

Place Class

String name

String location

String description

```
public place(String name, String location)
```

```
    this.name = name
```

```
    this.location = location
```

```
public place(String name, String location, String description)
```

```
    this.name = name
```

```
    this.location = location
```

```
    this.description = description
```

```
public void setName(String name)
```

```
    this.name = name
```

```
public void getName()
```

```
    return name
```

```
public void setLocation(String location)
```

```
    this.location = location
```

```
public void getLocation()
```

```
    return location
```

```
public void setDescription(String description)
```

```
    this.description = description
```

```
public void getDescription()
```

```
    return description
```

```
public void destroy()
```

```
    destroy object
```

Road Class

String name

double distanceOnRoad

```
int trafficEstimate
int speedLimit

public Road(String name, double distanceOnRoad, int trafficEstimate, int speedLimit)
    this.name = name
    this.distanceOnRoad = distanceOnRoad
    this.trafficEstimate = trafficEstimate
    this.speedLimit = speedLimit
    timeLeft = distanceOnRoad / speedLimit + trafficEstimate

public void setTime()
    timeLeft = distanceOnRoad / speedLimit + trafficEstimate

public int getTime()
    return time

public void setName(String name)
    this.name = name

public int getName()
    return name

public void setDistanceOnRoad(int distanceOnRoad)
    this.distanceOnRoad = distanceOnRoad

public int getDistanceOnRoad()
    return distanceOnRoad

public void setTrafficEstimate(int trafficEstimate)
    this.trafficEstimate = trafficEstimate

public int getTrafficEstimate()
    return trafficEstimate

public void setSpeedLimit(int speedLimit)
    this.speedLimit = speedLimit

public int getSpeedLimit()
    return speedLimit

public void destroy()
```

destroy object

Navigation Class

Place currentLocation

Place destination

int timeEstimate

double distance

Road[] route

Public navigation(Place currentPlace, Place destination, Road[] route)

 this.currentPlace = currentPlace

 this.destination = destination

 this.distance = distance

 this.route= route

 timeEstimate = 0

 distance = 0

 for each road in route

 timeEstimate += road.getTime()

 distance += road.getDistanceOnRoad()

public void updateRoute(Road[] newRoute)

 route = newRoute

 timeEstimate = 0

 distance = 0

 for each road in route

 timeEstimate += road.getTime()

 distance += road.getDistanceOnRoad()

public Road[] getRoute()

 return route

```

public int getTimeEstimate()
    return timeEstimate
public double getDistance()
    return distance
public void setCurrentLocation(Place newLocation)
    currentLocation = newLocation
public Place getCurrentLocation()
    return currentLocation
public void setDestination(Place newDestination)
    destination = newDestination
public Place getDestination()
    return destination
public void destroy()
    destroy object

```

Map Class

```

Place[] places
Public Map(Place[] places)
    this.places = places
public void setPlaces(Place[] places)
    this.places = places
public Place[] getPlaces()
    return places
public Place searchPlaces(searchedPlace)
    return places.search(searchedPlace) //search is java import
public void addPlace(Place place)
    places[places.length+1] = place
public void removePlace(Place removedPlace)
    for each place in places

```

```
        if place = removedPlace
```

```
            remove place
```

```
public void destroy
```

```
    destroy object
```

Client Class

```
String displayName
```

```
String username
```

```
String password
```

```
Public Client (String displayName, String username, String password)
```

```
    this.displayName = displayName
```

```
    this.displayName = displayName
```

```
    this.displayName = displayName
```

```
public void setDisplayName(String displayName)
```

```
    this.displayName = displayName
```

```
public String getDisplayName()
```

```
    return displayName
```

```
public void setUsername(String username)
```

```
    this.username = username
```

```
public String getUsername()
```

```
    return username
```

```
public void setPassword(String oldPassword, String newPassword)
```

```
    if password = oldPassword
```

```
        password = newPassword
```

```
public boolean verify(String username, String password)
```

```
    return this.username = username and this.password = password
```