VBugs Chapter 5 Worksheet

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| **Name:** |
| **Year Level: SOLUTIONS** |

**Part 1**

Exercise 1: *Replacing the original mouse point to the custom one*

1. Loadtarget.png into your program

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| Answer:  …  Private Sub LoadImages()  NewImage("sprite", "sprite.png")      End Sub  … |

NewImage("target", "target.png")

1. Inside the Game Loop (below ClearScreen) tell the program to draw target.png instead of the original mouse pointer using the methods described above (you need to hide the mouse pointer first).

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| Answer:  Graphics.DrawBitmapOnScreen(GameImage("target"),mousePoint.X, mousePoint.Y) 'draws the new mouse pointer…  Input.ShowMouse(False)  …    Do  'Clears the Screen to White (customized color)  SwinGame.Graphics.ClearScreen(Color.White) |

1. The image has the size of 40x40 pixels. Remember the mouse position is going to be the position of the top left corner of the mouse on the screen. In order get the target in the right position (the middle of crosshair image) you need to consider the size of the image. If the image is 40x40 then the middle of the image will have a position of X = mousePoint.X – 20 and Y = mousePoint.Y – 20 as shown in Figure 1.

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| Answer:  …  Do  'Clears the Screen to White (customized color)  SwinGame.Graphics.ClearScreen(Color.White) |

Graphics.DrawBitmapOnScreen(GameImage("target"),mousePoint.X, mousePoint.Y) 'draws the new mouse pointer…

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| Answer:  'Game Loop  Do                  'Refreshes the Screen and Processes Input Events  … |

**Part 2**

Exercise 1: *Playing sound when clicked on a bug*

1. Write the code to tell the program to play the “splat.wav” (file provided in the resources folder) when a user clicks on a bug sprite. Use knowledge from previous chapters and follow the logic above.

If Physics.IsSpriteOnScreenAt(bug, mousePoint.X, mousePoint.Y) Then

If Input.MouseWasClicked(MouseButton.LeftButton) Then

Audio.PlaySoundEffect(GameSound("splat"))

End If

End If

**Part 3**

Exercise 1: *Declaring the animated sprite variable*

1. Declare a new animated sprite variable and name it “deadBug”. Use the CreateSprite()function as detailed in the Chapter and assign the deadBug image to the variable. Write the code that enables you to do this in the area below:

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| Answer:  …  'Load Resources  LoadResources()            'Game Loop  … |

Dim deadBug As Sprite

deadBug = Graphics.CreateSprite(GameImage("deadBug"), 40, 10, 57, 43)

Question 1:

In the following code what is the height of each frame in the animation: Graphics.CreateSprite(GameImage("monkey"), **50, 10, 60, 35**)

60

Answer:

Question 2:

In the following code how many cells are in the animation? Graphics.CreateSprite(GameImage("chimp"), **15, 5, 15, 10**)

4 – remember the last cell is blank so take one off.

Answer:

*Question 3: In the following code was run what would be the final value of String1?*

*String1 = “medium”*

*String2 = “high”*

*String3 = “low”*

String4 = “high”

String2 = “low”

String 1 = “low”

String4 = String2

String2 = String3

String1 = String2

“low”

*Answer:*

*Question 4: In the following code was run what would be the final value of X?*

*X = 20*

*Y = 40*

*Z = 50*

20 × 50 = 1000, X = 1000

50 + 1000 = 1050, Z = 1050

1000 + 1050 – 40 = 2010, X = 2010

*X = X × Z*

*Z = Z + X*

*X = X + Z - Y*

2010

*Answer:*

Exercise 2: *Playing animation when a bug was clicked.*

1. Write and implement code that stops the bug and plays the animation in its place when it is clicked. Use the previous information to complete this task.

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| Answer:  If Physics.IsSpriteOnScreenAt(bug, mousePoint.X, mousePoint.Y) Then  If Input.MouseWasClicked(MouseButton.LeftButton)Then  Audio.PlaySoundEffect(GameSound("splat"))  bug.Movement.X = 0  bug.Movement.Y = 0  deadBug.X = bug.X  deadBug.Y = bug.Y  bug = deadBug  deadBug.EndingAction = SpriteEndingAction.Stop  End If  End If  …  'Load Resources  LoadResources()                                  'Game Loop  … |