

```
# Code for Practice Problem 1
```

```
import RPi.GPIO as gpio
import time
gpio.setwarnings(False)
gpio.setmode(gpio.BCM)
gpio.setup(18,gpio.OUT)

gpio.output(18,True)
time.sleep(2)
gpio.output(18,False)
```

```
# Code for Practice Problem 2
```

```
import RPi.GPIO as gpio
import time

gpio.setwarnings(False)
gpio.setmode(gpio.BCM)
gpio.setup(18,gpio.OUT)
gpio.setup(14,gpio.OUT)
gpio.setup(15,gpio.OUT)

while True:
    gpio.output(18,True)
    time.sleep(2)
    gpio.output(18,False)
    time.sleep(1)
    gpio.output(18,True)
    gpio.output(14,True)
    time.sleep(1)
    gpio.output(18,False)
    gpio.output(14,False)
    time.sleep(1)
    gpio.output(15,True)
    time.sleep(2)
    gpio.output(15,False)
    time.sleep(2)
```

```
# Code for Practice Problem 3
```

```
import RPi.GPIO as gpio
import time
from tkinter import *
```

```
gpio.setwarnings(False)
gpio.setmode(gpio.BCM)
gpio.setup(18,gpio.OUT)
gpio.setup(14,gpio.OUT)
gpio.setup(15,gpio.OUT)
gpio.output(18,False)
gpio.output(14,False)
gpio.output(15,False)
```

```
root = Tk()
root.title('Check Button')
```

```
check1_var = BooleanVar()
check2_var = BooleanVar()
check3_var = BooleanVar()
```

```
def Update1():
    print('Command')
    if check1_var.get():
        gpio.output(18,True)
    else:
        gpio.output(18,False)
```

```
def Update2():
    print('Command')
    if check2_var.get():
        gpio.output(14,True)
    else:
        gpio.output(14,False)
```

```
def Update3():
    print('Command')
    if check3_var.get():
        gpio.output(15,True)
    else:
        gpio.output(15,False)
```

```
check1 = Checkbutton(root, text = 'D1', command = Update1, \
    variable = check1_var, onvalue = True, offvalue = False)
check1.pack()
check2 = Checkbutton(root, text = 'D2', command = Update2, \
    variable = check2_var, onvalue = True, offvalue = False)
check2.pack()
check3 = Checkbutton(root, text = 'D3', command = Update3, \
    variable = check3_var, onvalue = True, offvalue = False)
check3.pack()

root.mainloop()

while True:
    time.sleep(3)
```