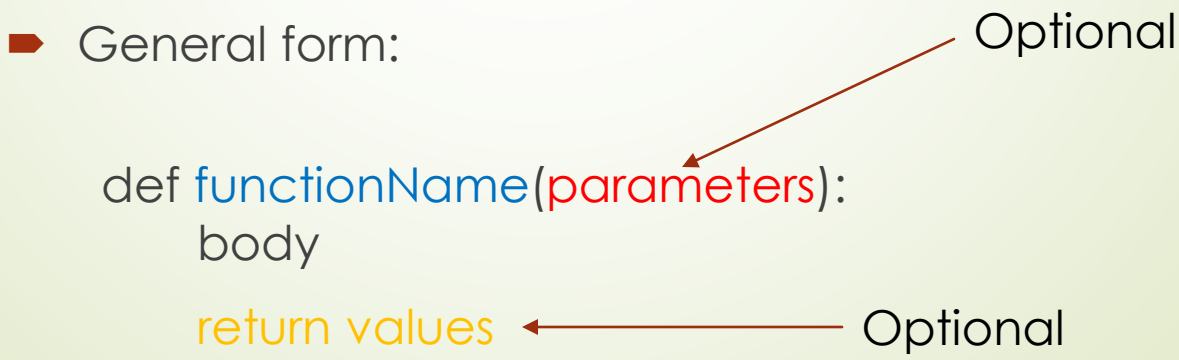
Tutorial

CPSC 217

Function

- What is a function?
  - A named set of statements
  - a function should perform a clearly defined specific Functions
  - May take parameters (Passing values to the function)
  - May return values

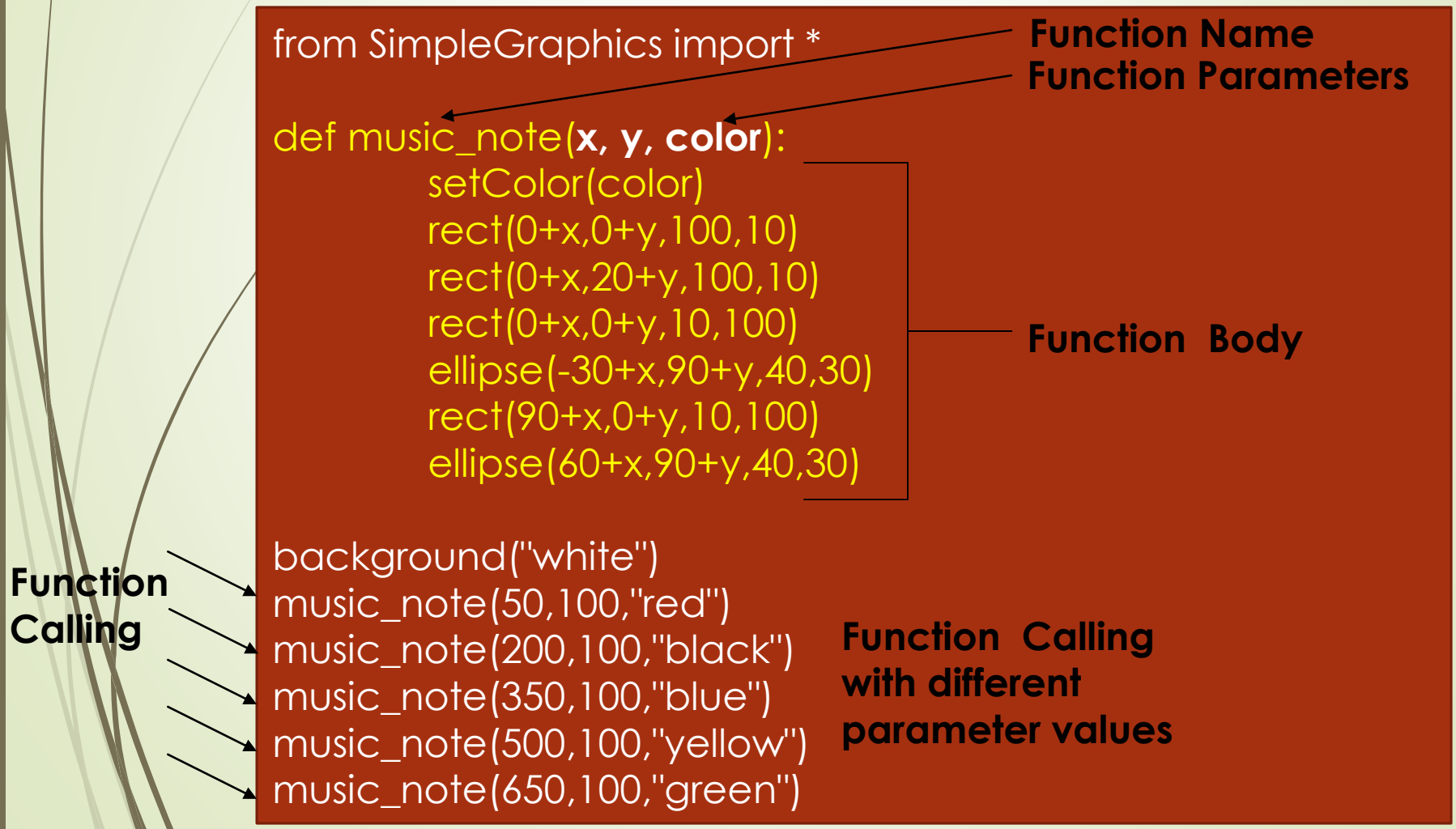
- General form:



Task 01:

- Write a program that draw the following 5 music notes using simple graphics.
  - You must define a function to draw a single music note.

Task 01: Solution



Best Approach

```
from SimpleGraphics import *

music_note(x, y, color):
        setColor(color)
        rect(0+x,0+y,100,10)
        rect(0+x,20+y,100,10)
        rect(0+x,0+y,10,100)
        ellipse(-30+x,90+y,40,30)
        rect(90+x,0+y,10,100)
        ellipse(60+x,90+y,40,30)

def main():
        background("white")
        music_note(50,100,"red")
        music_note(200,100,"black")
        music_note(350,100,"blue")
        music_note(500,100,"yellow")
        music_note(650,100,"green")

main()
```

Function Documentation

- Function documentation is very important for a Function.
- Function header documentation:
  - Say about its purpose (What it does)
  - Briefly describe the parameters
  - What it will return.

- Detail Documentation is not necessary for Main function.

Task 1 solution with proper documentation

```
from SimpleGraphics import *

#Definition: Draw a music note into a target location with desire color
#@param x: x coordinate of the location
#@param y: y coordinate of the location
#@param color: Desire color name
def music_note(x, y, color):
        setColor(color)
        rect(0+x,0+y,100,10)
        rect(0+x,20+y,100,10)
        rect(0+x,0+y,10,100)
        ellipse(-30+x,90+y,40,30)
        rect(90+x,0+y,10,100)
        ellipse(60+x,90+y,40,30)

# Main function: Your program starts from here.
def main():
        background("white")
        music_note(50,100,"red")
        music_note(200,100,"black")
        music_note(350,100,"blue")
        music_note(500,100,"yellow")
        music_note(650,100,"green")

main()
```