“Raspberry pi course”

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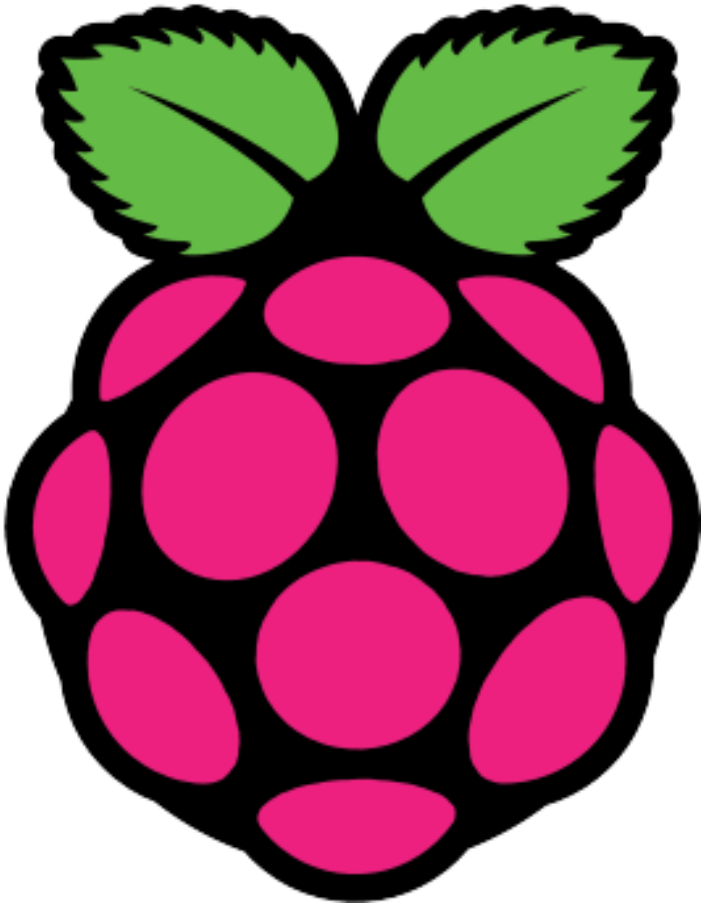

SESSION NO.“10”

- KEYBOARD CONTROL
- L298N MOTOR DRIVER
- ROBOT CONTROLLED USING KEAYBOARD

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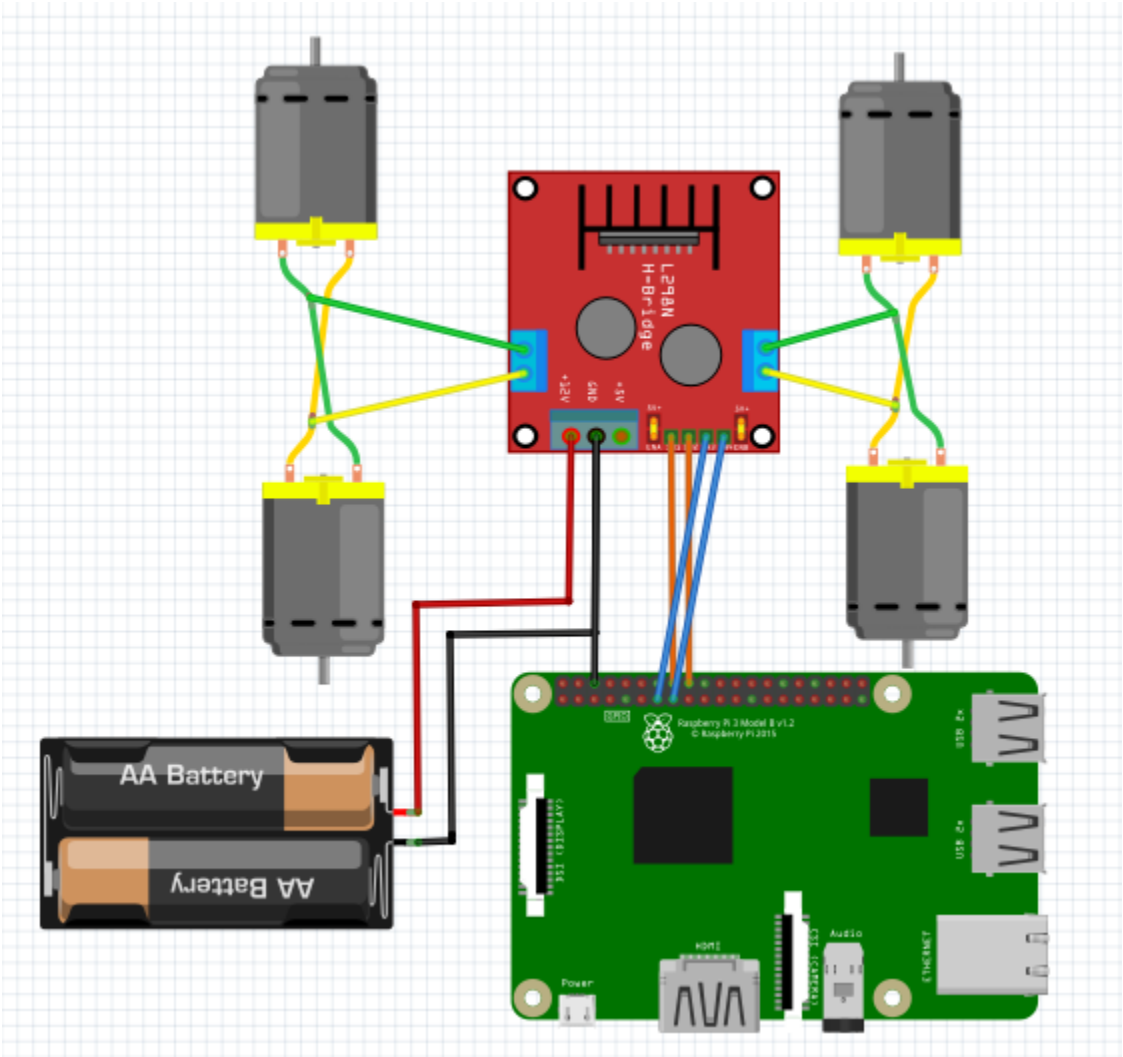
KEABOARD CONTROL

```
# import curses

import curses

# Get the curses window, turn off echoing of keyboard to screen, turn on

# instant (no waiting) key response, and use special values for cursor keys

screen = curses.initscr()

curses.noecho()

curses.cbreak()

screen.keypad(True)

try:

while True:

char = screen.getch()

if char == ord('q'):

break

elif char == curses.KEY_UP:

print "up"

elif char == curses.KEY_DOWN:

print "down"

elif char == curses.KEY_RIGHT:

print "right"

elif char == curses.KEY_LEFT:

print "left"

elif char == 10:

print "stop"

finally:

#Close down curses properly, inc turn echo back on!

curses.nocbreak(); screen.keypad(0); curses.echo()

curses.endwin()
```

L298N MOTOR DRIVER



ROBOT CONTROL USING KEAYBOARD

```
# import curses, GPIO and time
import curses
import RPi.GPIO as GPIO
import time
#set GPIO numbering mode and define output pins
GPIO.setmode(GPIO.BOARD)
GPIO.setup(16,GPIO.OUT)
GPIO.setup(18,GPIO.OUT)
GPIO.setup(13,GPIO.OUT)
```

```
GPIO.setup(15,GPIO.OUT)
# Get the curses window, turn off echoing of keyboard to screen, turn on
# instant (no waiting) key response, and use special values for cursor keys
screen = curses.initscr()
curses.noecho()
curses.cbreak()
screen.keypad(True)
try:
while True:
char = screen.getch()
if char == ord('q'):
break
elif char == curses.KEY_UP:
GPIO.output(16,False)
GPIO.output(18,True)
GPIO.output(13,False)
GPIO.output(15,True)
elif char == curses.KEY_DOWN:
GPIO.output(16,True)
GPIO.output(18,False)
GPIO.output(13,True)
GPIO.output(15,False)
elif char == curses.KEY_RIGHT:
GPIO.output(16,False)
GPIO.output(18,True)
GPIO.output(13,True)
GPIO.output(15,False)
elif char == curses.KEY_LEFT:
GPIO.output(16,True)
GPIO.output(18,False)
GPIO.output(13,False)
GPIO.output(15,True)
```

```
elif char == ord('d'):
GPIO.output(18,True)
GPIO.output(15,True)
time.sleep(.5)
GPIO.output(16,True)
GPIO.output(18,False)
GPIO.output(13,True)
GPIO.output(15,False)
time.sleep(.5)
GPIO.output(16,True)
GPIO.output(18,False)
GPIO.output(13,False)
GPIO.output(15,True)
time.sleep(.5)
GPIO.output(16,False)
GPIO.output(18,True)
GPIO.output(13,True)
GPIO.output(15,False)
time.sleep(.5)
GPIO.output(18,False)
GPIO.output(13,False)
elif char == ord('s'):
GPIO.output(16,False)
GPIO.output(18,False)
GPIO.output(13,False)
GPIO.output(15,False)
finally:
#Close down curses properly, inc turn echo back on!
curses.nocbreak(); screen.keypad(0); curses.echo()
curses.endwin()
GPIO.cleanup()
```