A·P·U
ASIA PACIFIC UNIVERSITY
OF TECHNOLOGY & INNOVATION

Introduction to Visual and Interactive Programming

CT803-4-0-OIVIP

Lab Week 2

Planning and Construction your Event-handling Method

Exercise 1

- **Make a sprite move across the screen:** Make the sprite move from one edge of the screen to the other, and then back again. You can also change the sprite's **costume**, **direction**, or **size** to make it more interesting.

When green flag clicked

```
repeat
        move in current direction
        if at the boundary
                point in opposite direction
                (switch costume)
                (change size)
        end if
end repeat
```

Exercise 2

- **Make a sprite say something:** Make a sprite say hello, ask the user's name, and then say something nice about them.

When key ‘space bar’ pressed

name = input (“Hello! What’s your name?”)

output (“Hello, ” + name + “. You are looking good today!”)

Exercise 3

- **Make a sprite change its color:** Make a sprite change its color gradually, or randomly. Start the program by pressing the “c” key on the keyboard

When key C pressed

for i = 1 to 100

    change color by i

    wait 0.1 seconds

When key C pressed

repeat

    change color by (random)

    wait 0.1 seconds

end repeat

Exercise 4

- **Make a sprite bounce off the edges of the screen:** Make a sprite move around the screen, and bounce off the edges when it touches them. You can also make the sprite bounce off other sprites, or make sound effects when it bounces. Press “s” to start

When key S pressed

```
repeat
        move in current direction
        if touching edges
                point in direction (random)
                (emit sound)
        end if
        if touching other sprites
                point in direction (random)
                (emit sound)
        end if
end repeat
```

Exercise 5

- **Make a sprite follow the mouse pointer:** Make a sprite follow the mouse pointer wherever it goes. You can also make the sprite change its speed, size, or costume depending on the distance from the mouse pointer. Start by clicking the sprite

When sprite is clicked

wait 1 second

repeat forever

    mouse x = x position of mouse

    mouse y = y position of mouse

    go to x: mouse x y: mouse y

end repeat

Week 2 Exercise

- **Create a guessing game:** the sprite will greet the user and asks the user to guess a random number between 1 and 100, and the program gives feedback on whether the guess is too high, too low, or correct. The user can only guess __ number of times (decided by the programmer) so the program needs to keep track of how many guesses the user has made. The game ends when the user guesses the correct number or runs out of guesses.