DBMS Project Report

Mock Professional Website

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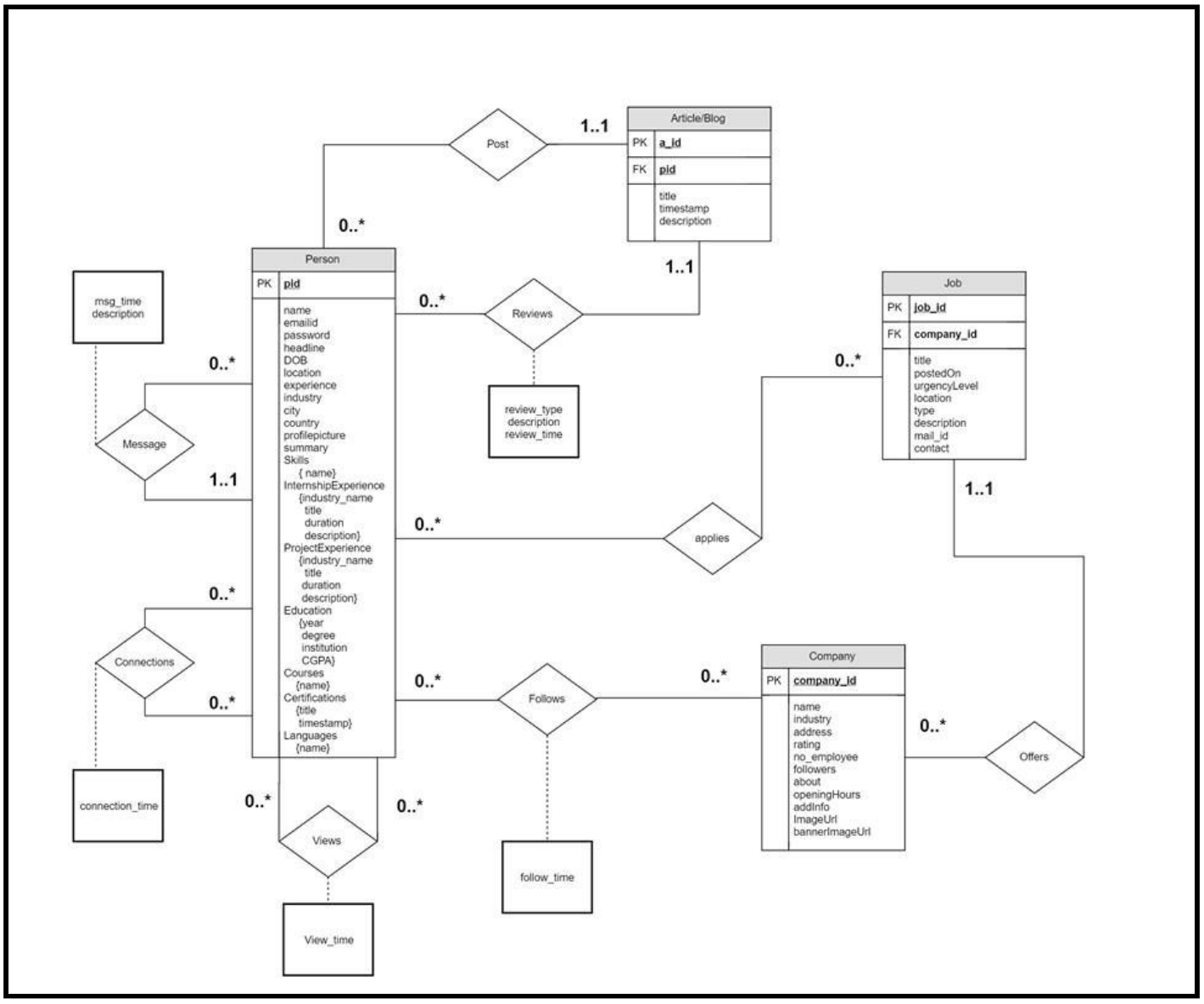
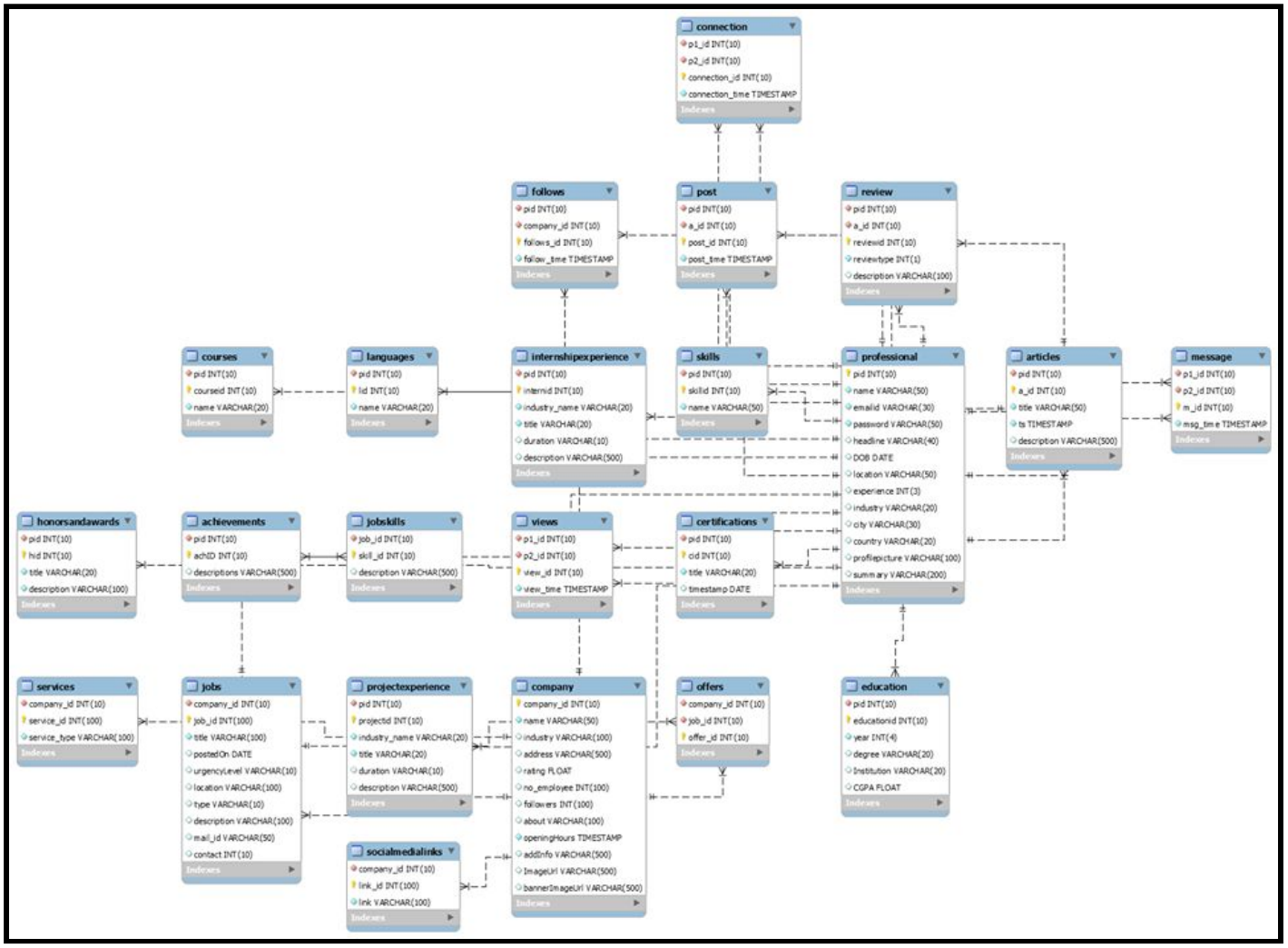
E-R Diagram:



Schema Diagram:



Assumptions:

1) Every professional has unique email_ID.
2) A user can like a post only once.
3) Each user can access his account only through one system at a time for the purpose of submitting reviews. Although, an account may be logged in through multiple systems at a time.

Functional Dependencies:

Professional :

pid -> name, email_id, password, headline, DOB , location , experience , industry ,city country, profile_picture , summary

Company:

company_id -> name, industry, address, rating, no_employee, followers, about, openingHours, addInfo, ImageUrl, bannerImageUrl

Job:

job_id -> company_id, title, postedOn, urgencyLevel, location, type, description, mail_id, contact

Article:

a_id -> pid, title, ts, description

Skills:

skilid -> pid, name

IntershipExperience :

internid -> pid, industry_name, title, duration, description

ProjectExperience :

projectid -> pid, industry_name, title, duration, description

Education :

educationid -> pid, year, degree, Institution, CGPA

Achievements:

achID -> pid, description

Courses :

courseid -> pid, name

HonorsandAwards :

hid -> pid, title, description

Certifications :

cid -> pid, title, timestamp

Languages :

lid -> pid, name

socialMediaLinks :

link_id -> link, company_id

Services :

service_id -> company_id, service_type

JobSkills :

job_id -> skill_id, description

Connection :

connection_id -> p1_id, p2_id, connection_time
(p1_id, p2_id) -> connection_id, connection_time

Follows :

follows_id -> pid, company_id, follow_time

Offers :

offer_id -> job_id, company_id

Views :

view_id -> p1_id, p2_id, view_time

Review :

reviewid -> reviewtype, description, pid, a_id

Post:

post_id -> pid, a_id, post_time

Message:

m_id -> p1_id, p2_id, msg_time

JobApplication :

apply_id -> pid, job_id

Database Normalization:

The keys, prime and nonprime attributes for each table in database are mentioned before decomposition. The decomposition up to 3NF in such a way that all the dependencies are preserved and the decomposed tables form a lossless join.

1NF:

For every possible multivalued attribute,e.g skills,project info, internship info etc, we have made separate tables.So, every table follows atomicity. So this database is in 1NF.

No multivalued attribute, already in 1NF.

2NF:

All the candidate keys are single attribute keys, therefore the table is in 2NF.

3NF:

No non-prime attribute determines any other non-prime attribute, so database is in 3NF.

Final Normalized Tables :

Professional (pid, name, email_id, password, headline, DOB , location , experience , industry ,city country, profile_picture , summary)
Company (company_id, name, industry, address, rating, no_employee, followers, about, openingHours, addInfo, lmageUrl, bannerImageUrl)
Job (job_id, company_id, title, postedOn, urgencyLevel, location, type, description, mail_id, contact)
Article (a_id, pid, title, ts, description)
Skills (skilid, pid, name)
IntershipExperience (internid, pid, industry_name, title, duration, description)
ProjectExperience (projectid, pid, industry_name, title, duration, description)
Education(educationid, pid, year, degree, Institution, CGPA)
Achievements (achID, pid, description)
Courses (courseid, pid, name)
HonorsandAwards (hid, pid, title, description)
Certifications (cid, pid, title, timestamp)
Languages (lid, pid, name)
socialMediaLinks (link_id, link, company_id)
Services (service_id , company_id, service_type)
JobSkills (job_id , skill_id, description)
Review (reviewid, reviewtype, description, pid, a_id)
Follows (follows_id, pid, company_id, follow_time)
Post (post_id, pid, a_id, post_time)
Offers (offer_id , job_id, company_id)
Views (view_id, p1_id, p2_id, view_time)
Connection (connection_id, p1_id, p2_id, connection_time)
Message (m_id, p1_id, p2_id, msg_time)
JobApplication (apply_id, pid, job_id)