Josue Loya
Daniel Reyes
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CSE 111 Phase 1

Project Description: Our project database revolves around dinosaurs, in which we create a database that has several details around dinosaurs. These details include: Fossil location, Time period, taxonomy and more. The intent of this database is to have a user be able to search for desired characteristics or a specific name, and be able to acquire the necessary data from the database.

1. A specification of the project requirements. This should describe the main use cases. You have to draw a UML use case diagram and write plain text describing the main use cases.

For the UML use case:
- Student/User: able to search for dinosaurs through: time period, name, region, diet,
  - Specific physical characteristics, name, name meaning.
- Paleontologist/Educated person: able to do the same with searches,
  - Can submit necessary changes if there are errors
  - New discoveries are made, which necessitates changes
  - Factcheck information in general
- Programmer/Database Manager
  - Respond to change requests
  - Modify necessary information
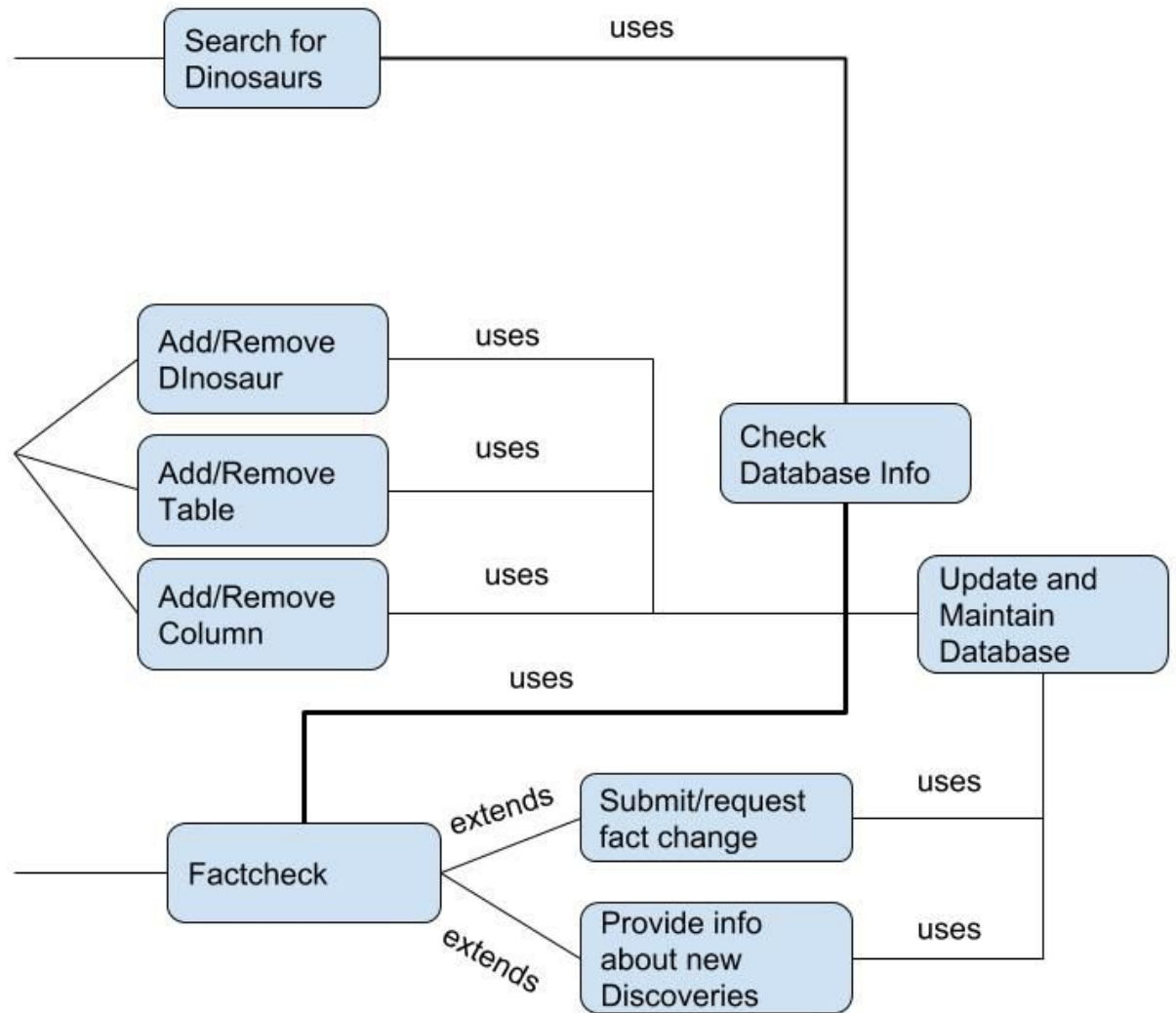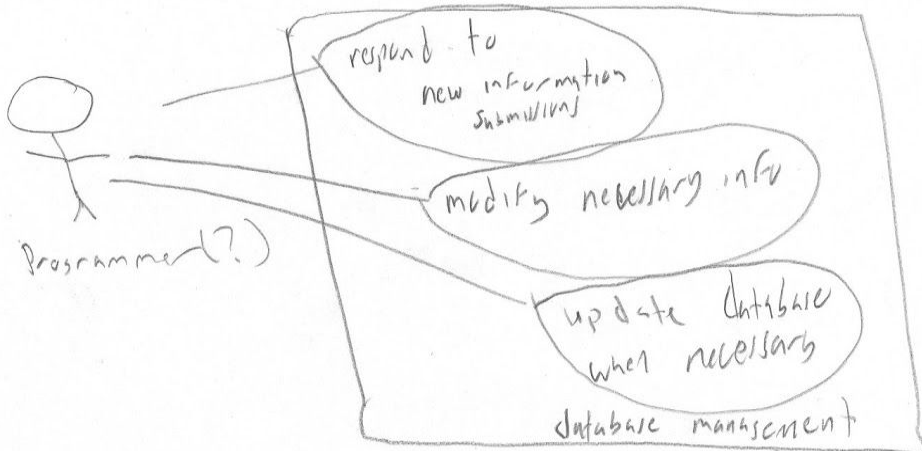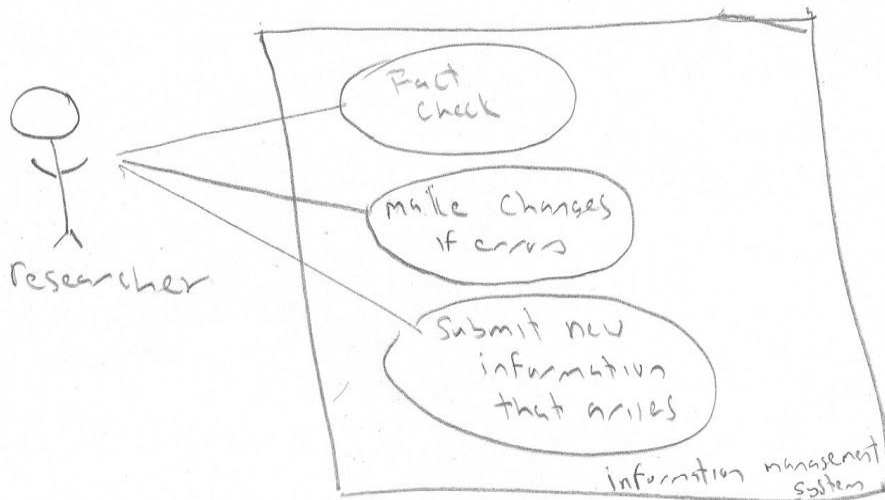 - Update database when necessary

STUDENT

Search for
Dinosaurs

uses

Programmer

Add/Remove
DInosaur

uses

Add/Remove
Table

uses

Add/Remove
Column

uses

Check
Database Info

Update and
Maintain
Database

uses

Paleontologist

Factcheck

extends

Submit/request
fact change

uses

extends

Provide info
about new
Discoveries

uses

User

Search
For
Dinosaur

Search System

researcher

Fact
Check

make changes
if errors

Submit new
information
that arises

Information management
system

respond to
new information
submissions

modify necessary info

Programmer(?)

update database
when necessary

Database management
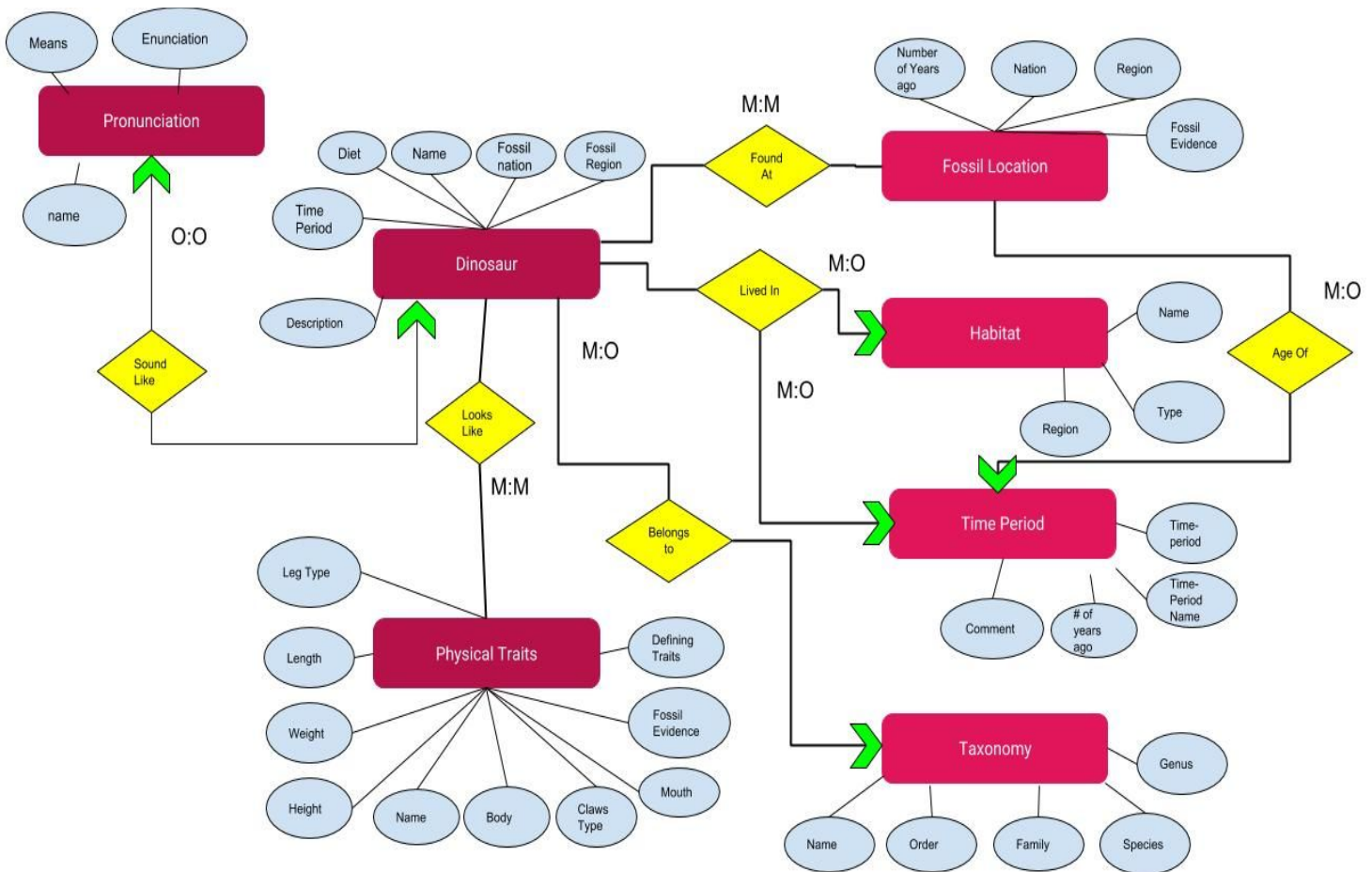
2. A database design document in the form of ER diagrams. The minimum requirement is:

- 6 entities
- 6 relationships (out of which at least 2 many-many)

3. A relation specification that you generate by transforming the ER diagram into relations, i.e., tables.

Relations
- **FoundAt** (name, nation, region)
- **LivedIn** (name, #of years ago, timePeriod_name, type, region)
- **BelongsTo** (name, order, family genus, species)
- **LooksLike** (name,length, weight, body, definingTraits)
- **SoundLike** (name, enunciation)
- **AgeOf** (nation, region, time period, # of years ago)

Tables
- **Dinosaur** (name, fossil nation , fossil_region, diet, timeperiod)
- **FossilLocation** (nation, region, #ofYearsago, FossilEvidence)
- **Habitat** (Environment_name, type, region)
- **TimePeriod** (timeperiod key, timeperiod name, #ofYearsago)
- **Taxonomy** (name, order, family, genus, species)
- **Phys_Traits**(name, body, weight, length, height, defining_traits, mouth_type, leg_type, claw_type, fossil evidence)
- **Pronunciation** (enunciation, meaning, name)