ER Modelling Exercise - SMCSE

The School of Mathematics, Computer Science and Engineering is composed of several **department**s. Each department is identified by a **code**, has a departmental office (**office number**) and a departmental administrator (**administrator name**). Each department has **teaching staff**s 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.

Entities are shown in **RED**

Attributes are shown in **GREEN**

Keys are shown in **BLUE**

Departments (Entity) –

Department Code (Key)

Office Number

Admin Name

Teaching Staff (Entity) –

Staff Number (Key)

Name

Salary

Dept Code (Key)

Academics (Entity) –

Staff Number (Key)

Grade

Special Responsibility Allowance

Modules (Entity) –

Module Number (Key)

Module Name

Topic

Responsible Academic

Module Assistants (Entity) –

Module Number (Key)

Staff Number (Key)