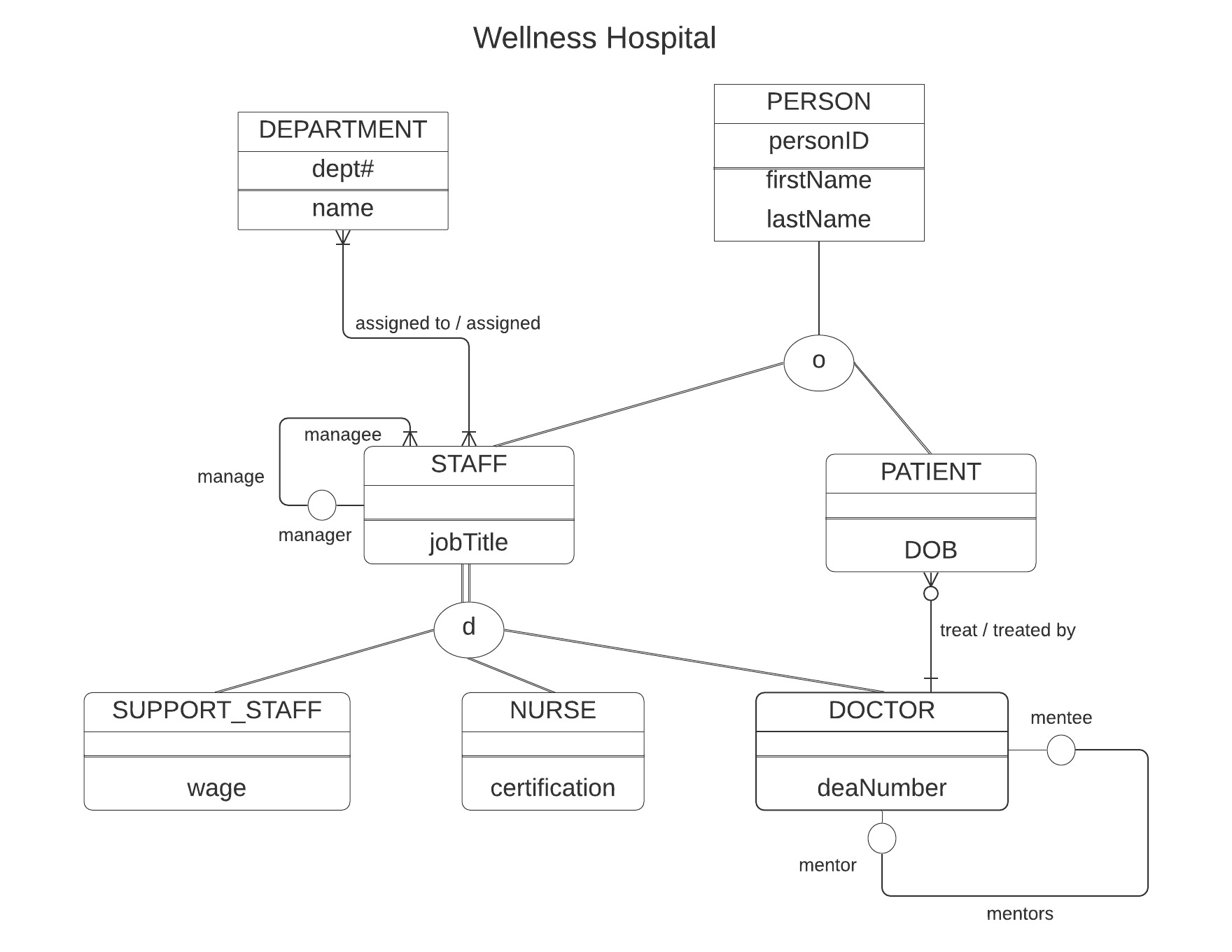
ISTE-230 Introduction to Database & Data Modeling

## Homework # 5 – HAS-A and IS-A Relationships

DUE:

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Submit this document, edited to include your answers, to the HW#5 Assignment folder by the stated deadline.**



Using the E-R diagram for Wellness Hospital, that appears on the previous page, please provide your answer to the following questions.

1. (5 points) List the relationship verb phrase for each 'HAS-A' relationship that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) List the relationship verb phrase for each binary relationship that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) List the relationship verb phrase for each recursive relationship that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) List the name of each supertype entity that appears in the diagram.

**YOUR ANSWER:**

1. (6 points) List the name of each subtype entity that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) Provide an example of an entity instance of PERSON.

**YOUR ANSWER:**

1. (5 points) List the relationship verb phrase for every 1:1 relationship that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) List the relationship verb phrase for every 1:N (N:1) relationship that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) List the relationship verb phrase for every M:N relationship that appears in the diagram.

**YOUR ANSWER:**

1. (5 points) List the name of each strong entity that appears in the diagram.

**YOUR ANSWER:**

1. (6 points) List the name of each weak entity that appears in the diagram.

**YOUR ANSWER:**

1. (4 points) Must a STAFF:managee be managed by a manager? Explain how you determined your answer from the E-R diagram provided.

**YOUR ANSWER:**

1. (4 points) Can there be an instance of DOCTOR that is not an instance of STAFF? Explain your answer.

**YOUR ANSWER:**

1. (4 points) Can a DOCTOR treat more than one PATIENT? Explain how you determined your answer from the E-R diagram provided.

**YOUR ANSWER:**

1. (4 points) Must every instance of PERSON belong to a subtype? Fully explain how you determined your answer from the E-R diagram provided.

**YOUR ANSWER:**

1. (4 points) Could an instance of PERSON be both a STAFF and a PATIENT? Fully explain how you determined your answer from the E-R diagram provided.

**YOUR ANSWER:**

1. (4 points) Must every instance of STAFF belong to a subtype? Fully explain how you determined your answer from the E-R diagram provided.

**YOUR ANSWER:**

1. (4 points) Could an instance of STAFF be both a SUPPORT\_STAFF and a DOCTOR? Fully explain how you determined your answer from the E-R diagram provided.

**YOUR ANSWER:**

1. (5 points) If a discriminator were to be added to PERSON, fully explain what that would entail and why?

**YOUR ANSWER:**

1. (5 points) If a discriminator were to be added to STAFF, fully explain what that would entail and why?

**YOUR ANSWER:**

1. (5 points) Fully state the business rules for the **assigned to/assigned** relationship without using technical terms.

**YOUR ANSWER:**