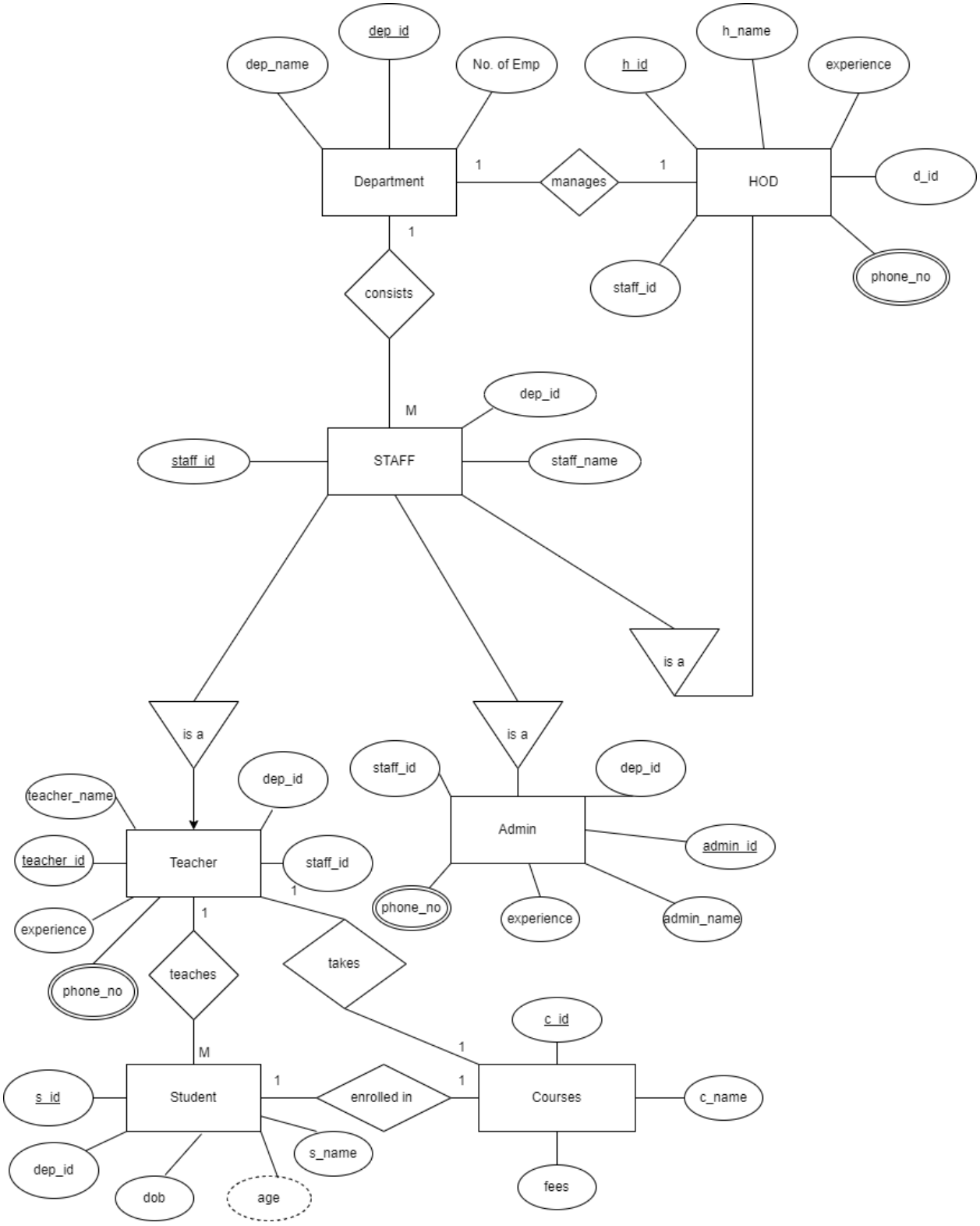
dep_id
dep_name
No. of Emp
h_name
h_id
experience
Department
1
manages
1
HOD
d_id
1
consists
staff_id
phone_no
M
dep_id
staff_id
STAFF
staff_name
is a
is a
is a
dep_id
staff_id
dep_id
teacher_name
Admin
admin_id
teacher_id
Teacher
staff_id
1
phone_no
experience
admin_name
1
experience
teaches
takes
phone_no
c_id
M
1
s_id
Student
1
enrolled in
1
Courses
c_name
s_name
dep_id
dob
age
fees

ENTITY	ATTRIBUTES	RELATIONSHIP WITH
COLLEGE	college_name,address,phone	Department,Staff
DEPARTMENT	d_id,d_name,No.of_emp	HOD
HOD	h_id,h_name,experience,d_id ,phone_no	-
STAFF	-	Teacher(is a),Admin(is a),HOD(is a)
TEACHER	t_id,t_name,experience,d_id, phone_no	Student
ADMIN	a_id,a_name,experience,d_id ,phone_no	-
STUDENT	s_id,d_id,dob,age,s_name,	Courses
COURSES	c_name,c_id,fees	-

1) College has Department. Here relation is one to many . As single college may have many departments.
   Now Departments have HODs . The relation here is one to one as one department can have only one HOD.

2) College also has Staff . Staff is specialized into Teacher, Admin and HOD.
3) Teacher teachers students. Relation here is one to many as One teacher teaches many Students in a class.
4) Students are enrolled in courses. Relation here is one to one as only one student is enrolled for one course.

DEPARTMENT TABLE :

dep_id	dep_name	No._of_Emp

HOD TABLE :

h_id	h_name	experience	d_id	staff_id	phone_no

STAFF TABLE :

staff_id	staff_name	dep_id

TEACHER TABLE :

teacher_id	teacher_name	experience	phone_no	dep_id	staff_id

ADMIN TABLE :

admin_id	admin_name	experience	phone_no	dep_id	staff_id

STUDENT TABLE :

s_id	s_name	dob	dep_id

COURSES TABLE :

c_id	c_name	fees

MINIMIZATION OF RELATIONS :

1) **Department manages HOD : (1 to 1 relationship , So only one table)**

dep_id	h_id	dep_name	h_name	No. of Emp	experience	d_id	staff_id	phone_no

2) **Department consists Staff (1 to M relationship , So Two tables):**

Department Table :

Dep_id (PK)	dep_name	No._of_Emp

Staff Table :

staff_id(PK)	staff_name	Dep_id (FK)

3) **Teacher teaches Students (1 to M , So two tables):**

Teacher Table :

Teacher_id (PK)	teacher_name	experience	phone_no	dep_id	staff_id

Student Table :

				FK
s_id	s_name	dob	dep_id	Teacher_id (FK)

4) **Students Enrolled in Courses (One to One, So One table):**

s_id(PK)	s_name	dob	dep_id	c_id	c_name	fees