**Diver**

* diverID (primary key)
* diverName
* dateOfBirth or diverAge
* emailAddress
* certificationType
* creditCardNumber

Diver Constraints:

* divers must be at least 16 years old when dive is scheduled
* diver certifications allowed: {NAUI, CMAS, PADI}.

**Monitor**

* monitorID (primary key)
* diverID (foreign key from Diver)
* Capacity (depends only on dive category)
  + openWaterDivingCapacity, caveDivingCapacity, deepDivingCapacity
* Price (depends on time of day, dive category, and possibly monitor-site affiliation discount)
  + morningOpenWaterDivingPrice, morningCaveDivingPrice, morningDeepDivingPrice
  + afternoonOpenWaterDivingPrice, afternoonCaveDivingPrice, afternoonDeepDivingPrice
  + eveningOpenWaterDivingPrice, eveningCaveDivingPrice, eveningDeepDivingPrice

Monitor Constraints:

* All prices are >= 0, and monitors with affiliations to sites may offer discounts.
* 0 <= evening, cave, deep diving capacities <= all other capacities

**Site**

* siteID (primary key)
* siteName
* siteLocation
* Price (only depends on a flat fee and amenities)
  + siteFee
  + maskRentalFee, finRentalFee, regulatorRentalFee, diveComputerRentalFee
* Capacity (only depends on time of day if it’s open water diving)
  + daytimeOpenWaterDiving, nighttimeOpenWaterDiving, caveDiving, deepDiving

Site Constraints:

* All prices are >= 0
* 0 <= evening, cave, deep diving capacities <= all other capacities

**Affiliation**

* monitorID (foreign key from Monitor), siteID (foreign key from Site)

Affiliation Constraints:

* none

**Supervision**

* sessionID (foreign key from Session), monitorID (foreign key from Monitor)

Supervision Constraints:

* Monitors can book at most 2 dive sessions per 24-hour period

**Holding**

* sessionID (foreign key from Session), siteID (foreign key from Site)

Occupies Constraints:

* none

**Session** (all diving session info)

* sessionID (primary key)
* leadDiver (foreign key from Diver)
* sessionDate, timeOfDay, diveCategory

Session Constraints:

* + Dive categories allowed: {open water diving, deep diving, cave diving}
  + Times of day allowed: {morning, afternoon, evening}
  + Lead divers can book as many dives as they can find dive monitors and dive sites for a single booking date and time

**Booking** (all group members in a dive session)

* sessionID (foreign key from Session), diverID (foreign key from Diver)

Booking Constraints:

* none

**SiteRating**

* sessionID (foreign key from Session), diverID (foreign key from Diver), siteID (foreign key from Site)
* siteRating

SiteRating Constraints:

* All site ratings are integers between 1 – 5 inclusive

**MonitorRating**

* sessionID (foreign key from Session), diverID (foreign key from Diver), monitorID (foreign key from Monitor)
* monitorRating

MonitorRating Constraints:

* All monitor ratings are integers between 1 – 5 inclusive