**Week 4: Class Diagrams & Initial Implementation**

**Deliverable:** Class Diagram Document

* **Class Diagram with Applied Design Patterns**A diagram of a computer

  AI-generated content may be incorrect.
* **Explanation of Responsibilities per Class  
  1. Account (Abstract)**

Common properties and methods for User and Company

Attributes: id, email, password, name, loginEmail, loginPassword

Methods: login, logout, resetPassword

**2. User (Implements Account)**

Manages job search activities

Can update/view profile, search jobs, apply, save jobs, view proposals & notifications

Methods include applyToJob, saveJob, viewSavedJobs, replyToMessages

**3. Company (Implements Account)**

Manages job postings

Posts jobs, manages proposals, schedules interviews, sends offers

Methods like postJob, respondToProposal, sendOtherApplicationStatus

**4. Profile**

Represents a User’s detailed profile

Includes name, skills, experience, education, contact info

**5. CompanyProfile**

Contains additional company information (description, industry, location, website)

**6. Filter**

Used to define job search filters (location, salary, experience level)

**7. Message**

Messaging between users/companies (sender, receiver, timestamp)

**8. Reminder**

Scheduled reminders (title, description, due date)

**9. Notification**

Alerts for user actions/events (message, timestamp, isRead)

**10. Job**

Represents a job posting

Includes title, description, location, salary, post date, company

**11. JobDetails**

Extra job analytics (views, application count)

**12. Proposal**

Represents a job application submitted by a user

Includes resume, submission date, status

**13. Interview**

Scheduled interviews for a proposal

**14. Offer**

Job offers sent to users (position, salary, terms)

**15. AuthManager**

Singleton class to manage login/logout

Tracks current user

**16. AccountFactory**

Creates accounts based on type (User, Company)

**17. MainActivity**

Entry point of the application

**Relationships Between Classes**

* Account is an abstract superclass, implemented by User and Company.
* User has a 1-to-1 relationship with Profile.
* Company has a 1-to-1 relationship with CompanyProfile.
* User and Company can send/receive Messages.
* User receives Notifications and sets Reminders.
* User applies to Job by submitting a Proposal.
* Proposal is related to one Interview or one Offer.
* Job is posted by a Company.
* Job has JobDetails.
* AuthManager uses Account for login management.
* AccountFactory creates Account objects.
* MainActivity uses AccountFactory.