**LINKEDIN ANALYSIS**

1) LinkedIn is a business- and employment-oriented online service that operates via websites and mobile apps which is launched on May 5, 2003. Firstly, the platform is used for professional networking and career development. Now, LinkedIn is a social networking website for companies and people. The purpose of LinkedIn is to allow people and companies to network with each other. LinkedIn lets people prepare a profile page where they can share their education, skills, hobbies, and work experiences with other people. On LinkedIn, people can follow other people to share their experiences or companies to stay up to date with job offers. Users can share, like, save or comment on a post. Also, LinkedIn can be used to create or join groups, send messages, etc.

**2)**

**2a.**

It allows users to expand their networks in the business world by introducing themselves appropriately. So that the user, if he is looking for a job, can examine the job offers suitable for him and view the status of his other connections. If the account is a company account, this company can find the employees they are looking for easier and faster thanks to LinkedIn. In addition, both types of users can share posts, communicate with other accounts, so LinkedIn offers us a professional social media opportunity.

2b.

**Key Entities:**

Users -> User must be a company or a person account

Company -> Company account where people work and can offer people an optional job

Person -> Person accounts that have worked or are working somewhere, have hobbies, skills, certificates; graduated from a school, etc.

Posts –> shared, liked, saved, commented by the user

Forum-> where posts are shared

Job Alert- offer that companies can create and that can be accepted by the user

Experience -> shows the experience of employees in companies

Group -> users can create a new group or join already created groups

Skill -> users can have many skills

Hobby -> users may have multiple hobbies

Certificate-> The user may have gained a certificate because of various evaluations.

**c. What are the characteristics of each entity?**

**USERS**

* **E-mail**
* **UserID**
* **Password**
* **Phone**
* **Address**

**The user can be a person, a company:**

**PERSON**

* Person ID -PK
* Person’s Name (FName, Minit, LName)
* Date of Birth
* Sex
* CV

**COMPANY**

* CompanyName
* EmployeeNumber

**POST**

**The users can post something with others, or like or comment on others’ posts.**

* Post-ID
* ContentType
* PostedDate

GROUP

The user can create a group or join another group.

* G-ID (Group-ID)
* GroupName
* MemberNo

COURSE

The user can take a course or give a course to another people.

* CCode (CourseCode)
* CourName(CourseName)
* Level

CERTIFICATE

The user can earn certificate.

* Cer-ID (Certificate ID)
* CourseID
* UserID
* CerDate(Certificate Date)
* CerName(Certificate Name)

SKILL

The user can have skills, skills have id and name.

* SkID(Skill ID)
* SName(Skill Name)

HOBBY

The user also can have hobbies.

* H-ID(HobbyID)
* HName(HobbyName)

**d. What relationships exists among the entities?**

The user must have a company or person type. Companies can *create* job offers and people can *view* this offer. Users can *share*, *like*, *save* or *comment* as many posts as they want. Users can follow or send to messages to other users. Also, persons can *create* a group or can be *member of* others’ groups. Person also can *have* certificate, skills, or hobbies. Person can have *experience* with companies.

COMPANY 1 CREATE N EXPERIENCE

PERSON M VIEW N EXPERIENCE

COMPANY 1 CREATE N JOB\_AD

JOB\_AD N VIEW M PERSON

PERSON 1 CREATE N GROUP

GROUP M MEMBER\_OF N PERSON

PERSON N TAKES M COURSE

COURSE N GIVES 1 PERSON

PERSON N HAS M CERTIFICATE

PERSON N SKILLS M SKILL

USER N MESSAGES M

USER N FOLLOWS M

USER N LIKES M POST

USER 1 POSTS N POST

USER N COMMENTS M POST

USER N SAVES M POST

**e. What are the constraints related to entities, their characteristics and the relationships among them?**

CONSTRAINTS:

GRUP:

CONSTRAINT pk\_GRUP primary key (GroupID), CONSTRAINT fk\_GRUP\_PERSON foreign key (CreatorPersonUserID) references PERSON(PersonUserID)

MEMBER\_OF:

CONSTRAINT pk\_MEMBER\_OF primary key (MemberPersonUserID, MemberGroupID),

CONSTRAINT fk\_MEMBER\_OF\_PERSON foreign key (MemberPersonUserID) references PERSON(PersonUserID),

CONSTRAINT fk\_MEMBER\_OF\_GRUP foreign key (MemberGroupID) references GRUP(GroupID)

COMPANY:

CONSTRAINT uq\_CompanyName UNIQUE (CompanyName),

CONSTRAINT pk\_COMPANY primary key (CompanyUserID),

CONSTRAINT fk\_COMPANY\_USERS foreign key (CompanyUserID) references USERS(UserID)

EXPERIENCE:

CONSTRAINT pk\_EXPERIENCE primary key (Company, ExperienceUserID),

CONSTRAINT fk\_EXPERIENCE\_COMPANY foreign key (Company) references COMPANY(CompanyUserID),

CONSTRAINT fk\_EXPERIENCE\_PERSON foreign key (ExperienceUserID) references PERSON(PersonUserID)

JOB\_ALERT:

CONSTRAINT pk\_JOB\_ALERT primary key (AlertID, AlertingCompanyUserID),

CONSTRAINT fk\_JOB\_ALERT\_COMPANY foreign key (AlertingCompanyUserID) references COMPANY(CompanyUserID)

VIEW\_ALERT:

CONSTRAINT pk\_VIEW\_ALERT primary key (ViewingPersonID, ViewedAlertID),

CONSTRAINT fk\_VIEW\_ALERT\_PERSON foreign key (ViewingPersonID) references PERSON(PersonUserID),

CONSTRAINT fk\_VIEW\_ALERT\_JOB\_ALERT foreign key (ViewedAlertID) references JOB\_ALERT(AlertID)

FORUM:

CONSTRAINT pk\_FORUM primary key (ForumTitle),

CONSTRAINT fk\_FORUM\_USERS foreign key (CreatorUserID) references USERS(UserID)

POST:

CONSTRAINT pk\_POST primary key (PostID),

CONSTRAINT fk\_POST\_FORUM foreign key (ForumTitle) references FORUM(ForumTitle),

CONSTRAINT fk\_POST\_USERS foreign key (PosterUserID) references USERS(UserID)

COMMENTS:

CONSTRAINT pk\_COMMENTS primary key (CommentingUserID, CommentedPostID),

CONSTRAINT fk\_COMMENTS\_USERS foreign key (CommentingUserID) references USERS(UserID)

SAVES:

CONSTRAINT pk\_SAVES primary key (SavingUserID, SavedPostID),

CONSTRAINT fk\_SAVES\_USERS foreign key (SavingUserID) references USERS(UserID)

LIKES:

CONSTRAINT pk\_LIKES primary key (LikingUserID, LikedPostID),

CONSTRAINT fk\_LIKES\_USERS foreign key (LikingUserID) references USERS(UserID)

SKILL:

CONSTRAINT pk\_SKILL primary key (SkillID),

CONSTRAINT fk\_SKILL\_USERS foreign key (SkillPersonUserID) references PERSON(PersonUserID)

HOBBY:

CONSTRAINT pk\_HOBBY primary key (HobbyID),

CONSTRAINT fk\_Hobby\_USERS foreign key (HobbyPersonUserID) references PERSON(PersonUserID)

HAS:

CONSTRAINT pk\_HAS primary key (HobbysPersonUserID, HHobbyID),

CONSTRAINT fk\_HAS\_PERSON foreign key (HobbysPersonUserID) references PERSON(PersonUserID),

CONSTRAINT fk\_HAS\_HOBBY foreign key (HHobbyID) references HOBBY(HobbyID)