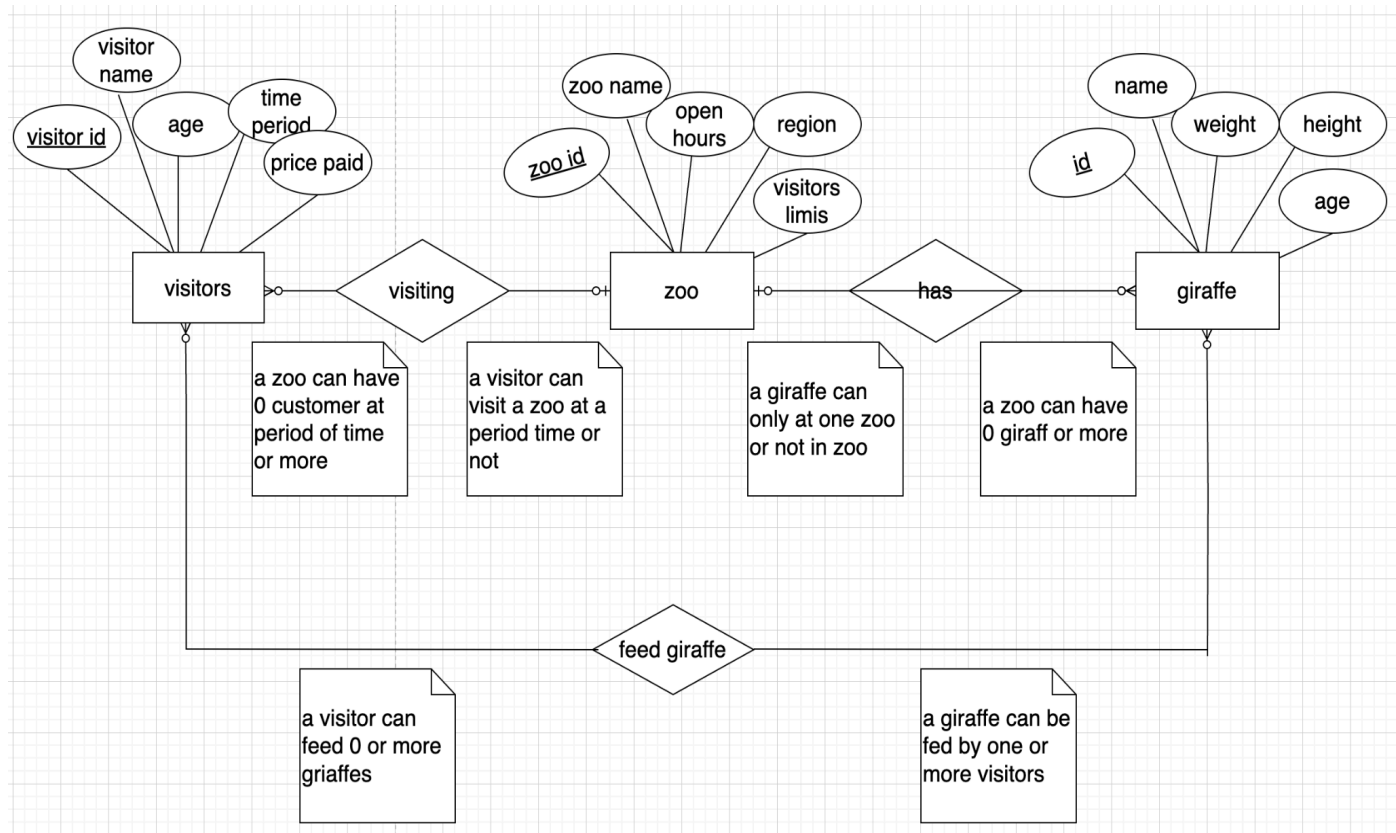


## Homework Assignment 4:

ER diagram:



### 1. Entities:

#### 1.1 Visitors:

visitors' id, name, age, time period, price paid

**constraints:** id must be unique, age, price paid are positive numbers. and the time period should follow the zoo requirement.

#### 1.2 Zoo:

zoo unique id, name, open hours, region, species of animals, limits

**constraints:** id must be unique, open hour must follow a valid time format, limits must be a positive number.

1.3 giraffe:

It has a unique identifier of each giraffe, and its name, weight, height, age.

**constraints:** id must be unique, weight, height, age must be positive numbers.

2. Relationship:

2.1 visitors and zoo:

one visitor can only visit one zoo each time period, and a zoo can have 0 or more visitors at each time period

2.2 zoo and animals(giraffe):

a zoo can have 0 or more giraffes (a new zoo can have 0 animals or the zoo doesn't have any giraffes but has others).  
and a giraffe can only be in one zoo or not.

2.3 visitors and giraffe:

a visitor can feed 0 or more giraffes, and a giraffe can be fed by 0 or more visitors.