

## Turtle Graphics Lab Exploration

Open a shell, then try the following.

Command	What does it do? In your answer, explain what the function does, and how any of the input(s), if any, affect the behavior.
<code>import turtle</code>	Imports the turtle library to python
<code>t = turtle.Turtle()</code>	Creates a window and the turtle
<code>t.forward(50)</code>	Moves the turtle in the direction it is facing 50 units leaving a line behind it
<code>t.backward(20)</code>	Moves the turtle in the opposite direction it is facing 20 units leaving a line behind it
<code>t.right(90)</code>	Turns the turtle right 15°
<code>t.left(135)</code>	Turns the turtle left 135°
<code>t.up()</code>	Stops leaving a line behind the turtle
<code>t.forward(30)</code>	Moves the turtle in the direction it is facing 50 units without leaving a line
<code>t.down()</code>	Starts leaving a line behind the turtle
<code>t.forward(40)</code>	Moves the turtle in the direction it is facing 50 units leaving a line behind it
<code>t.color("green")</code>	Makes the turtle green along with the trail it leaves behind
<code>t.heading()</code>	Returns the position the turtle is facing
<code>t.left(90)</code>	Turns the turtle left 90°
<code>t.heading()</code>	Returns the position the turtle is facing
<code>t.position()</code>	Returns the turtles position in coordinate form as floats in a tuple (float, float)
<code>t.backward(70)</code>	Moves the turtle in the opposite direction it is facing 20 units leaving a line behind it
<code>t.position()</code>	Returns the turtles position in coordinate form as floats in a tuple (float, float)
<code>t.goto(100, 200)</code>	The turtle goes to the position (100, 200)
<code>t.fillcolor("red")</code>	Except for the borders and pen line the turtle became red

<pre> t.begin_fill() t.forward(30) t.left(60) t.forward(30) t.left(60) t.forward(30) t.left(60) t.end_fill() </pre>	<p>Starts a fill which when end fill will fill the color of the area as what the fill color is set to.</p> <p>Moves the turtle in the direction it is facing 30 units leaving a line behind it</p> <p>Turns the turtle left 60°</p> <p>Moves the turtle in the direction it is facing 30 units leaving a line behind it</p> <p>Turns the turtle left 60°</p> <p>Moves the turtle in the direction it is facing 30 units leaving a line behind it</p> <p>Turns the turtle left 60°</p> <p>Ends the fill filling the space in with red.</p>
<pre> t.forward(40) t.dot() t.right(90) t.forward(50) t.dot() </pre>	<p>Moves the turtle in the direction it is facing 40 units leaving a line behind it</p> <p>Adds a dot to the position it is at</p> <p>Turns the turtle right 90°</p> <p>Moves the turtle in the direction it is facing 50 units leaving a line behind it</p> <p>Adds a dot to the position it is at</p>
<pre> t.forward(10) t.shape("turtle") t.stamp() t.forward(10) t.shape("arrow") t.stamp() t.forward(10) t.shape("classic") t.stamp() t.forward(10) t.shape("circle") t.stamp() t.forward(10) t.shape("square") </pre>	<p>Moves the turtle in the direction it is facing 10 units leaving a line behind it</p> <p>Makes the turtle's shape a turtle</p> <p>Makes a stamp of what it looks like leaving it behind</p> <p>Moves the turtle in the direction it is facing 10 units leaving a line behind it</p> <p>Makes a stamp of what it looks like leaving it behind</p> <p>Moves the turtle in the direction it is facing 10 units leaving a line behind it</p> <p>Makes the turtle shape a much larger arrow that the original shape</p> <p>Makes a stamp of what it looks like leaving it behind</p> <p>Moves the turtle in the direction it is facing 10 units leaving a line behind it</p> <p>Returns the turtle to its original shape</p> <p>Makes a stamp of what it looks like leaving it behind</p> <p>Moves the turtle in the direction it is facing 10 units leaving a line behind it</p> <p>Turns the turtles shape into a hexagon</p> <p>Makes a stamp of what it looks like leaving it behind</p> <p>Moves the turtle in the direction it is facing 10 units leaving a line behind it</p>