

# Vehicle Tracking ReadME

## Vehicle Tracking

Vehicle Tracking is a location-based application that stores vehicle locations. This app has been written for 7PeaksSoftware 's job challenge.

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## Prerequisites

- Download .NET Core 2.2
  - Microsoft SQL Server 2016+
  - Redis 3.2.100+
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## Structure

Architecture: Clean Architecture

- By clean Architecture It is so easy adding new features, changing and maintenance Models, Databases or application layers

Task Queue: Redis

- for performance and persistence issues using Redis in this application.
- queue API requests of TrackAsync API and a task manager (.net core task scheduler) runs the tasks in the queue,

Cash: Redis

- for performance issues using Redis to cash the current location of vehicles.

**Git Branch Modeling:** Git Flow

**UI:** Swagger

**Test:** XUnit

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## Nuget Packages

- Microsoft.AspNetCore.App
  - Swashbuckle.AspNetCore" Version="4.0.1
  - Swashbuckle.AspNetCore.Swagger" Version="4.0.1
  - AutoMapper" Version="5.1.1
  - Microsoft.AspNetCore.Cryptography.KeyDerivation" Version="2.2.0
  - Microsoft.EntityFrameworkCore" Version="2.2.6
  - Microsoft.Extensions.Hosting.Abstractions" Version="2.2.0
  - Microsoft.Extensions.Options" Version="2.2.0
  - Microsoft.IdentityModel.Tokens" Version="5.6.0
  - System.IdentityModel.Tokens.Jwt" Version="5.6.0
  - Microsoft.Extensions.Hosting.Abstractions" Version="2.2.0
  - Microsoft.Extensions.DependencyInjection.Abstractions
  - Microsoft.EntityFrameworkCore.Relational" Version="2.2.6
  - Microsoft.EntityFrameworkCore.SqlServer" Version="2.2.6
  - Microsoft.EntityFrameworkCore.Tools" Version="2.2.6
  - Newtonsoft.Json" Version="12.0.3
  - StackExchange.Redis" Version="2.0.519
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## Getting Started

1. Write appropriate Connection Strings for SqlConnection and RedisConnection  
Edit .\Src\SevenPeaksSoftware.VehicleTracking.WebApi\appsettings.json

```
1  "ConnectionStrings": {  
2    "SqlConnection": ".;Database=VehicleTracking;User Id=Sa;Password=***;MultipleActiveResultSets=True;"  
3  }
```

```
1  "RedisSettings": {  
2    "RedisConnection": "localhost,abortConnect=False"  
3  }
```

2. Cd .\Src\SevenPeaksSoftware.VehicleTracking.WebApi
3. Run commands:
  - a. dotnet restore
  - b. dotnet build
  - c. dotnet run
4. Go To <http://localhost:5000/swagger>

#### **For Docker Run :**

1. Install docker
2. Start docker service
3. Edit connection strings
4. Cd .\
5. Run commands:
  - a. docker build -t vehicle-tracking
  - b. docker run vehicle-tracking
6. Go To <http://localhost:5000/swagger>

- Database Automatically will be created at first run,

Admin and GpsNavigator Role will be added to the database,  
An Admin user will be added to the database.

username: admin,

password: QAZwsx123