Description

1. Resources is parent class of BookResourcesDetails and DigitalResourcesDetails
2. Following indexes are added:
   1. Primary Key, Foreign Key and Unique Indexes automatically added to perform fast join
   2. For BookResourcesTable lookupResource index (Title, AvailableCopy, Location) is added to fetch the information quickly
   3. For DigitalResourcesTable lookupResource index (Title, Location) is added for same purpose
3. Following Constraints are added:
   1. All Aqua Color diamond dots represent NOT NULL constraint
   2. All Red Color diamond dots represent FK constraint
   3. All PK are auto incremented except NetID, ISBN, and DigitalResourceDetails.Title
   4. UNIQUE for
      1. Department.DepartmentName
      2. Role.RoleName
      3. ContactMethod.ContactType
      4. User.UTDID
      5. DigitalResourceDetails.Location
      6. BookResourceDetails.Location
      7. Publisher.PublisherName
      8. Resources.ResourceType
      9. Genre.GenreName
   5. CHECK for
      1. Role.MaximumDays >0
      2. Role.MaximumItems >0
      3. UserLoanedDetails.DueDate >= current\_date
      4. UserLoanedDetails .Fine >=0
      5. Resources.FinePerDay >0
      6. Resources.MaximumFine >=Resources.FinePerDay
      7. BookResourceDetails.Edition >0
      8. BookResourceDetails.AvailableCopy >=0
      9. BookResourceDetails.PublicationDate <= current\_date and > date(1000-01-01)
      10. BookResourceDetails.Pages >0
      11. DigitalResourceDetails.RunningTime >0
      12. DigitalResourceDetails.Year >0
      13. User.Gender in (M, F)
   6. Though contraints on email and phone pattern can be put but it is not possible in my design as only 1 table with 1 attribute is storing all contact details

CONSTRAINT CHK\_EMAIL CHECK (Email like '%\_@\_\_%.\_\_%')

CONSTRAINT PHONE\_NUMBER\_CHECK CHECK(Phone\_Number not like '%[^0-9]%')