The School of Mathematics, Computer Science and Engineering is composed of several departments. Each department is identified by a code, has a departmental office (office number) and a departmental administrator (administrator name). Each department has teaching staffs that teach modules. Each teaching staff member has a staff number, a name, and a salary. Teaching staff are either Academics or Teaching Assistants. Academics have grades, while Teaching Assistants have contracts (Contract Number). Most Academics are responsible for one or more modules (module number, module name, topic), and a module is the responsibility of only one Academic. Teaching Assistants must assist with teaching one or more modules. Module can have several Teaching Assistants. In each department, one of the Academics acts as the Head of Department, and they have a special responsibility allowance.

Design an E-R diagram for the above database.

Derive a corresponding relational scheme from your E-R diagram

⧉ **Department**

- Attributes:
    - Code (Primary Key)
    - Office Number
    - Administrator Name

⧉ **Teaching Staff**

- Attributes:
    - Staff Number (Primary Key)
    - Name
    - Salary
- Subtypes:
    - **Academic**
        - Attributes:
            - Grade
            - Special Responsibility Allowance
    - **Teaching Assistant**
        - Attributes:
            - Contract Number

⧉ **Module**

- Attributes:
    - Module Number (Primary Key)
    - Module Name

o Topic

Department

📄 Code	integer(10)	N
📄 Office number	integer(10)	N
📄 Administrator	integer(10)	N

Teaching staff

📄 Staff number	integer(10)	N
📄 Name	integer(10)	N
📄 Salary	integer(10)	N

Academic

📄 Grade	integer(10)	N
📄 Special Responsibility Allowance	integer(10)	N

Teaching assistant

📄 Contract number	integer(10)	N

Module

📄 Module number	integer(10)	N
📄 Module name	integer(10)	N
📄 Topic	integer(10)	N