Location API

Location API (JSR-179) allows Java ME applications to get the user geographic location.

The implementation of this technique in the device can be:

- A GPS technology, like the one in Nokia N95.
- Using the mobile phone network (with Cell ID).
- Using short-range positioning systems.

The most common solution is the GPS one, as the others need operators APIs or some hardware installed on buildings.

This API adds **javax.microedition.location** package, that enables developers to write wireless location-based applications and services and can be implemented with any common location method. The APIs provide mobile applications with information about the device's present physical location and orientation (compass direction), and support the creation and use of databases of known landmarks, stored in the device.

Classes

There is a **Location** class that abstract the location of the user. It has, inside, a **Coordinates** (latitude and longitude) and, sometimes, speed and optional information about the place.

You can also define **Landmark** objects with a name and description. They are stored in the **LandmarkStore** in the device for future use. If the device supports a compass, you can have an **Orientation** class.

Criteria class is key to influencing how the device will acquire location

```
// The following sample code describes how to use Location API
double lat,lon;
QualifiedCoordinates qc=null;
Criteria cr=new Criteria();
cr.setHorizontalAccuracy(500);
cr.setVerticalAccuracy(500);
cr.setPreferredPowerConsumption(Criteria.POWER_USAGE_LOW);
LocationProvider lp=LocationProvider.getInstance(cr);
Location loc=lp.getLocation(60);
qc=loc.getQualifiedCoordinates();
AddressInfo adinfo = loc.getAddressInfo();
String place="";
if(adinfo!=null){
 place = adinfo.getField(AddressInfo.COUNTRY);
}

// To get the latitude and longitude
lat = qc.getLatitude();
lon = qc.getLongitude();
```

Receiving updates from a `LocationProvider`: `javax.microedition.location.LocationListener` In the `LocationListener` interface `setLocationListener` method is used to receive the updates

`setLocationListener(listener,interval,timeout,maxAge);`

- Interval — how often you want fix updates, in seconds
- Timeout— how late update can be from interval, in seconds
- maxAge— acceptable age for cached info to be returned

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