Person

-id:Long
-type:String
-name:String
-description:String

getters/setters

Person_Organization

-id:Long
-person:Person
-organization:Organization
-startDate:LocalDate
-endDate:LocalDate

getters/setters

Person_Sighting

-id:Long
-person:Person
-sighting:Sighting

getters/setters

Person_Power

-id:Long
-person:Person
-power:Power

getters/setters

Organization

-id:Long
-name:String
-description:String
-location:Location

getters/setters

Sighting

-id:Long
-location:Location
-sightingDate:LocalDate
-description:String

getters/setters

Power

-id:Long
-name:String

getters/setters

Location

-id:Long
-lattitude:Double
-longitude:Double
-name:String
-description:String
-street:String
-city:String
-state:String
-zip:String
-country:String

getters/setters

<<Interface>>
PersonDao

<<Interface>>
PersonOrganizationDao
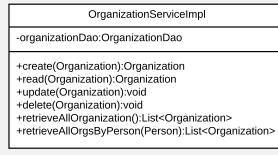
<<Interface>>
PersonSightingDao

<<Interface>> PersonDao

```
+create(Person):Person
+read(Person):Person
+update(Person):void
+delete(Person):void
+retrieveAllPersonsByOrg(int,int):List<Person>
+retrieveAllPersons(int , int):List<Person>
+retrieveAllPersonsByPower(Power,int,int):List<Person>
+retrieveAllPersonsBySighting(sighting,int,int):List<Person>
+retrieveAllPersonsByLocation(Location,int,int):List<Per
```

<<Interface>> PersonOrganizationDao

```
+create(PersonOrganization):PersonOrganization
+read(PersonOrganization):PersonOrganization
+update(PersonOrganization):void
+delete(PersonOrganization):void
+retrieveAllPersonOrganization(int,int):List<PersonOr
```

<<Interface>> PersonSightingDao

```
+create(PersonSighting):PersonSighting
+read(PersonSighting):PersonSighting
+update(PersonSighting):void
+delete(PersonSighting):void
+retrieveAllPersonSightings(int,int):List<PersonSighting>
```

<<Interface>> PersonPowerDao

```
+create(PersonPower):PersonPower
+read(PersonPower):PersonPower
+update(PersonPower):void
+delete(PersonPower):void
+retrieveAllPersonPowers(int, int):List<PersonPower>
```

<<Interface>> OrganizationDao

```
+create(Organization):Organization
+read(Organization):Organization
+update(Organization):void
+delete(Organization):void
+retrieveAllOrganizations(int,int):List<Organization>
+retrieveAllOrganizationsByPerson(Person,int,int):Lis
```

<<Interface>> SightingDao

```
+create(Sighting):Sighting
+read(Sighting):Sighting
+update(Sighting):void
+delete(Sighting):void
+retrieveAllSightings(int, int):List<Sighting>
+retrieveAllSightingsByPerson(Person, int, int):List<Sighting>
+retrieveAllSightingsByLocation(Location, int, int)
+retrieveAllSightingsByDate(LocalDate, int, int)
```

<<Interface>> PowerDao

```
+create(Power):Power
+read(Power):Power
+update(Power):void
+delete(Power):void
+retrieveAllPowers(int, int):List<Power>
+retrieveAllPowersByPerson(Person, int, int):List<Power>
```

<<Interface>> LocationDao

```
+create(Location):Location
+read(Location):Location
+update(Location):void
+delete(Location):void
+retrieveAllLocations(int,int):List<Location>
+retrieveAllLocationsByPerson(Person,int,int):List<Location>
```

PersonDaoImpl

PersonOrganizationDaoImpl

PersonSightingDaoImpl

(top-left class, name cut off)

```
+create(Person):Person
+read(Person):Person
+update(Person):void
+delete(Person):void
+retrieveAllPersonsByOrg(int,int):List<Person>
+retrieveAllPersons(int , int):List<Person>
+retrieveAllPersonsByPower(Power,int,int):List<Person>
+retrieveAllPersonsBySighting(sighting,int,int):List<Person>
+retrieveAllPersonsByLocation(Location,int,int):List<Person>
```

(top-middle class, name cut off)

```
+create(PersonOrganization):PersonOrganization
+read(PersonOrganization):PersonOrganization
+update(PersonOrganization):void
+delete(PersonOrganization):void
+retrieveAllPersonOrganizations():List<PersonOrganization>
```

PersonSightingDaoImpl

```
+create(PersonSighting):PersonSighting
+read(PersonSighting):PersonSighting
+update(PersonSighting):void
+delete(PersonSighting):void
+retrieveAllPersonSightings():List<PersonSighting>
```

PersonPowerDaoImpl

```
+create(PersonPower):PersonPower
+read(PersonPower):PersonPower
+update(PersonPower):void
+delete(PersonPower):void
+retrieveAllPersonPowers():List<PersonPower>
```

OrganizationDaoImpl

```
+create(Organization):Organization
+read(Organization):Organization
+update(Organization):void
+delete(Organization):void
+retrieveAllOrganization():List<Organization>
+retrieveAllOrgsByPerson(Person):List<Organization>
```

SightingDaoImpl

```
+create(Sighting):Sighting
+read(Sighting):Sighting
+update(Sighting):void
+delete(Sighting):void
+retrieveAllSightings(int, int):List<Sighting>
+retrieveAllSightingsByPerson(Person, int, int):List<Sighting>
+retrieveAllSightingsByLocation(Location, int, int)
+retrieveAllSightingsByDate(LocalDate, int, int)
```

PowerDaoImpl

```
+create(Power):Power
+read(Power):Power
+update(Power):void
+delete(Power):void
+retrieveAllPowers():List<Power>
+retrieveAllPowersByPerson(Person):List<Power>
```

LocationDaoImpl

```
+create(Location):Location
+read(Location):Location
+update(Location):void
+delete(Location):void
+retrieveAllLocations(int,int):List<Location>
+retrieveAllLocationsByPerson(Person,int,int):List<Location>
```

PersonServiceImpl

```
-personDao:PersonDao

+create(Person):Person
+read(Person):Person
+update(Person):void
```

PersonOrganizationServiceImpl

```
-personOrganizationDao:PersonOrganizationDao

+create(PersonOrganization):PersonOrganization
```

PersonSightingServiceImpl
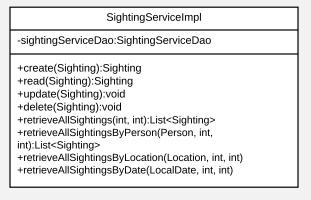
```
-personSightingDao:PersonSightingDao
```

```
+create(Person):Person
+read(Person):Person
+update(Person):void
+delete(Person):void
+retrieveAllPersonsByOrg(int,int):List<Person>
+retrieveAllPersons(int , int):List<Person>
+retrieveAllPersonsByPower(Power,int,int):List<Person>
+retrieveAllPersonsBySighting(sighting,int,int):List<Person>
+retrieveAllPersonsByLocation(Location,int,int):List<Person>
```

```
+create(PersonOrganization):PersonOrganization
+read(PersonOrganization):PersonOrganization
+update(PersonOrganization):void
+delete(PersonOrganization):void
+retrieveAllPersonOrganization():List<PersonOrganization>
```

```
-personSightingDao:PersonSightingDao

+create(PersonSighting):PersonSighting
+read(PersonSighting):PersonSighting
+update(PersonSighting):void
+delete(PersonSighting):void
+retrieveAllPersonSightings():List<PersonSighting>
```

PersonPowerServiceImpl

```
-personPowerDao:PersonPowerDao

+create(PersonPower):PersonPower
+read(PersonPower):PersonPower
+update(PersonPower):void
+delete(PersonPower):void
+retrieveAllPersonPowers():List<PersonPower>
```

OrganizationServiceImpl

```
-organizationDao:OrganizationDao

+create(Organization):Organization
+read(Organization):Organization
+update(Organization):void
+delete(Organization):void
+retrieveAllOrganization():List<Organization>
+retrieveAllOrgsByPerson(Person):List<Organization>
```

SightingServiceImpl

```
-sightingServiceDao:SightingServiceDao

+create(Sighting):Sighting
+read(Sighting):Sighting
+update(Sighting):void
+delete(Sighting):void
+retrieveAllSightings(int, int):List<Sighting>
+retrieveAllSightingsByPerson(Person, int,
int):List<Sighting>
+retrieveAllSightingsByLocation(Location, int, int)
+retrieveAllSightingsByDate(LocalDate, int, int)
```

PowerServiceImpl

```
-powerDao:PowerDao

+create(Power):Power
+read(Power):Power
+update(Power):void
+delete(Power):void
+retrieveAllPowers():List<Power>
+retrieveAllPowersByPerson(Person):List<Power>
```

LocationServiceImpl

```
-locationDao:LocationDao

+create(Location):Location
+read(Location):Location
+update(Location):void
+delete(Location):void
+retrieveAllLocations(int,int):List<Location>
+retrieveAllLocationsByPerson(Person,int,int):List<Location>
```