IHF: CODE - PYTHON WORKSHEET 6 - ACTIVITY 1

Challenge - Parallel Parking - 10 points

1. You must get the Edison car to parallel park between two objects. (5 points)
2. The car must not touch any of the objects, each time you hit an object, you lose a point. (-1 point each hit)
3. You must reverse the Edison car out of the parking space, again without hitting any objects. (5 points)

What you need to know

To drive the car, you use the Ed.Drive() function.

The Drive() function has three input parameters:

- direction - the direction that Edison will drive
- speed - the speed at which Edison will drive
- distance - the number of distance units Edison will travel

The type of distance units is controlled by the constant that 'Ed.DistanceUnits' is set to in the Setup code. There are three distance units that you can use:

- Centimetres, written as Ed.CM
- Inches, written as Ed.INCH
- Time, written as Ed.TIME

Coding Examples

To drive the car forward:

```
#-------------Setup----------------

import Ed

Ed.EdisonVersion = Ed.V2

Ed.DistanceUnits = Ed.CM
Ed.Tempo = Ed.TEMPO_MEDIUM

#--------Your code below-----------

Ed.Drive(Ed.FORWARD, Ed.SPEED_6, 8)
```

To drive the car backward:

```
#-------------Setup----------------

import Ed

Ed.EdisonVersion = Ed.V2

Ed.DistanceUnits = Ed.TIME
Ed.Tempo = Ed.TEMPO_MEDIUM

#--------Your code below-----------

Ed.Drive(Ed.BACKWARD, Ed.SPEED_6, 8)
```

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CODING EXAMPLES

To drive the car forward then backwards:

```
#-------------Setup----------------

import Ed

Ed.EdisonVersion = Ed.V2

Ed.DistanceUnits = Ed.CM
Ed.Tempo = Ed.TEMPO_MEDIUM

#--------Your code below-----------

Ed.Drive(Ed.FORWARD, Ed.SPEED_9, 5)
Ed.Drive(Ed.BACKWARD, Ed.SPEED_6,4)
```

To drive the car forward then wait for 1000 milliseconds (1 second) before turning the motors off.

```
#-------------Setup----------------

import Ed

Ed.EdisonVersion = Ed.V2

Ed.DistanceUnits = Ed.CM
Ed.Tempo = Ed.TEMPO_MEDIUM

#--------Your code below-----------

Ed.Drive(Ed.FORWARD, Ed.SPEED_9, Ed.DISTANCE_UNLIMITED)
Ed.TimeWait(1000, Ed.TIME_MILLISECONDS)
Ed.Drive(Ed.STOP, Ed.SPEED_6,0)
```

To turn the car 90 degrees to the right.
To turn the car left change, Ed.SPIN_LEFT.

```
#-------------Setup----------------

import Ed

Ed.EdisonVersion = Ed.V2

Ed.DistanceUnits = Ed.CM
Ed.Tempo = Ed.TEMPO_MEDIUM

#--------Your code below-----------
degreesToTurn = 90
Ed.Drive(Ed.SPIN_RIGHT, Ed.SPEED_5, degreesToTurn)
```

To drive the car forward to the left.
To drive the car forward to the right, Ed.FORWARD_RIGHT.

```
#-------------Setup----------------

import Ed

Ed.EdisonVersion = Ed.V2

Ed.DistanceUnits = Ed.CM
Ed.Tempo = Ed.TEMPO_MEDIUM

#--------Your code below-----------
Ed.Drive(Ed.FORWARD_LEFT, Ed.SPEED_7, 10)
```

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