**Step 1**

**1.1**

**1.** 1. Offer can be divide into three child classes as Grad\_Sheme\_Offer,Job\_Offer and Placement\_Offer.

2. The primary key of the parent class offer is added to the three child classes as a foreign key and as a primary key.

3. One offer can’t have any Grad\_Sheme\_Offer,Job\_Offer , Placement\_Offer and Offer can have maximum of one Grad\_Sheme,Job\_Offer an a Placement\_Offer.

4. One Grad\_Sheme\_Offer, Job\_Offer and Placement\_Offer can have minimum and maximum of one offer.

**2.** 1. Event is broken down into child class name EventType.

2. Primary key parent class Event is added to the subclass EventType as a primary key and a foreign key.

3. Flags of the two sub entities Presentation and Job\_Fair is added to the child class EventType and the attribute of the sub entity Presentation is also added to the child class EventType.

4. One Event cannot be any Event Type and one Event can be maximum of one EventType.

5. One EventType may have minimum and maximum of one EventType.

**3.** 1. Student is breakdown into a child class as Graduate\_Student as the {optional} participation is taken as {optional,OR},because there is only one child class, so it should definitely participate as there are not no other child classes . (In {optional,OR} there is a comparison between child classes and one should definitely participate )

2. Primary key of Student is added to the Graduate\_Student as a primary key and a foreign key, while all the attributes of Graduate is added to the newly created child class Graduate\_Student.

3.One Student cannot be any Graduate\_Student and can be maximum of one Graduate\_Student.

4. One Graduate\_Student can have maximum of one Student.

**Step 2**

**2.2**

**1.** 1. Staff and Event Parent Classes are connected to one child class named Staff\_Event as it has many to many relationship.

2. Primary keys of Staff and Event Parent classes are added to the Staff\_Event child class as a foreign key and date is taken as a primary key.

3. Staff and Event may not have any Staff\_Event and have maximum of many events.

4. Staff\_Event child class is for minimum and maximum of one Staff and one Event parent classs.

**2.**1. Job an Event\_Type is connected to one child class namely Job\_EventType as it has many to many relationships.

2**.** Primary keys of Job and EventType is added to the Job\_EventType child class as primary and foreign keys.

3. One job many not have any Job\_EventType and have maximum of many EventTypes.

4. One EventType is for minimum of one Job\_EventType and maximum of many Job\_EventTypes.

5. One Job\_EventType have minimum and maximum of one Job and one EventType.

**3.**1. Event and consultant parent classes are connected to one Event\_Consultant as it has many to many relationships.

2. Primary keys of Event and Consultant are added to the Event\_Consultant as foreign and primary keys.

3. One Event has minimum of one Event\_Consultant an maximum of many Event\_Consultants.

4. One Consultant may not have any Event\_Consultant and have maximum of many Event\_Consultants.

5. One Event\_Consultant is for minimum and maximum of one Event and one Consultant parent classes.

**4.**1. EventType and Graduate\_Student parent classes are connected to one child entity namely EventType\_GraduateStudent , as it has many to many relationships.

2. Primary keys of EventType and GraduateStudent parent classes are added as foreign and primary keys to EventType\_GraduateStudent.

3. EventType and GraduatStudent may not have any EventType\_GraduateStudent and have maximum of many EventType\_GraduateStudent.

4. One EventType\_GraduateStudent is for minimum and maximum of one EventType and one GraduateStudent parent classes.

**Step 2**

**3.1**

**1.**1. Application entity and Support\_Session entities do not connect with a new child entity as it has one to one relationship optional on one side.

2. Primary key of the Application is added to the Support\_Session entity as a foreign key.

3. Application may not have any Support\_Session and have maximum of one Support\_Session.

4. One Support\_Session assists with one and only one Application.

**3.2**

**1.**1. Company and Staff entities do not connect with a new child entity as it has one to much relationship.

2. Primary key of Company is added to the Staff entity as a foreign key.

3. Company may not employ any Staff and employ maximum of many Staffs.

4. One Staff has one and only one company.

**2.**1**.** Interview and Application entities do not connect with a new child entity as it has one to many relationships.

2. Primary key of Application is added to the Interview entity as a foreign key.

3. One Interview has one and only one Application.

4. One Application may not lead to any Interview and leads to maximum of many Interviews.

**3.** 1.Company and Offer entities do not connect with a new child entity as it has one to many relationship.

2. Primary key of Company is added to the Offer entity as a foreign key.

3. One Company may not propose any Offer and proposes many Offers.

4. One Offer has one and only one Company.

**4.** 1.Application and Student entities do not connect with any child entity as it has one to many relationships.

2. Primary key of Student entity is added to the Application entity as a foreign key.

3. One Application has one and only one Student.

4. One Student may not place any Application and places maximum of many Applications.

**5.** 1.Offer and Application entities do not connect with any new child entity as it has one to many relationships.

2. Primary key of Offer entity is added to the Application entity as a foreign key.

3. One Offer may not have any application and have maximum of many Applications.

4. One Application is for one and only one Offer.

**6.** 1.Support\_Session and Consultant entities do not connect with any new child entity as it has one to many relationships.

2. Primary key of Consultant is added to the Support\_Session entity as a foreign key.

3. One Support\_Session has one and only one Consultant.

4. One Consultant may not provide any Support\_Session and provides maximum of many Support\_Sessions.

**7.** 1. Offer and Consultant entities do not connect with a new child entity as it has one to many relationships.

2. Primary key Consultant is added to the Offer entity as a foreign key.

3. One Offer has one and only one Consultant.

4. One Consultant may not assign to any Offer and is assigned to many Offers.

**8.** 1.Consultant is connected to itself , therefore no new child entity is connected.

2. Primary key of Consultant is added to the Consultant itself as a foreign key as it has one to many relationships.

3. One Consultant may not mentor any Consultant and mentors many Consultants.

4. One Consultant may not have any Consultant and have maximum of one Consultant.

**9.** 1.Grad\_Sheme\_Offer and EventType entities do not connect with a new child event as it has one many relationship.

2. Primary key of Grad\_Sheme \_Offer entity is added to the EventType entity as a foreign key.

3. One Grad\_Sheme\_Offer may not present at any EventType and presents at maximum of many EvenTypes.

4. One EventType has one and only one Grad\_Sheme\_Offer.