Database and Data Management

Assignment 2:

Ontology report

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Introduction.-

As part of this Project, the researcher had as a goal to create a structure for the IT department to handle any information referent to ADHD that can be easily maintained and updated according to the necessity of the IT department. It is commonly known that medicine's breakthroughs happen very quickly; thus, it is necessary to have an efficient and easy to follow organizational scheme that allows to not only maintain but keep up to date all of the possible changes and relationships among parts of the information. Has part of the goals of this project, was to create an easy to follow scheme, that would allow to keep building upon it, without having to re-create the ontology from scratch. Thus, saving time and money.

As part of the Ontology, the creator chose to included pieces in Spanish and English, making and emphasis on how to treat the disease, the most known reasons that cause it and the disorders that tent to come with it.

Ontology Structure.-

As part of the research, a general and easy to read structure was developed. Below it is possible to get the overview of the structure used.

- owl:Thing
  - 'Associated Disorders'
  - DomainThing
    - ADHD
      - Management
        - Diet
          - 'Toxic Food'
          - 'Recommended Regime'
        - 'Behavioral Therapies'
          - Neurofeedback
          - 'Organization _Training'
          - 'Behavioral _peer _intervention'
          - Social_Skills_training
          - Interpersonal_psychotherapy
          - Family_Therapy
          - 'Cognitive Behavioral Therapy'
        - Medication
          - Antidepressants
          - Non-Stimulant
          - Stimulant
      - Cause
        - Genetics
        - Society
        - Environment
      - Type
        - 'ADHD-C_(Combined type)'
        - 'ADHD-PI_(Inattentive)'
        - 'ADHD-PH_(Hyperactive-impulsive)'
      - History
    - Country

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Object Properties.-

As part of the ontology, the architect of the ontology chose to create certain object properties as to explain the different relationships among classes and subclasses. The domain and ranges created below are also display in the ontology

Object property I.-

Object Name = Treat

Domain= Stimulant

Range= Symptoms Combined Type, Symptoms Hyperactive-impulsive, Symptoms inattentive.

Type = Functional

Inverse = are treated by

Object Property II.-

Clause = are treated by

Domain= Symptoms Combined Type, Symptoms Hyperactive-impulsive, Symptoms inattentive.

Range= Stimulant

Type= Inverse functional, functional

Inverse = Treat

Object Property III.-

Domain= Symptoms combined

Range= Symptoms Hyperactive-impulsive, Symptoms inattentive.

Clause = are a combination of

Type= Functional

Object Property IV.-

Domain= Toxic food

Range= Symptoms Combined Type, Symptoms Hyperactive-impulsive, Symptoms inattentive.

Clause = can aggravate

Type= Functional

Inverse = are aggravated by

Object Property V.-

Domain= Symptoms Combined Type, Symptoms Hyperactive-impulsive, Symptoms inattentive.

Range= Toxic Food

Clause = are aggravated by

Type= Functional, inverse functional

Inverse = can aggravated

Object Property VI.-

Domain= 1887

Individual = Germany

Clause = Stimulants are first used

Type= Functional

Object Property VII.-

Domain= recommend regime, behavioral therapies

Range= Medication

Clause = complement

Type= Functional

Object Property VIII.-

Domain= genes

Range= ADHD-C (Combined type), ADHD-PH(Hyperactive-impulsive), ADHD-PI (Inattentive)

Clause = main reason

Type= Functional

Object Property VIII.-

Domain = 1887

Individual = Germany

Clause = methylphenidate are first used

Type= Functional

Individuals.-

For this ontology, the architect created the individual of Germany. To present a few specific topics on the use of stimulants through history.

- **Germany**

Conclusion.-

To conclude, this structure will allow the IT personnel in charge of database management to address each part with the necessary information and build on top of it, without having to create major changes that would slow down the area, cost money or create an inconvenient with any website were the information is offered.

As part of the goals for this ontology was to build something that would take minimum effort to maintain and reduce any investment. More often than not, the biggest monetary losses in an organization are the ones directed to fix what could have been set up from the beginning.