**Name: Anas Al-Abdallat  
1-Define Scope [Recorded Courses System].**

**2-Mandatory Object (Users, Courses, Admin).**

**3-Software Type (Customize) – (Requirement Techniques).**

**4-Summarizing System Object. (Abstraction).**

**(Id, CreatedBy, UpdateBy, IsActive, UpdateDate, CreationDate).**

1. **Admin == {email, password}.**
2. **Users == (learners, instructors) by [Role] ==>(ID, email, password, profile image, bio).**
3. **Courses == (ID, title, description, category, level, price, discount (if any), Totalduration).**
4. **Lessons == (ID, title, video file, duration).**
5. **Ratings == (Comments, Rate, Comment).**
6. **Reviews.**
7. **Categories == (ID, title, description, category, level, price, discount (if any), Total duration).**
8. **Bookmark == (Title, Category).**
9. **Enrollment == (ID, title, description, category, level, Total duration).**
10. **Report == (revenue, enrollments, and instructor performance).**

**5-Generlization and Specialization (Restructuring).**

1. **Admin, Learners, Instructors = {Users}.**
2. **Users, Courses, Lessons, Ratings, Categories, Bookmark, Enrollment, Report = {Parent Entity}.**

**6-Define Relationships:**

1. **Inheritance  
   A-) Combine everything in one table. {Users}  
   B-) Create child and add the shared element in each child individually. {Parent Entity}  
   C-) Create Parent and Child and build relationship between them.**
2. **Composition.  
   Users & Courses (M-M).  
   Users & Lessons (M-M).  
   Users & Ratings (M-M).   
   Users & Categories (M-M).  
   Users & Bookmark (1-M).  
   Users & Enrollment (1-M).  
   Users & Reports (1-M).**
3. **Association.**

=============================Result-1=================================  
**Users, Courses, Lessons, Ratings, Categories, Bookmark, Enrollment, Report** =====================================================================

**{Functional Requirement to Admin}**

**0- Admin account should be available before anything.**

**1-Admin will login in to the system.**

**2-Admin should be able to {Manage Users}.**

**3-Admin should be able to add users (learners, instructors).**

**{ID, Email, Password, Profile Image, Bio}.**

**4-Explore Users By {Email, Image}.**

**5-Admin should be able to Deactivate OR Activate Users Account By {ID, Email}.**

**6-Admin should be able to Edit Info Users {Email, Bio}.**

**7-Admin should be able to {Manage Courses}.**

**8-Admin should be able to View Courses By {Title, Category, Rate}.**

**9-Admin should be able to Explore Courses Details By {Title, description, Category, Rate, Price, Discount [of any], Level, Total duration}.**

**10-Admin should be able to Add {New Course}.**

**11-Admin should be able to {Edit OR Delete} Courses.**

**12-Admin should be able to {Manage categories}.**

**13-Admin should be able to Explore Categories By {Name, Description}.**

**14-Admin should be able to Explore Categories By {Name, Description}.**

**15-Admin should be able to [Add, Edit, Delete] Categories By {Name, Description}.**

**16- Admin should be able to [Add, Edit, Delete] Price Plan.**

**{Functional Requirement to instructors}**

**1-instructors should be able login to the system by {Email, Password}.**

**2- instructors should be able to Upload Courses.**

**3-instructors should be able to Add Lessons.**

**4-instructors should be able to Set Prices.**

**5-instructors should be able to View Courses.**

**6-instructors should be able to Enrollments Courses.**

**7-instructors should be able to Reviews Courses.**

**8-instructors should be able to Rating Courses.**

**9-instructors should be able to Explore Learner.**

**10-instructors should be able to Log out.**

**{Functional Requirement to Learners}**

**1-Learners should be able login to the system By {Email, Password}.**

**2-Learners should be able to Change profile Image.**

**3-Learners should be able to Change Account Password.**

**4-Learners should be able to Change Email Account.**

**5- Learners should be able to Browse Courses By {Title, description, category, level, price, discount (if any).**

**6-Learners should be able to search Courses By {Title, description, category, level, price, discount (if any).**

**7-Learners should be able to Filter Courses By {Title, description, category, level, price, discount (if any).**

**8-Learners should be able to Bookmark favorite Courses and Leave Reviews.**

**9-Learners should be able to View Rating Course.**

**10-Learners should be able to Reviews Courses.**

**11-Learners should be able to Rating Courses.**

**12-Learners should be able to Explore Instructor.**

**13-Learners should be able to Download Video by Link.**

**14-Learners should be able to Log out.**