COMP1021 Basic Turtle Command Summary

`turtle.up()`
Pulls the pen up, then the turtle doesn't draw when it moves. *Alternative command names:* `penup()`, `pu()`

`turtle.down()`
Puts the pen down, then turtle will draw when moving. *Alternative command names:* `pendown()`, `pd()`

`turtle.goto(` *X*, *Y* **`)`**
Moves turtle to the position (*X*, *Y*) e.g. `0,0`
Alternative command names: `setpos()`, `setposition()`

`turtle.forward(` *DISTANCE* **`)`**
Moves the turtle forward by *DISTANCE* in the direction of the turtle e.g. `100`
Alternative command name: `fd()`

`turtle.backward(` *DISTANCE* **`)`**
Moves the turtle backward by *DISTANCE* e.g. `100`
Does not change the direction of the turtle.
Alternative command names: `bk()`, `back()`

`turtle.left(` *ANGLE* **`)`**
Turns turtle left by *ANGLE* degrees e.g. `45`
Alternative command name: `lt()`

`turtle.right(` *ANGLE* **`)`**
Turns turtle right by *ANGLE* degrees e.g. `45`
Alternative command name: `rt()`

`turtle.width(` *WIDTH* **`)`**
Sets the line thickness to *WIDTH* e.g. `5`
Alternative command name: `pensize()`

`turtle.dot(` *SIZE* **`)`**
Draws a filled circle with diameter *SIZE* e.g. `50`
The center is at the current position of the turtle. The circle is always filled. Works even if the pen is off the page.

`turtle.circle(` *RADIUS*, *EXTENT* **`)`**
Draws a circle with given *RADIUS*. If *RADIUS* is positive the circle is drawn to the left of the turtle. If it is negative it is drawn to the right. *EXTENT* is optional. *EXTENT* is an angle that determines how many degrees are drawn.
An example pair of numbers: `200,90`

`turtle.pencolor(` *PENCOLOR* **`)`**
Sets the pen color to *PENCOLOR* e.g. `"red"`

`turtle.fillcolor(` *FILLCOLOR* **`)`**
Sets the fill color to *FILLCOLOR* e.g. `"blue"`

`turtle.color(` *PENCOLOR*, *FILLCOLOR* **`)`**
Sets the pen color to *PENCOLOR* and optionally sets the fill color to *FILLCOLOR* at the same time e.g. `"red","blue"`

`turtle.begin_fill()`
Begins the color filling. Put this before the code which draws the shape you want to fill.

`turtle.end_fill()`
Ends the color filling. Put this after the code which draws the shape you want to fill.

`turtle.speed(` *SPEED* **`)`**
Sets the turtle's animation speed to *SPEED* e.g. `5`
1 is slow, 10 is fast. 0 means very fast.

`turtle.undo()`
Undoes the last turtle action.

`turtle.done()`
Tells Python your code has finished drawing. This command is written at the end of your program. However, you probably don't need to use this until we do cleverer things later in the semester (after the midterm).

`turtle.clear()`
Deletes everything the turtle has drawn.

`turtle.write( "`*TEXT***`", font=("`***FONTYPE***`", `***FONTSIZE***`, "`***FONTSTYLE***`") )`**
Writes *TEXT* using the style information, for example: `font=("Arial", 20, "bold")`