

ICS 140 Computational Thinking with Programming

Assignment 1

For this assignment, make any freeform drawing you wish using the turtle library. The only requirement is that you spend at least 30 minutes coding and that you don't download code from the internet and submit it as your own. If you don't have any ideas, you can consider the following:

- Create a smiley face.
- Create a house using a triangle on top of a square for the roof and a rectangle for a door.
- Create a tic tac toe board with some Xs and Os

When you are done, take a screenshot of your code and paste it into this document. Then take a screenshot of your drawing and paste it in the document. When done, save this file as a PDF and upload it to D2L.

Turtle Cheat Sheet

The first line in your program should be: `import turtle`

Name your turtle: `name = turtle.Turtle()`

Use some combination of the following commands to draw (*the numbers can be changed to change the size of the line/circle/angle*):

- `name.forward(100)`
- `name.right(90)`
- `name.left(90)`
- `name.circle(100)`
- `name.penup()`
- `name.pendown()`
- `name.setpos(x,y)`

The last line in your program should be: `turtle.done()`

Paste your python code here:

```
import turtle

mike = turtle.Turtle()

mike.left(90)
mike.forward(200)
mike.penup()
mike.right(90)
mike.forward(100)
mike.right(90)
mike.pendown()
mike.forward(200)
mike.penup()
mike.right(90)
mike.forward(200)
mike.right(90)
mike.forward(66)
mike.right(90)
mike.pendown()
mike.forward(300)
mike.penup()
mike.left(90)
mike.forward(68)
mike.left(90)
mike.pendown()
mike.forward(300)
mike.penup()
mike.right(90)
mike.forward(15)
mike.right(90)
mike.forward(50)

# make an X
mike.left(180)
mike.forward(25)
mike.right(135)
mike.pendown()
mike.forward(90)
mike.penup()
mike.left(135)
mike.forward(60)
mike.left(135)
mike.pendown()
```

```
mike.forward(90)
mike.penup()
mike.right(135)
mike.forward(50)

#move to other X location
mike.left(90)
mike.forward(175)
mike.left(90)

#place another X
mike.left(180)
mike.forward(25)
mike.right(135)
mike.pendown()
mike.forward(90)
mike.penup()
mike.left(135)
mike.forward(60)
mike.left(135)
mike.pendown()
mike.forward(90)
mike.penup()
mike.right(135)
mike.forward(50)

# move to a circle location
mike.right(180)
mike.forward(225)

# Draw 1st circle
mike.pendown()
mike.circle(30)
mike.penup()

# Move to another circle location
mike.left(90)
mike.forward(95)
mike.left(90)
mike.forward(110)
mike.right(180)

# Draw 2nd circle
mike.pendown()
mike.circle(30)
```

```
mike.penup()

# Move to 3rd X location
mike.right(180)
mike.forward(95)

# Draw 3rd X
mike.forward(25)
mike.right(135)
mike.pendown()
mike.forward(90)
mike.penup()
mike.left(135)
mike.forward(60)
mike.left(135)
mike.pendown()
mike.forward(90)
mike.penup()
mike.right(135)
mike.forward(50)

# Draw winners line
mike.left(90)
mike.forward(100)
mike.right(180)
mike.pendown()
mike.forward(250)

turtle.done()
```

Paste a screenshot of your drawing here:

