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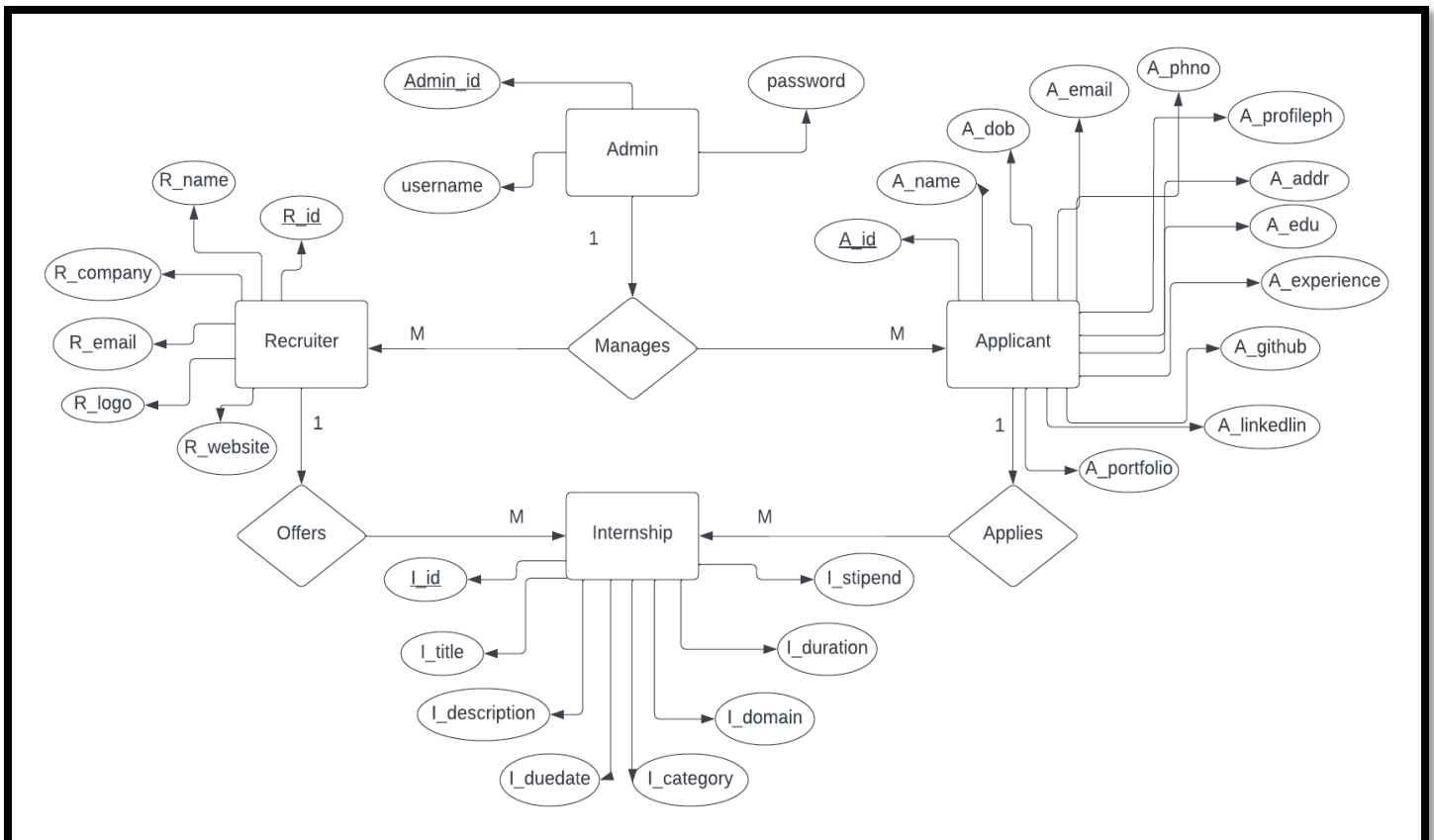
Roll No.: SYCOC303   Course Name: Project Based Learning - II

Div: C   Batch: C4   Course Code: BCE4409

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Problem Statement:

Propose a Conceptual Design using ER features using tools like ERD plus, ER Win etc. (Identifying entities, relationships between entities, attributes, keys, cardinalities, generalization, specialization etc.) Convert the ER diagram into relational tables and normalize Relational data model.

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1) Entity – Relationship Diagram:

Reduction of ER Diagram into Tables:

Admin	Recruiter	Rec_Intern	Internship	App_intern	Applicant
Admin_id	R_id	R_id	I_id	A_id	A_id
username	R_name	I_id	I_title	I_id	A_name
password	R_company		I_description		A_dob
	R_email		I_duedate		A_email
	R_logo		I_category		A_phno
	R_website		I_domain		A_profileph
			I_duration		A_addr
			I_stipend		A_edu
					A_experience
					A_github
					A_linkedin
					A_portfolio

Normalization of the Tables:

1NF:

➢ **In our all tables the input value for each attribute is restricted to only single value, Hence the given table is in 1NF form.**

Admin	Recruiter	Rec_Intern	Internship	App_intern	Applicant
Admin_id	R_id	R_id	I_id	A_id	A_id
username	R_name	I_id	I_title	I_id	A_name
password	R_company		I_description		A_dob
	R_email		I_duedate		A_email
	R_logo		I_category		A_phno
	R_website		I_domain		A_profileph
			I_duration		A_addr
			I_stipend		A_edu
					A_experience
					A_github
					A_linkedin
					A_portfolio

2NF:

- ➢ **The Admin table is in 2NF.**
- ➢ **In the recruiter table the attributes R_logo and R_website are dependent on R_company which is again dependent on R_id. Hence here is transitive dependency which we have to remove in order to achieve the 2NF.**
- ➢ **All the other tables are already in 2NF**

3NF:

- ➢ **Final Tables after 3NF**

Admin	Recruiter	Rec_Intern	Internship	App_intern	Applicant
Admin_id	R_id	R_id	I_id	A_id	A_id
username	R_name	I_id	I_title	I_id	A_name
password	R_company		I_description		A_dob
	R_email		I_duedate		A_email
	R_logo		I_category		A_phno
	R_website		I_domain		A_profileph
			I_duration		A_addr
			I_stipend		A_edu
					A_experience
					A_github
					A_linkedin
					A_portfolio

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