

Database design schema

- **Database name:** Game Development Project Management System
- **Entity Types and Attributes:**
 1. Project (project_id [PK], title, budget, start_date, end_date)
 2. Developer (developer_id [PK], name, email, skill_set)
 3. Product manager (product_manager_id [PK], name, email, skill_set)
 4. Full-time developer (office_location)
 5. Freelancer (contract_sign_date)[multi-value attribute]
 6. Employee
 7. Game (game_id [PK], title, genre (action, RPG, shooting), platform)
 8. Task (task_id [PK], task_name, deadline, description)
 9. Client (client_id [PK], name, company, contact_info (phone number, email))
 10. Publisher (publisher_id [PK], name, company)
 11. Business partner
 12. Software Tool (tool_id [PK], tool_name, license_type)
 13. Milestone (milestone_id [PK], milestone_name, due_date) [Weak Entity related to Project]
- **Relationships:**
 1. Project-Developer: Each project is developed by multiple developers, and each developer can work on multiple projects. (Many-to-Many)
 2. Game-Project: A game is created from a single project, but a project can be linked to multiple games. (One-to-Many)
 3. Task-Developer: A developer is assigned multiple tasks, and each task is handled by one developer. (One-to-Many)
 4. Client-Project: A client commissions multiple projects, but each project is linked to only one client. (One-to-Many)
 5. Project-Milestone: Each milestone is related to a project, and each project has multiple milestones. (One-to-Many, Weak Entity relationship)
 6. Software Tool-Project: Each project may use multiple software tools, and each tool can be used by multiple projects. (Many-to-Many)
 7. Task Dependencies (Recursive Relationship): Some tasks depend on

other tasks to be completed first. (One-to-Many within Task entity)

● **Specialization:**

1. Developers are categorized as either Full-time Developers or Freelancers, and they cannot belong to both categories at the same time.
2. Some developers may also take on managerial roles, such as Project Manager, meaning they can be both a developer and a manager.
3. A Business Partner can either be a Client or a Publisher, but not both at the same time.

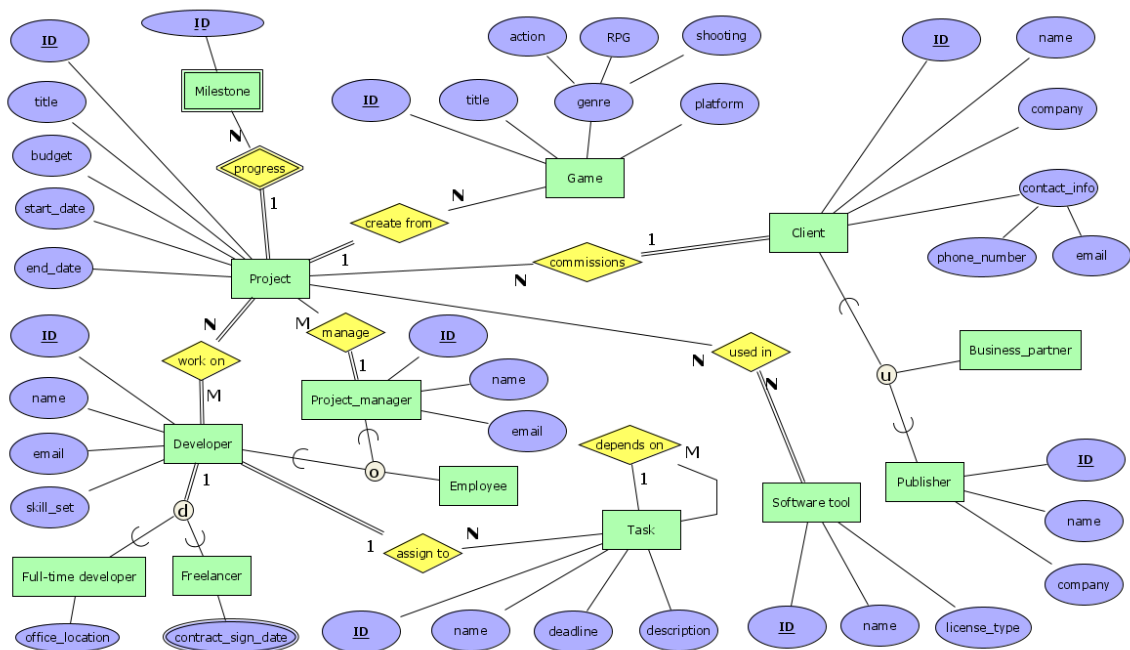


Figure 1. EER diagram