VBugs Worksheet 1

Name: _____

Year Level: _____ **SOLUTIONS** _____

Answers to Part 1

What is happening on your screen? Describe the output below:

> _____
>
> There are black background, light blue "Hello World!" text
>
> and a red rectangle underneath the text.
>
> _____
>
> _____

Answers to Part 2

Exercise1: *Reading the code*

a) Which line contains the code that tells the computer to draw text on the screen?

Line 21

b) Which line does contain the code that tell a computer to draw a rectangle on the screen?

Line 18

c) Where (line number) does the game loop start and end?

Start-13, end -27

Exercise 2: *Changing the text*

    a) Change the text "Hello World!" to "Hello *Your Name*!"
        Write the code below that you changed to make this happen:

```
Answer:

  …
  'Draws text "Hello World"

Text.DrawText("Hello Your Name!", Color.Aqua,
GameFont("ArialLarge"), 100, 150)

  'Refreshes the Screen and Processes Input Events

  …
```

Exercise 3: *Changing the color*

    a) Change the color of the text to `Color.GreenYellow`.
        Write the code below that you changed to make this happen:

```
Answer:

  …

  'Draws text "Hello World"

Text.DrawText("Hello Your Name!", Color.GreenYellow,
GameFont("ArialLarge"), 100, 150)

  'Refreshes the Screen and Processes Input Events
  …
```

    b) Change the color of the rectangle to `Color.Blue`.
        Write the code below that you changed to make this happen:

```
Answer:
  …

  'Draws red rectangle

  Graphics.FillRectangle(Color.Blue, 20, 150, 500, 50)

  'Draws text "Hello World"

  …
```
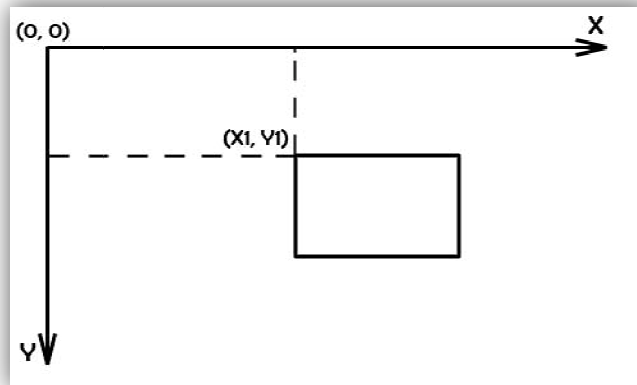
c) Change the background color to `Color.LightBlue.`
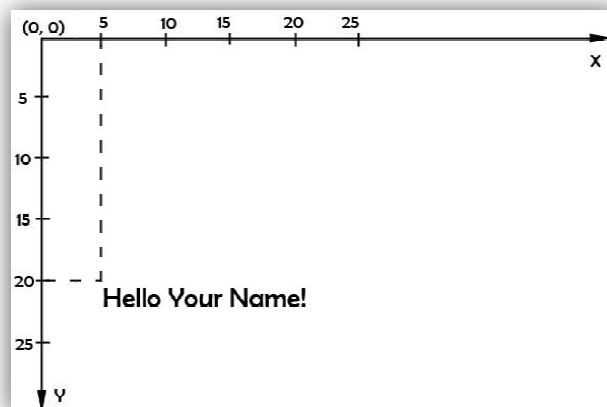Write the code below that you changed to make this happen:

Answer:

…

```
'Clears the Screen to Black

SwinGame.Graphics.ClearScreen(Color.LightSkyBlue)

'Draws red rectangle
```

…

Answers to Part 3

Exercise 1: *Locations on the screen*

   a) In the area below draw a small rectangle with coordinates X = 15 and Y = 5 by hand.

   b) In the area below draw the text "Hello Your Name" at X = 5, Y = 20.

Exercise 2: *Changing drawing locations*

   a) Change the location of the text; put it in the middle of the screen.
      Write the code below that you changed to make this happen:

```
Answer:

  …

  'Draws text "Hello World"

Text.DrawText("Hello Your Name!", Color.GreenYellow,
GameFont("ArialLarge"), 100, 150)

  'Refreshes the Screen and Processes Input Events
  …
```

b) Change the location of the rectangle; put it under the text.
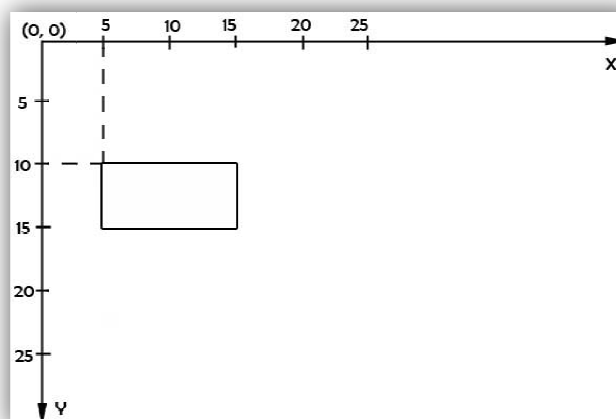   Write the code below that you changed to make this happen:

```
Answer:
  …

  'Draws red rectangle

  Graphics.FillRectangle(Color.Blue, 100, 250, 500, 50)

  'Draws text "Hello World"

  …
```

Exercise 3: *Size of an element*

a) In the area below draw a rectangle with width = 5, height = 10 at the position X = 0, Y = 5.

b) In the area below draw a rectangle with width = 10, height = 5 at the position X = 5, Y = 10.

Exercise 4: *Draw an element with the new size.*

a) Change the size of the rectangle to width = 630 and height = 20.
Write the code below that you changed to make this happen:

```
Answer:
  …

  'Draws red rectangle

   Graphics.FillRectangle(Color.Blue, 100, 250, 630, 20)

  'Draws text "Hello World"

  …
```

Extra Exercise:

Draw Smiley face on the screen then put the code you entered to achieve this below:

```
'Draw yellow circle on the screen – "face".
 Graphics.FillEllipseOnScreen(Color.Yellow, 100, 250, 100, 100)

'Draw eyes – two black circles inside the yellow circle
 Graphics.FillEllipseOnScreen(Color.Black, 125, 280, 15, 15)
 Graphics.FillEllipseOnScreen(Color.Black, 160, 280, 15, 15)

'Draw "smile" on the screen.
 Graphics.DrawLineOnScreen(Color.Black, 130, 310, 150, 330)
 Graphics.DrawLineOnScreen(Color.Black, 170, 310, 150, 330)
```