SNAKE

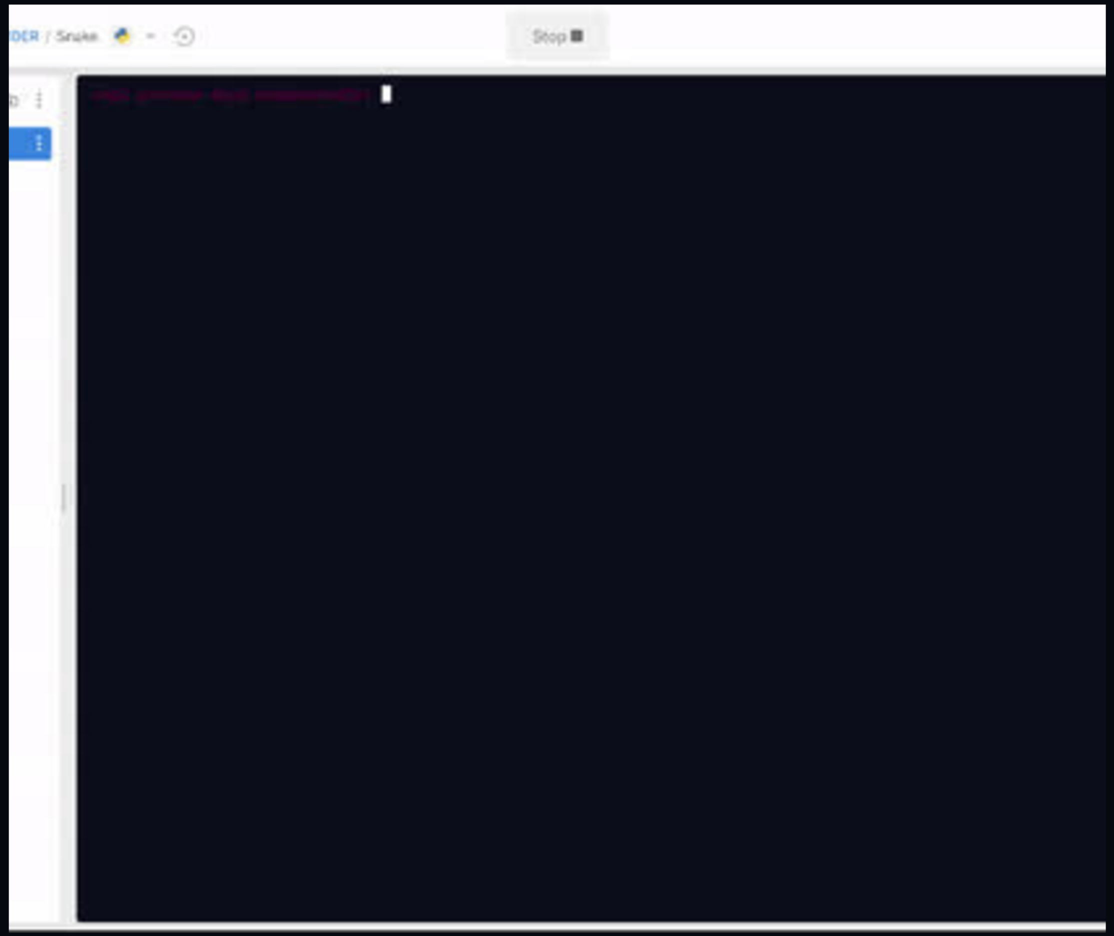
PROJECT

PYTHON

2025

WL HACK CLUB

WORKSHOP



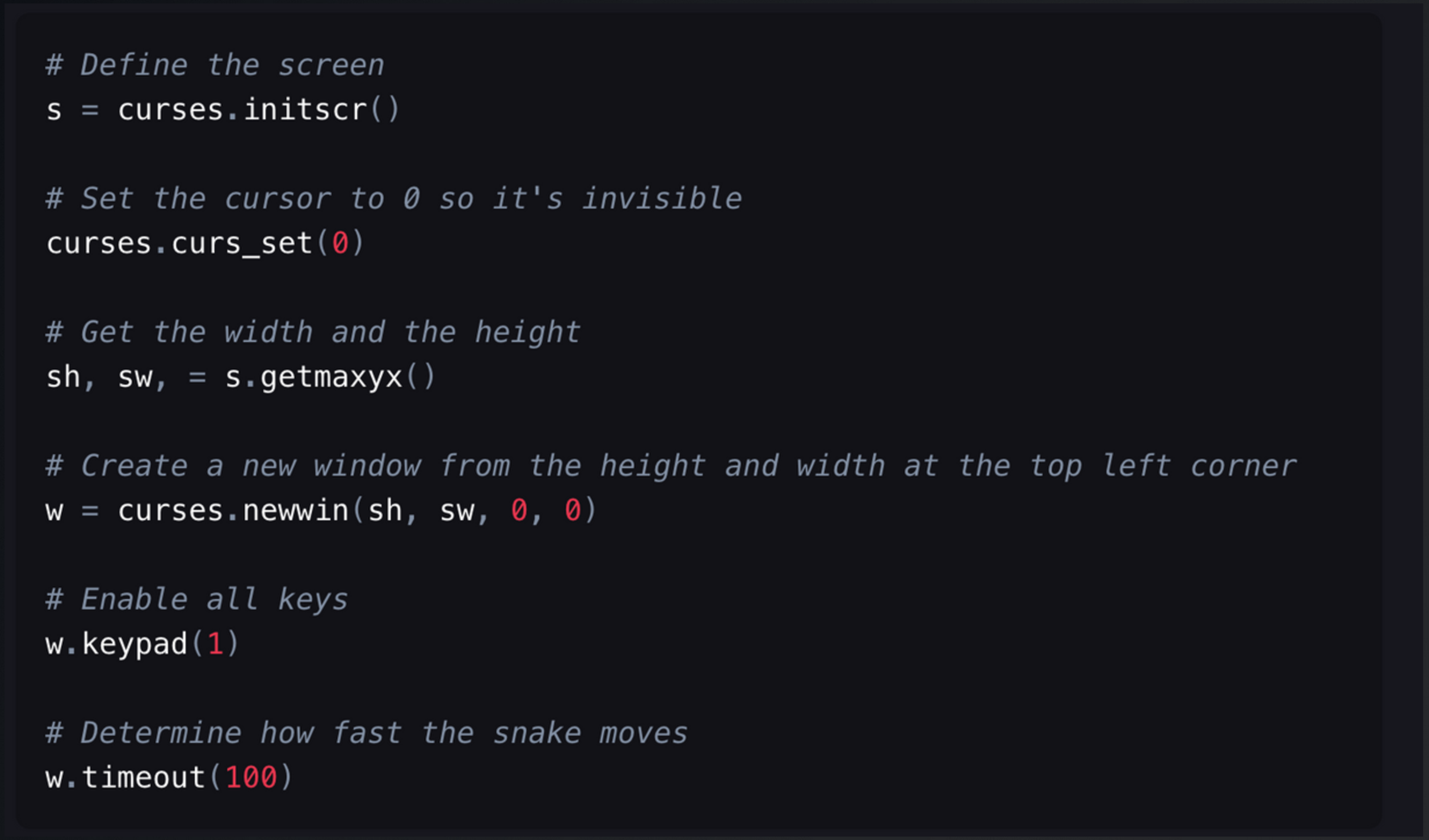
Python Snake

Google Snake

https://workshops.hackclub.com/python_snake/

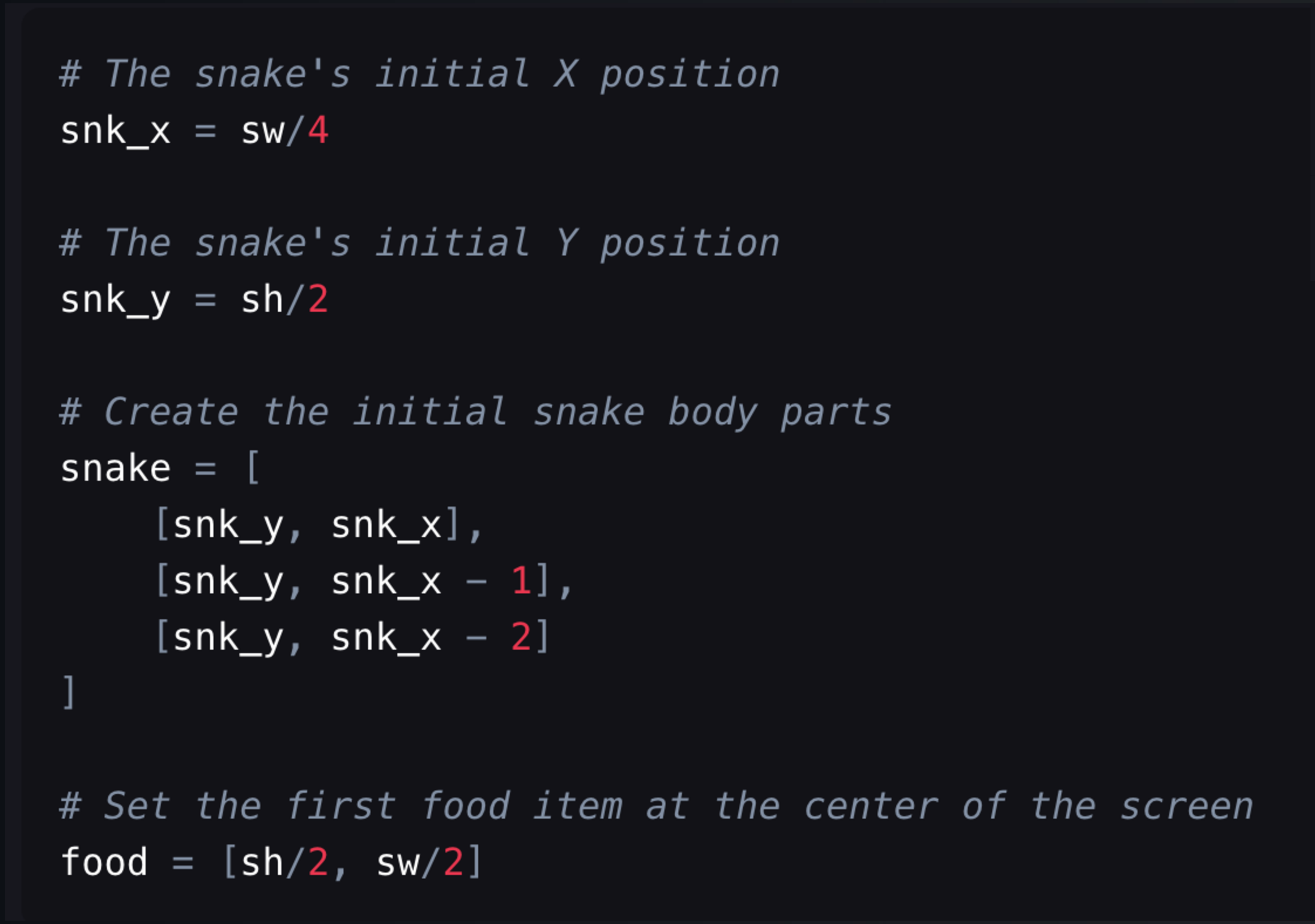
SETUP

INITIALIZE SCREEN

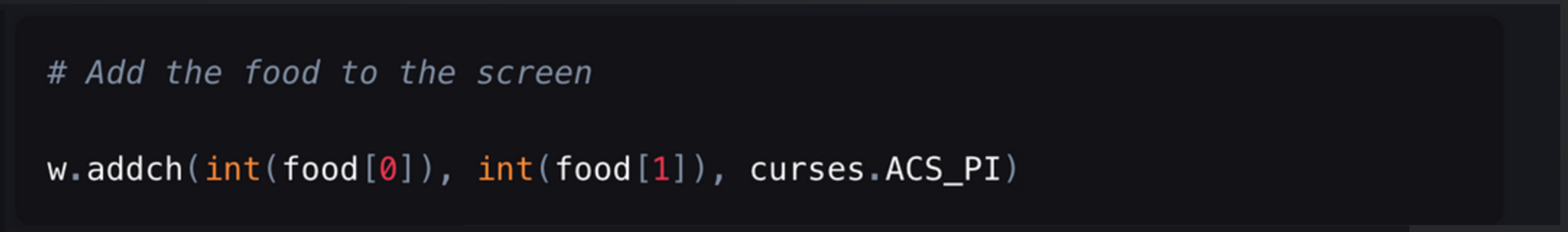


```
# Define the screen
s = curses.initscr()

# Set the cursor to 0 so it's invisible
curses.curs_set(0)

# Get the width and the height
sh, sw, = s.getmaxyx()

# Create a new window from the height and width at the top left corner
w = curses.newwin(sh, sw, 0, 0)

# Enable all keys
w.keypad(1)

# Determine how fast the snake moves
w.timeout(100)
```

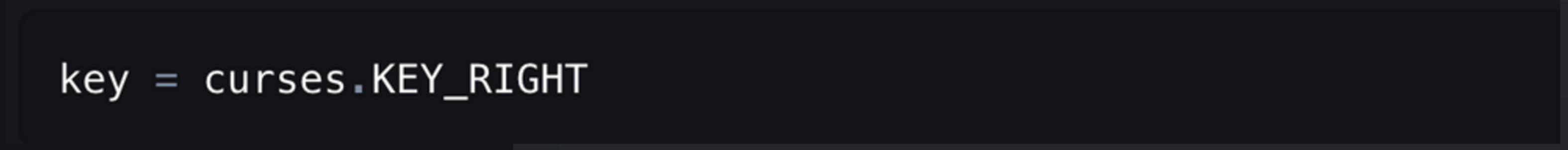
SNAKE AND FOOD



```python
# The snake's initial X position
snk_x = sw/4

# The snake's initial Y position
snk_y = sh/2

# Create the initial snake body parts
snake = [
    [snk_y, snk_x],
    [snk_y, snk_x - 1],
    [snk_y, snk_x - 2]
]

# Set the first food item at the center of the screen
food = [sh/2, sw/2]
```

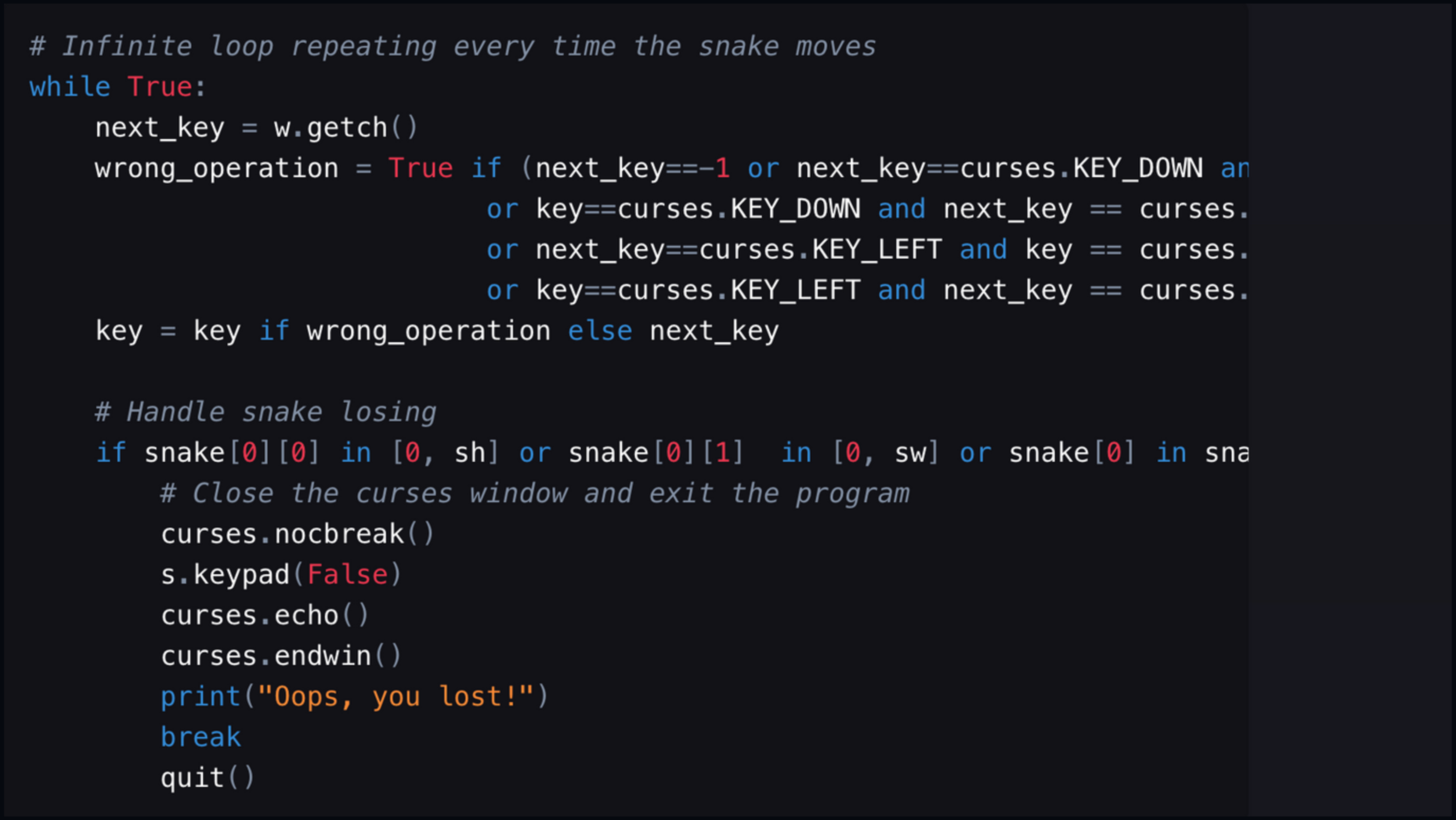


```python
# Add the food to the screen

w.addch(int(food[0]), int(food[1]), curses.ACS_PI)
```



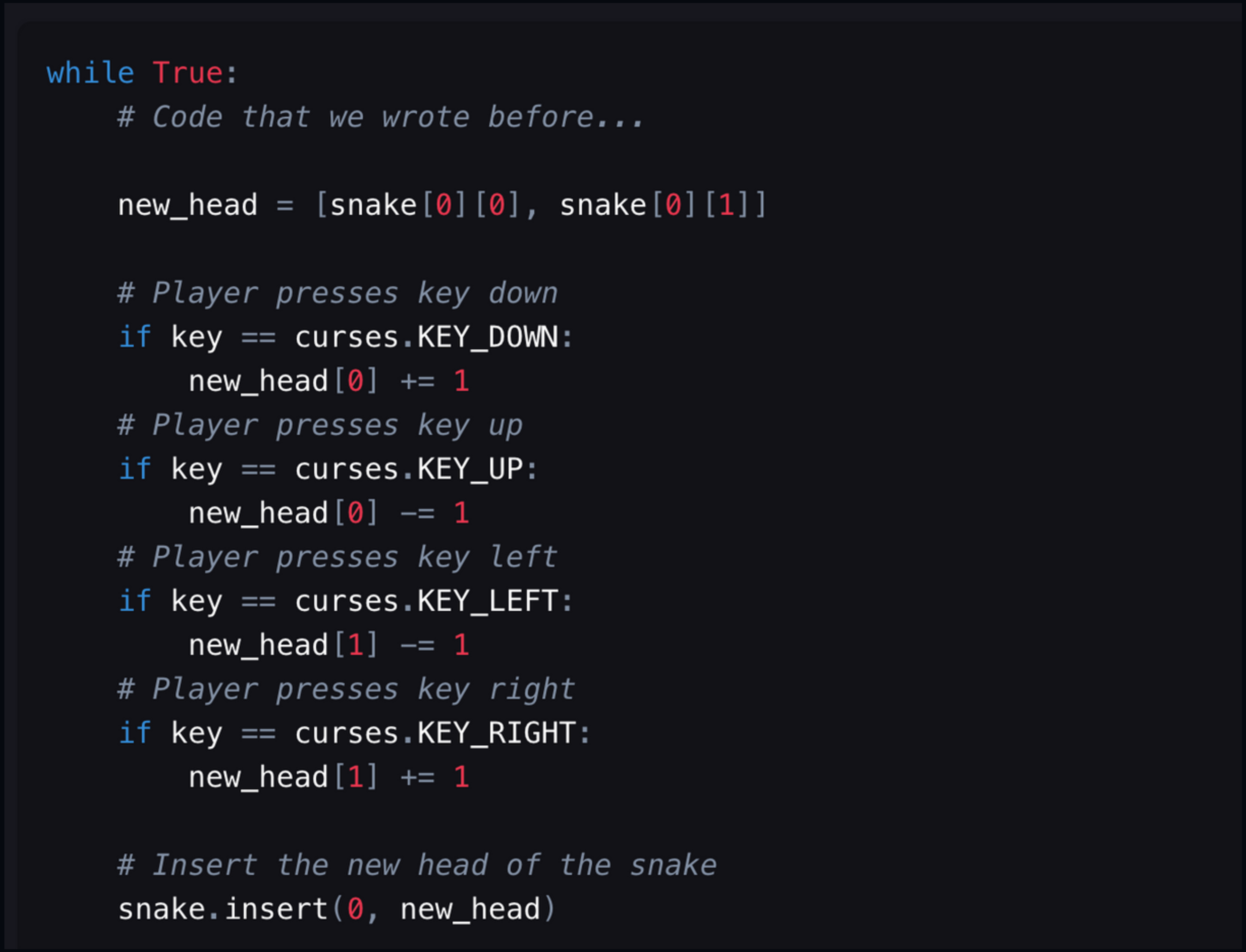
```python
key = curses.KEY_RIGHT
```

MOVEMENT AND LOGIC

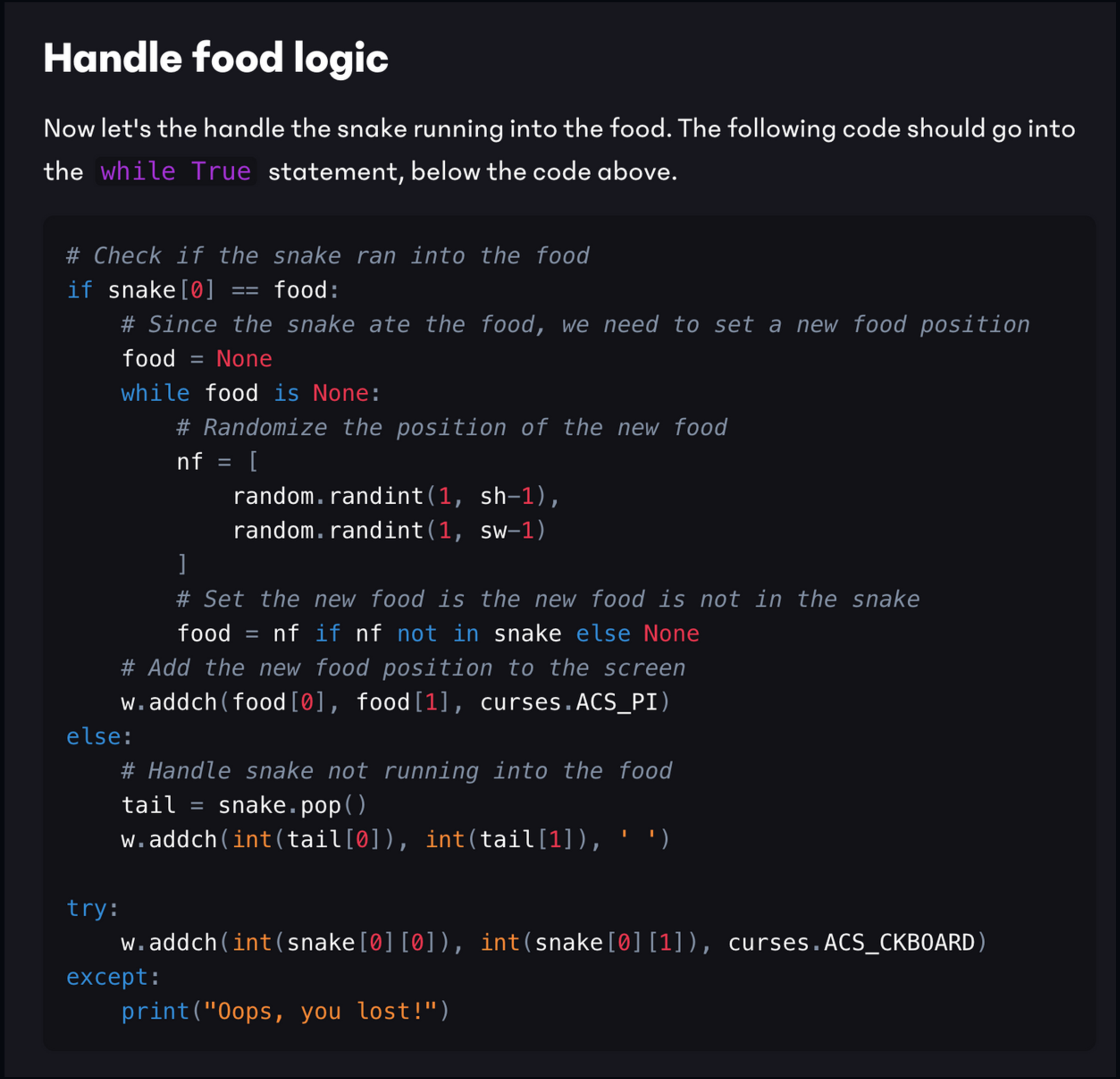


```
# Infinite loop repeating every time the snake moves
while True:
    next_key = w.getch()
    wrong_operation = True if (next_key==-1 or next_key==curses.KEY_DOWN an
                            or key==curses.KEY_DOWN and next_key == curses.
                            or next_key==curses.KEY_LEFT and key == curses.
                            or key==curses.KEY_LEFT and next_key == curses.
    key = key if wrong_operation else next_key

    # Handle snake losing
    if snake[0][0] in [0, sh] or snake[0][1]  in [0, sw] or snake[0] in sna
        # Close the curses window and exit the program
        curses.nocbreak()
        s.keypad(False)
        curses.echo()
        curses.endwin()
        print("Oops, you lost!")
        break
        quit()
```

MOVEMENT AND LOGIC



```python
while True:
    # Code that we wrote before...

    new_head = [snake[0][0], snake[0][1]]

    # Player presses key down
    if key == curses.KEY_DOWN:
        new_head[0] += 1
    # Player presses key up
    if key == curses.KEY_UP:
        new_head[0] -= 1
    # Player presses key left
    if key == curses.KEY_LEFT:
        new_head[1] -= 1
    # Player presses key right
    if key == curses.KEY_RIGHT:
        new_head[1] += 1

    # Insert the new head of the snake
    snake.insert(0, new_head)
```



Handle food logic

Now let's the handle the snake running into the food. The following code should go into the `while True` statement, below the code above.

```
# Check if the snake ran into the food
if snake[0] == food:
    # Since the snake ate the food, we need to set a new food position
    food = None
    while food is None:
        # Randomize the position of the new food
        nf = [
            random.randint(1, sh-1),
            random.randint(1, sw-1)
        ]
        # Set the new food is the new food is not in the snake
        food = nf if nf not in snake else None
    # Add the new food position to the screen
    w.addch(food[0], food[1], curses.ACS_PI)
else:
    # Handle snake not running into the food
    tail = snake.pop()
    w.addch(int(tail[0]), int(tail[1]), ' ')

try:
    w.addch(int(snake[0][0]), int(snake[0][1]), curses.ACS_CKBOARD)
except:
    print("Oops, you lost!")
```