# Coding Exercise – Techworks Marine

## Rules

* You have until Wednesday 4th of November at 12pm to complete the challenge
* Submit your solution to [glenn.tarpey@techworks.ie](mailto:glenn.tarpey@techworks.ie)
* Python 3 is preferred but other OOP languages are also acceptable
* Please do not import external libraries not included in the standard library e.g pynmea2

## Introduction

GPS data is given in NMEA data output when read by a sensor system. This data needs to be parsed, verified and written to a file in a particular format. For this exercise you will be given some example GPS data (GPS.txt), your script should extract the relevant data and output to a file in csv format.

For an overview of NMEA data see : <http://aprs.gids.nl/nmea/>

## Desired Data Output

In a csv file (comma separated) we should be able to see the following data:

1. Date
2. Time
3. Latitude
4. Longitude
5. Number of Satellites

## Hints and Tips

* GPGGA and GPRMC should be sufficient for the exercise
* In GPGGA there is a parameter for valid data
* Careful of any invalid data / data in wrong format

## Metrics/Grading

* Code readability
* Exception handling
* Simplicity
* General efficiency