DEPARTMENT(<u>DID</u>, DeptName, OfficeLocation, $\widehat{ChairID}$)

DEPARTMENT(<u>DID</u>, DeptName, OfficeLocation, (*ChairID*))

Specify Obvious Elements

DEPARTMENT(<u>DID</u>, DeptName, OfficeLocation, *ChairID*)

Table DEPARTMENT
    Attribute DID

    Attribute DeptName

    Attribute OfficeLocation

    Attribute ChairID

    Primary Key (DID)
    Foreign Key ChairID **References** FACULTY(FID)

DEPARTMENT(DID, DeptName, OfficeLocation, (*ChairID*))

Table DEPARTMENT

    Attribute DID

    Attribute DeptName

    Attribute OfficeLocation

    Attribute ChairID

    Primary Key (DID)
    Foreign Key ChairID **References** FACULTY(FID)

Now determine the other elements

DEPARTMENT(<u>DID</u>, DeptName, OfficeLocation, *(ChairID)*)

Table DEPARTMENT

    Attribute DID
    Type

    Attribute DeptName
    Type

    Attribute OfficeLocation
    Type

    Attribute ChairID
    Type

    Primary Key (DID)
    Foreign Key ChairID **References** FACULTY(FID)

DEPARTMENT(<u>DID</u>, DeptName, OfficeLocation, $\boxed{\textbf{\textit{ChairID}}}$)

Table DEPARTMENT

    Attribute DID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute DeptName
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute OfficeLocation
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute ChairID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Primary Key (DID)
    Foreign Key ChairID **References** FACULTY(FID)

FACULTY(<u>FID</u>, LastName, FirstName, Rank, Tenured, *DepartmentID*)

FACULTY(FID, LastName, FirstName, Rank, Tenured, *DepartmentID*)

Table FACULTY

    Attribute FID

    Attribute LastName

    Attribute FirstName

    Attribute Rank

    Attribute Tenured

    Attribute DepartmentID

    Primary Key (FID)
    Foreign Key DepartmentID References Department(DID)

FACULTY(FID, LastName, FirstName, Rank, Tenured, (DepartmentID))

Table FACULTY

    Attribute FID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute LastName
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute FirstName
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute Rank
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute Tenured
    ype   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute DepartmentID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Primary Key (FID)
    Foreign Key DepartmentID References Department(DID)

STUDENT(<u>STID</u>, LastName, FirstName, Major, Level, GPA, *AdvisorID*)

STUDENT(STID, LastName, FirstName, Major, Level, GPA, *AdvisorID*)

Table STUDENT

    Attribute STID

    Attribute LastName

    Attribute FirstName

    Attribute Major

    Attribute Level

    Attribute GPA

    Attribute AdvisorID

    Primary Key (STID)
    Foreign Key AdvisorID References Faculty(FID)

STUDENT(STID, LastName, FirstName, Major, Level, GPA, *AdvisorID*)

Table STUDENT

    Attribute STID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute LastName
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute FirstName
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute Major
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute Level
    ype   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute GPA
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute AdvisorID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Primary Key (STID)
    Foreign Key AdvisorID References Faculty(FID)

COURSE(<u>CID</u>, Title, *DeptOffering*, CreditHours)

COURSE(CID, Title, *DeptOffering*, CreditHours)

Table Course
    Attribute CID

    Attribute Title

    Attribute DeptOffering

    Attribute CreditHours

    Primary Key (CID)
    Foreign Key DeptOffering References Department(DID)

COURSE(CID, Title, *DeptOffering*, CreditHours)

Table Course
    Attribute CID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute Title
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute DeptOffering
     ype   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute CreditHours
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Primary Key (CID)
    Foreign Key DeptOffering References Department(DID)

SECTION(<u>SectionID</u>, *CourseID*, SectionNumber, Semester, Year, *InstructorID*)

SECTION(<u>SectionID</u>, *CourseID*, SectionNumber, Semester, Year, *InstructorID*)

Table SECTION

    Attribute SectionID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute CourseID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute SectionNumber
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute Semester
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute Year
    Type   INT? DECIMAL(p,d) CHAR(?) VARCHAR(?)

    Attribute InstructorID
    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Primary Key (SectionID)
    Foreign Key CourseID References Course(CID)
    Foreign Key InstructorID References Faculty(FID)

SECTION(SectionID, *CourseID*, SectionNumber, Semester, Year, *InstructorID*)

Table SECTION

    Attribute SectionID

    Attribute CourseID

    Attribute SectionNumber

    Attribute Semester

    Attribute Year

    Attribute InstructorID

    Primary Key (SectionID)
    Foreign Key CourseID References Course(CID)
    Foreign Key InstructorID References Faculty(FID)

CLASS(*SectID*, *StudentID*, Grade)

CLASS(***SectID***, ***StudentID***, Grade)

Table CLASS

    Attribute SectID

    Attribute StudentID

    Attribute Grade

    Primary Key (SectID,StudentID)
    Foreign Key SectID References Section(SectionID)
    Foreign Key StudentID References Student(STID)

CLASS(***SectID***, ***StudentID***, Grade)

Table CLASS

    Attribute SectID

    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute StudentID

    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Attribute Grade

    Type   INT? DECIMAL(p,d)? CHAR(?) VARCHAR(?)

    Primary Key (SectID,StudentID)

    Foreign Key SectID References Section(SectionID)
    Foreign Key StudentID References Student(STID)