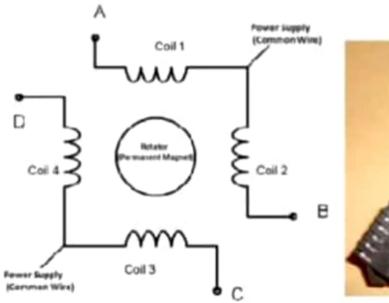
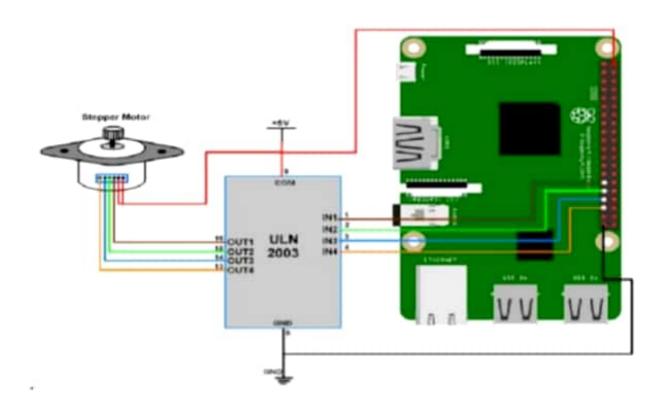
	- Contract the second of the second s
TEA !	Assignment No: 7 Nikita Bhosale
slosone	Title! Unite an application using Raspherry-Pil
	DOUZU TO (ANTONI UNE ADDOCCE HAN AN
	1110401
- 10	THE PART OF THE PA
	Theory !- mers barrans somewhat
	Stepper Motor:
1	the sterrer motor, as the name itself says, the
	step form. There are
02 1	aitherent types of stepper motor, in here we
940	will be using the most populos one that is
200	unipolor stepper motor.
210	To roteite this 4 stage stepper motor we will
or Hon	deliver power puses by using stepper motor
7917	De Deriver circuit
1112	There are 40 GPIO.01P Pins in Raypherry Piz
	But out of 40, only 26 GPTO PINS (GP102 to
	GP1027) can be programmed some of these.
	pins perform some special functions, then we
	have only 17 GPIO remaining, each of these
-	rins can deliver a maximum of 15MA (ussent
	There are 45 V (Pin 284) and +3-3' V (Pin 1817)
	power of Pins on the board for connecting other
	moduled and sensors these power rails can't be
	THOO WE WILL SUISOIS THESE POWER TRAILS COUNT DE







	GURUKUL Page No. Date
	used to drive the stepper motor because we
Ciell	need more power to rotate it
	Delivery and humblashing to the transfer
	Python Program for Stepper motor interfacing
brown	with Raspberry Pi

```
I import RPi.GPIO as GPIO
   2 from time import sleep
      import sys
   5 Wassign GPIO pins for motor
   6 motor_channel = (29,31,33,35)
   7 GPIO.setwarnings(False)
   8 GPIO.setmode(GPIO.BOARD)
   9 #for defining more than 1 GPIO channel as input
          /output use
  10 GPIO.setup(motor_channel, GPIO.OUT)
  11
  12 motor_direction = input('select motor direction
          a=anticlockwise, c=clockwise: ')
  13 * while True:
        try:
  14 -
  15 -
              if(motor_direction = 'c')
                  print('motor running clockwise\n')
  17
                  GPIO.output(motor_channel, (GPIO
                       .HIGH, GPIO.LOW, GPIO.LOW, GPIO
                       .HIGH))
                  sleep(0.02)
  18
  19
                  GPIO.output(motor_channel, (GPIO
                       .HIGH, GPIO. HIGH, GPIO. LOW, GPIO
                       .LOW))
  20
                  sleep(0.02)
                  GPIO.output(motor_channel, (GPIO
  21
                       .LOW, GPIO.HIGH, GPIO.HIGH, GPIO
                       .LOW))
  22
                   sleep(0.02)
                   GPIO.output(motor_channel, (GPIO
  23
                       .LOW, GPIO.LOW, GPIO.HIGH, GPIO
                       .HIGH))
                  sleep(0.02)
  24
  25
  26 -
              elif(motor_direction == 'a'):
  27
                  print('motor running anti
                       -clockwise\n')
  28
                   GPIO.output(motor_channel, (GPIO
                       .HIGH, GPIO.LOW, GPIO.LOW, GPIO
                       .HIGH))
                  sleep(0.02)
  29
  30
                   GPIO.output(motor_channel, (GPIO
                       .LOW, GPIO.LOW, GPIO.HIGH, GPIO
                       .HIGH))
  31
                  sleep(0.02)
  32
                   GPIO.output(motor_channel, (GPIO
                       .LOW, GPIO.HIGH, GPIO.HIGH, GPIO
                       .LOW))
  33
                  sleep(0.02)
  34
                   GPIO.output(motor_channel, (GPIO
                       .HIGH, GPIO.HIGH, GPIO.LOW, GPIO
                       .LOW))
  35
                  sleep(0.02)
  36
  37
          #press ctrl+c for keyboard interrupt
  38
  39 -
          except KeyboardInterrupt:
              Equery for setting motor direction or
                  exit
              motor_direction = input('select motor
  41
                  direction a=anticlockwise, c
                  =clockwise or q=exit: ')
  42
              #check for exit
  43 -
              if(motor_direction == 'q'):
  44
                  print('motor stopped')
45
                  sys.exit(0)
```