Tutorial to use the algfindvelocity.py program

To use the files: **algfindvelocity.py program** with the **unidvelocityconvequat.py module** will duty reside in the same directory. Always use the **algfindvelocity.py program** with any editors as: **IDLE**, **PyCharm**, **Visual Studio Code**, **Geany** or others in the **Windows** or **Linux operating systems**.

Before of start the test access the GitHub to the download of the **Conversions-between-Velocity** repository.

Begin test using only the **algfindvelocity.py program** with the same *previous examples* of the README.Me file. Will use the Geany editor in the examples.

Instructions basic to use the Geany editor:

1.) Access the following link: https://www.geany.org/download/releases/ to download. In the previous link have versions to **Windows** or **Linux operating systems** or **other operating systems.** Too will can use the repository of the **Ubuntu** or **Linux Mint systems** to installation of the Geany editor. After install the Geany editor in the **Windows** or **Linux operating systems**. Next follow given an click with the right button in **algfindvelocity.py program** and click in guide [Open with other application] → [application recommend] → [Select] → [Geany] and the Geany editor will open present the code developed.

2.) Now configure the Geany editor in the **Windows** or **Linux operating systems** of the following manner before of use:

[i] In the [**Windows**] access and set the [Build] → [Set Build Commands] guides:
[Compile] = **C:\Python310\python -m py_compile "%f"**
[Execute] = **C:\Python310\ python "%f"**

[ii] In the [**Windows11**] access and set the [Build] → [Set Build Commands] guides:
[Compile] = **py -m py_compile "%f"**
[Execute] = **py "%f"**

iii] In the [**Ubuntu or Linux Mint**] access and set the [Build] → [Set Build Commands] guides:
[Compile] = **python3 -m py_compile "%f"**
[Execute] = **python3 "%f"**

Note: After key in [OK] guide to return.

Note: All the user will duty **configure the Geany editor** to ***avert errors*** in running the **algfindvelocity.py program** - Ok!

3.) After configure, follow given an click in guides [Build] → [Execute] to run the **algfindvelocity.py program.**

The links to editors: **PyCharm**, **Visual Studio Code** are:

https://www.jetbrains.com/pt-br/pycharm/download/#section=linux

https://code.visualstudio.com/

Warning!: Follow the instructions of the previous links to download, installation and configure before of use this editors. The instructions to configure the editors PyCharm, Visual Studio Code are diffrents of the editor Geany.

E1.) Conversion of Mph to Kph.

```
==================================
* [ALGORÍTHM: ALGFINDVELOCITY.PY] *
==================================
```

ºº[DEFINITION OF THE VARIABLES GETED IN RESULT]ºº

--[Mph]: Mile per hour
--[Kph]: Kilometer per hour
--[Mps]: Meter per second
--[Fps]: Foot per second

[INSTRUCTIONS FOR USE]

```
------------------------------------------------------------------------
- To [conversion] of the [Velocity]: [Kph] to [Mph] key [1].
- To [conversion] of the [Velocity]: [Mps] to [Mph] key [2].
- To [conversion] of the [Velocity]: [Fps] to [Mph] key [3].
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- To [conversion] of the [Velocity]: [Mph] to [Kph] key [4].
- To [conversion] of the [Velocity]: [Mps] to [Kph] key [5].
- To [conversion] of the [Velocity]: [Fps] to [Kph] key [6].
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- To [conversion] of the [Velocity]: [Mph] to [Mps] key [7].
- To [conversion] of the [Velocity]: [Kph] to [Mps] key [8].
- To [conversion] of the [Velocity]: [Fps] to [Mps] key [9].
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- To [conversion] of the [Velocity]: [Mph] to [Fps] key [10].
- To [conversion] of the [Velocity]: [Kph] to [Fps] key [11].
- To [conversion] of the [Velocity]: [Mps] to [Fps] key [12].
------------------------------------------------------------------------
```

```
        - Select an only [previous option] given -- Ok!
        (º>º) Provide the [new] value? 4
    **[The typed number]: 4 is a [valid float number!]**
```

--[VELOCITY GIVEN IN MILE PER HOUR(MPH)]--
(ª<ª) Enter the [new] value? 183.45
[[The typed number]: 183.45 is a [valid positive float number!]]

[ANSWER]
-- The velocity in [Kph] is: 295.17

```
                /////
                º<º . . .[END PROGRAM -- OK!]. . .
                \-/
```

. . .KEY [ENTER] TO EXIT OF THE PROGRAM!. . .

Note: After the last message key: [ENTER].

(program exited with code: 0)
Press return to continue

Note: After the two last messages too key: [ENTER] to return.

E2.) Conversion of Kph to Fps.

```
==================================
* [ALGORÍTHM: ALGFINDVELOCITY.PY] *
==================================
```

ºº[DEFINITION OF THE VARIABLES GETED IN RESULT]ºº

--[Mph]: Mile per hour
--[Kph]: Kilometer per hour
--[Mps]: Meter per second
--[Fps]: Foot per second

[INSTRUCTIONS FOR USE]

```
------------------------------------------------------------------------
- To [conversion] of the [Velocity]: [Kph] to [Mph] key [1].
- To [conversion] of the [Velocity]: [Mps] to [Mph] key [2].
- To [conversion] of the [Velocity]: [Fps] to [Mph] key [3].
------------------------------------------------------------------------
- To [conversion] of the [Velocity]: [Mph] to [Kph] key [4].
- To [conversion] of the [Velocity]: [Mps] to [Kph] key [5].
- To [conversion] of the [Velocity]: [Fps] to [Kph] key [6].
------------------------------------------------------------------------
- To [conversion] of the [Velocity]: [Mph] to [Mps] key [7].
- To [conversion] of the [Velocity]: [Kph] to [Mps] key [8].
- To [conversion] of the [Velocity]: [Fps] to [Mps] key [9].
------------------------------------------------------------------------
- To [conversion] of the [Velocity]: [Mph] to [Fps] key [10].
- To [conversion] of the [Velocity]: [Kph] to [Fps] key [11].
- To [conversion] of the [Velocity]: [Mps] to [Fps] key [12].
------------------------------------------------------------------------
```

- Select an only [previous option] given -- Ok!
(º>º) Provide the [new] value? 11
[The typed number]: 4 is a [valid float number!]

--[VELOCITY GIVEN IN KILOMETER PER HOUR(KPH)]--
(ª<ª) Enter the [new] value? 227
[[The typed number]: is a [valid positive float number!]]

[ANSWER]
-- The velocity in [Fps] is: 206.96

```
                    /////
                    º<º . . .[END PROGRAM -- OK!]. . .
                    \-/


                . . .KEY [ENTER] TO EXIT OF THE PROGRAM!. . .
```

Note: After the last message key: [ENTER].

```
-----------------
(program exited with code: 0)
Press return to continue
```

Note: After the two last messages too key: [ENTER] to return.

E3.) Different option when the user type number bigger than 12 or smaller than 1.

```
                    ================================
                    * [ALGORÍTHM: ALGFINDVELOCITY.PY] *
                    ================================


        ºº[ DEFINITION OF THE VARIABLES GETED IN RESULT ]ºº

        --[Mph]: Mile per hour
        --[Kph]: Kilometer per hour
        --[Mps]: Meter per second
        --[Fps]: Foot per second


        *[ INSTRUCTIONS FOR USE ]*

        ------------------------------------------------------------------------
        - To [conversion] of the [Velocity]: [Kph] to [Mph] key [1].
        - To [conversion] of the [Velocity]: [Mps] to [Mph] key [2].
        - To [conversion] of the [Velocity]: [Fps] to [Mph] key [3].
        ------------------------------------------------------------------------
        - To [conversion] of the [Velocity]: [Mph] to [Kph] key [4].
        - To [conversion] of the [Velocity]: [Mps] to [Kph] key [5].
        - To [conversion] of the [Velocity]: [Fps] to [Kph] key [6].
        ------------------------------------------------------------------------
        - To [conversion] of the [Velocity]: [Mph] to [Mps] key [7].
        - To [conversion] of the [Velocity]: [Kph] to [Mps] key [8].
        - To [conversion] of the [Velocity]: [Fps] to [Mps] key [9].
        ------------------------------------------------------------------------
        - To [conversion] of the [Velocity]: [Mph] to [Fps] key [10].
        - To [conversion] of the [Velocity]: [Kph] to [Fps] key [11].
        - To [conversion] of the [Velocity]: [Mps] to [Fps] key [12].
        ------------------------------------------------------------------------

                - Select an only [previous option] given -- Ok!
                (º>º) Provide the [new] value? 13
            **[The typed number]: 4 is a [valid float number!]**
```

--[NONE OF THE OPTIONS PREVIOUS WAS USED!]--
-_- [USE THE PROGRAM: ALGFINDVELOCITY.PY] AGAIN -- OK!]

/////
º<º . . .[END PROGRAM -- OK!]. . .
\-/

. . .KEY [ENTER] TO EXIT OF THE PROGRAM!. . .

Note: After the last message key: [ENTER].

(program exited with code: 0)
Press return to continue

Note: After the two last messages too key: [ENTER] to return.

E4.) If any user key: @ or [ENTER] or any other character as: J or ? or b or -2 . . .

==========
* [ALGORÍTHM: ALGFINDVELOCITY.PY] *
==========

ºº[DEFINITION OF THE VARIABLES GETED IN RESULT]ºº

--[Mph]: Mile per hour
--[Kph]: Kilometer per hour
--[Mps]: Meter per second
--[Fps]: Foot per second

[INSTRUCTIONS FOR USE]

- To [conversion] of the [Velocity]: [Kph] to [Mph] key [1].
- To [conversion] of the [Velocity]: [Mps] to [Mph] key [2].
- To [conversion] of the [Velocity]: [Fps] to [Mph] key [3].

- To [conversion] of the [Velocity]: [Mph] to [Kph] key [4].
- To [conversion] of the [Velocity]: [Mps] to [Kph] key [5].
- To [conversion] of the [Velocity]: [Fps] to [Kph] key [6].

- To [conversion] of the [Velocity]: [Mph] to [Mps] key [7].
- To [conversion] of the [Velocity]: [Kph] to [Mps] key [8].
- To [conversion] of the [Velocity]: [Fps] to [Mps] key [9].

- To [conversion] of the [Velocity]: [Mph] to [Fps] key [10].
- To [conversion] of the [Velocity]: [Kph] to [Fps] key [11].
- To [conversion] of the [Velocity]: [Mps] to [Fps] key [12].

- Select an only [previous option] given -- Ok!
(º>º) Provide the [new] value? @

```
###
º>º [Warning!]: invalid literal for int() with base 10: '@'
\~/ [TYPE AN NEW POSITIVE INTEGER NUMBER IN NEXT INSTRUCTION -- OK!]

    (º>º) Provide the [new] value? ENTER
###
º>º [Warning!]: invalid literal for int() with base 10: 'ENTER'
\~/ [TYPE AN NEW POSITIVE INTEGER NUMBER IN NEXT INSTRUCTION -- OK!]

    (º>º) Provide the [new] value? J
###
º>º [Warning!]: invalid literal for int() with base 10: 'J'
\~/ [TYPE AN NEW POSITIVE INTEGER NUMBER IN NEXT INSTRUCTION -- OK!]

    (º>º) Provide the [new] value?  ?
###
º>º [Warning!]: invalid literal for int() with base 10: '?'
\~/ [TYPE AN NEW POSITIVE INTEGER NUMBER IN NEXT INSTRUCTION -- OK!]

    (º>º) Provide the [new] value? b
###
º>º [Warning!]: invalid literal for int() with base 10: 'b'
\~/ [TYPE AN NEW POSITIVE INTEGER NUMBER IN NEXT INSTRUCTION -- OK!]


    (º>º) Provide the [new] value? -2

*[ NO TYPE AN [NEGATIVE INTEGER NUMBER] or equal [ZERO]--Ok! ]*
```

Warning!: Only will possible finish the **algfindvelocity.py program** keying any number: 1 or 2 or 3 or . . . or 10 or 11 or 12 — Ok!

Will follow with the next conversion: The *american driver*: **Álex Palou** of the Indy formule in 2023 was do the more speed lap in 234.22 Mph. Will use the option: 4 to find the velocity in Kph as:

```
    (º>º) Provide the [new] value? 4
**[The typed number]: 4 is a [valid float number!]**


--[VELOCITY GIVEN IN MILE PER HOUR(MPH)]--
(ª<ª) Enter the [new] value? 234.22
**[ [The typed number]: 234.22 is a [valid positive float number!] ]**

**[ANSWER]**
-- The velocity in [Kph] is: 376.86


        /////
        º<º . . .[END PROGRAM -- OK!]. . .
        \-/


    . . .KEY [ENTER] TO EXIT OF THE PROGRAM!. . .
```

Note: After the last message key: [ENTER].

(program exited with code: 0)
Press return to continue

Note: After the two last messages too key: [ENTER] to return.

E5. Conversion of [Mph] to [Fps]

==========
* [ALGORÍTHM: ALGFINDVELOCITY.PY] *
==========

ºº[DEFINITION OF THE VARIABLES GETED IN RESULT]ºº

--[Mph]: Mile per hour
--[Kph]: Kilometer per hour
--[Mps]: Meter per second
--[Fps]: Foot per second

[INSTRUCTIONS FOR USE]

- To [conversion] of the [Velocity]: [Kph] to [Mph] key [1].
- To [conversion] of the [Velocity]: [Mps] to [Mph] key [2].
- To [conversion] of the [Velocity]: [Fps] to [Mph] key [3].

- To [conversion] of the [Velocity]: [Mph] to [Kph] key [4].
- To [conversion] of the [Velocity]: [Mps] to [Kph] key [5].
- To [conversion] of the [Velocity]: [Fps] to [Kph] key [6].

- To [conversion] of the [Velocity]: [Mph] to [Mps] key [7].
- To [conversion] of the [Velocity]: [Kph] to [Mps] key [8].
- To [conversion] of the [Velocity]: [Fps] to [Mps] key [9].

- To [conversion] of the [Velocity]: [Mph] to [Fps] key [10].
- To [conversion] of the [Velocity]: [Kph] to [Fps] key [11].
- To [conversion] of the [Velocity]: [Mps] to [Fps] key [12].

- Select an only [previous option] given -- Ok!
(º>º) Provide the [new] value? 10
[The typed number]: 10 is a [valid float number!]

[Warning!]: Data is not permit as [value] to velocity conversion.

--[VELOCITY GIVEN IN MILE PER HOUR(MPH)]--
(ª<ª) Enter the [new] value? -57.25

[NO TYPE AN [NEGATIVE FLOAT NUMBER] or equal [ZERO]--Ok!]

(ª<ª) Enter the [new] value? &

```
  _/§\_
 @<@ [Warning!]: could not convert string to float: '&'
   \~/ [ TYPE AN [NEW POSITIVE FLOAT NUMBER ]
     [ IN NEXT INSTRUCTION -- OK! ]

(ª<ª) Enter the [new] value? 118.93
**[ [The typed number]: 118.93 is a [valid positive float number!] ]**

**[ANSWER]**
-- The velocity in [Fps] is: 174.43


                  /////
                  º<º . . .[END PROGRAM -- OK!]. . .
                  \-/


          . . .KEY [ENTER] TO EXIT OF THE PROGRAM!. . .
```

Note: After the last message key: [ENTER].

```
------------------
(program exited with code: 0)
Press return to continue
```

Note: After the two last messages too key: [ENTER] to return.

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