

1) To initialize the GPIO ports on the Raspberry Pi we need to first import the Python library, then initialize the library and setup pin 8 as an output pin

```
import RPi.GPIO as GPIO    # Import Raspberry Pi GPIO library
from time import sleep      # Import the sleep function from the time module

GPIO.setwarnings(False)    # Ignore warning for now
GPIO.setmode(GPIO.BOARD)   # Use physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial
value to low (off)
```

2) Next we need to turn the LED on and off in 1 second intervals by setting the output pin to either high (on) or low (off). We do this inside an infinite loop so our program keeps executing until we manually stop it.

```
while True: # Run forever
    GPIO.output(8, GPIO.HIGH) # Turn on
    sleep(1)                  # Sleep for 1 second
    GPIO.output(8, GPIO.LOW)  # Turn off
    sleep(1)                  # Sleep for 1 second
```

3) Combining the initialization and the blink code should give you the following full Python program

```
import RPi.GPIO as GPIO # Import Raspberry Pi GPIO library
from time import sleep # Import the sleep function from the time module

GPIO.setwarnings(False) # Ignore warning for now
GPIO.setmode(GPIO.BOARD) # Use physical pin numbering
GPIO.setup(8, GPIO.OUT, initial=GPIO.LOW) # Set pin 8 to be an output pin and set initial value
to low (off)

while True: # Run forever
    GPIO.output(8, GPIO.HIGH) # Turn on
    sleep(1) # Sleep for 1 second
    GPIO.output(8, GPIO.LOW) # Turn off
    sleep(1) # Sleep for 1 second
```

