Academic centers that offer courses in programming and other fields, and Center for school students.**

**So we decided to use the concept of Specialization To express these types ,** **Since these center is either academic or for school students, we used the Disjoint Specialization (so we have Higher-Level entity set and Lower-Level entity set ).**

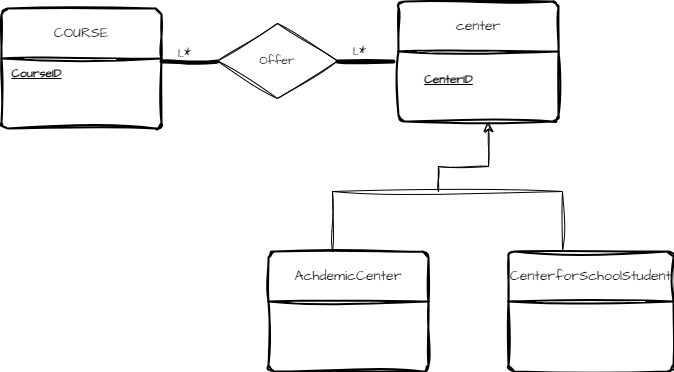
SuperClass

****

SubClass

**The Super entity *Center*  has the attribute Center-Type so all center evaluated on the defining Center-Type if it Academic so its belong to the Acadimic Center, Otherwise its belong to center for school student.**

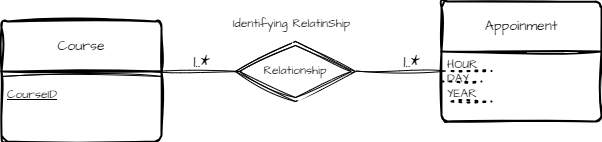
**Each center must offer courses, and each course must be linked to a center** **Total Participation .**

****

**Appointment of Course is a** **weak entity Because its existence depends on the existence of the course itself .**

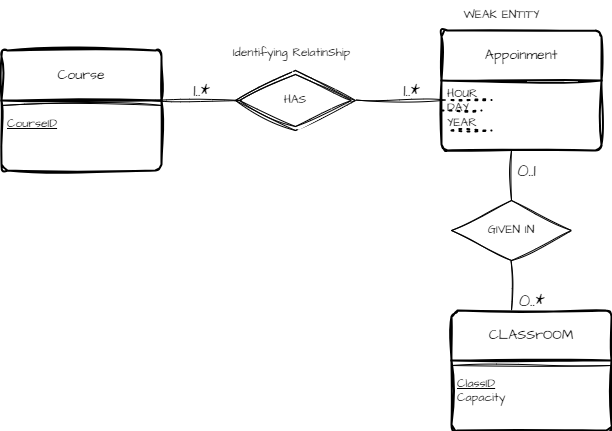
**Each course has more than one Appointment and vice versa, so the relationship between the Course and Appointment is :Many to Many**

**Each appointment is linked to a course and each course is linked to an appointment Total** **Participation**

****

**The relationship between the** **appointment and class is: Many to one.**

**Partial Participation on the part of appointment and class.**

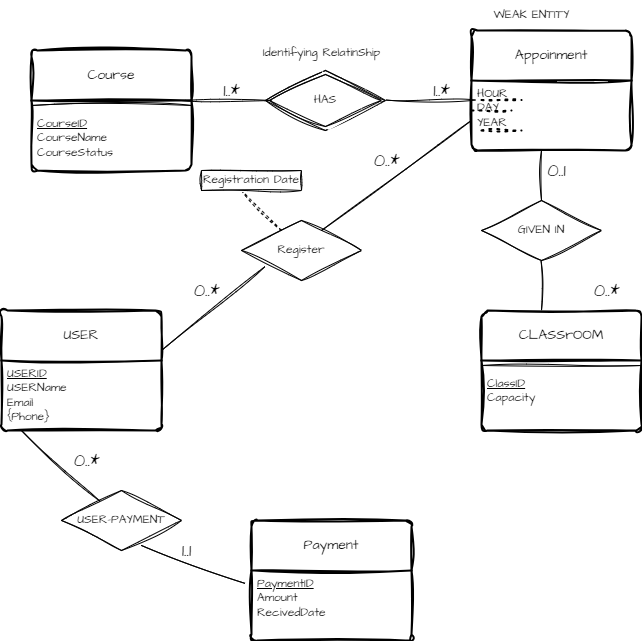
****

**The relationship between the student and appointment is Many to Many .**

**Partial participation on the part of the appointment and Total from student.**

**The relationship between the user and payment is one to Many .**

**Partial** **participation on the part of user and Total participation on the part of payment.**

****

**Final ERD**

**Summary OF Relationship**

**Center Course**

**Many to Many From Center To Course**

**1 \***

**\* 1**

**\* \***

**Course Appointment**

**Many to Many From Course To Appointment**

**1 \***

**\* 1**

**\*\***