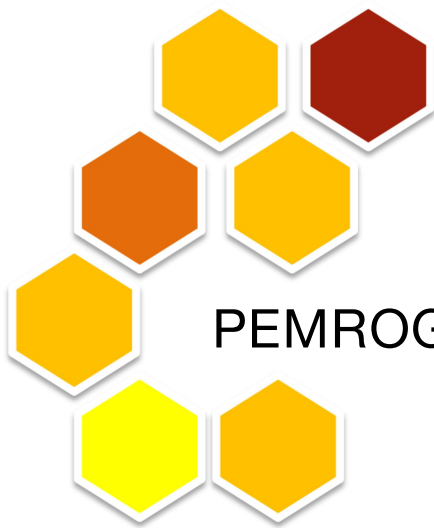


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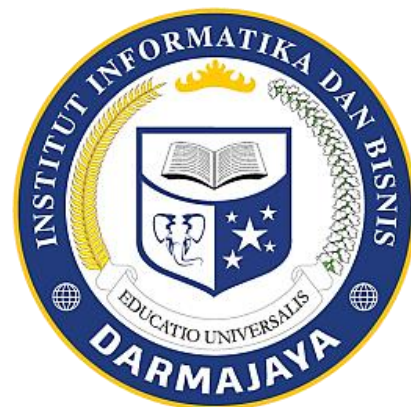


## Modul

# PEMROGRAMAN TERSTRUKTUR

Kode Matakuliah: SKO21411

C For Arduino



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**PROGRAM STUDI SISTEM KOMPUTER  
FAKULTAS ILMU KOMPUTER  
INSTITUT INFORMATIKA DAN BISNIS DARMAJAYA  
2023**

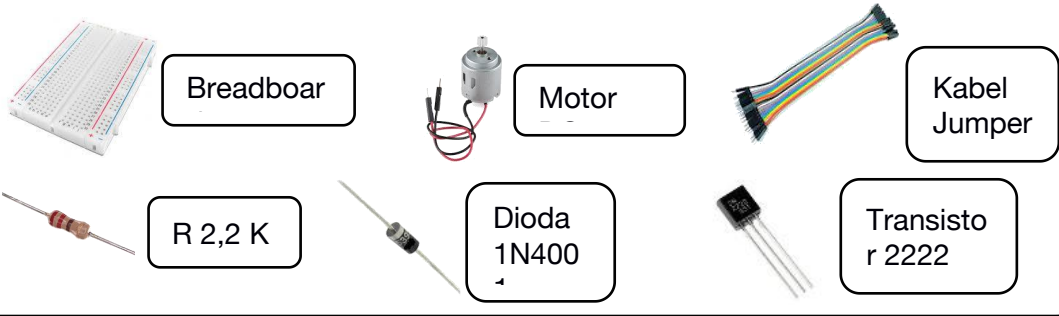
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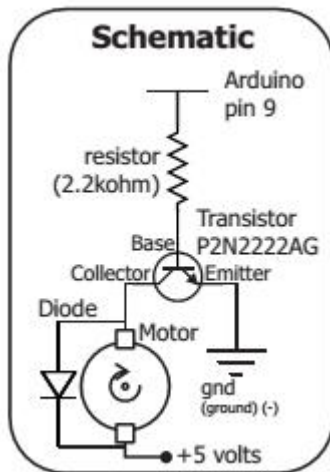
# JOB SHEET 4

## Konstanta dan Variable (Motor Spin)

### KOMPONEN

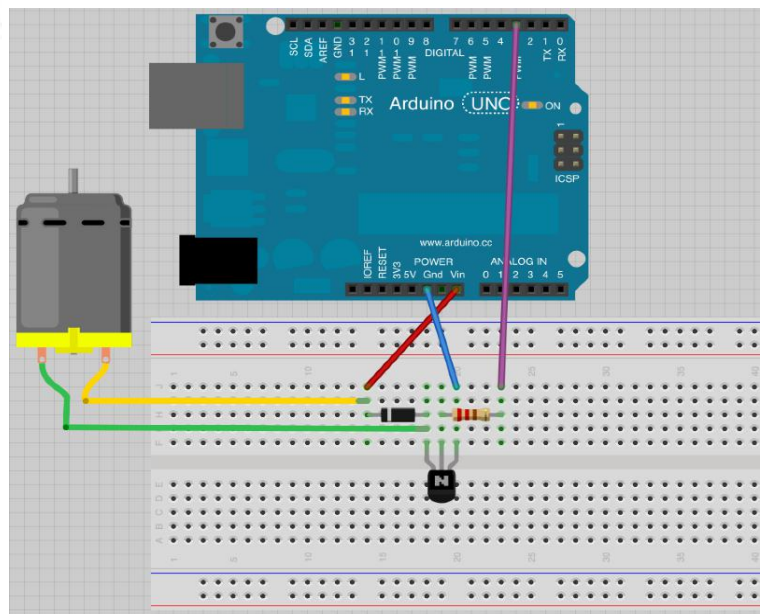


### SKEMA



### PERAKITAN

Hubungkan Pin 9 Arduino ke kaki resistor pada papan breadboard dan transistor seperti pada gambar.



## KODE PROGRAM

```
int motorPin = 9;
//pin the motor is connected to

void setup() //runs once
{
  pinMode(motorPin, OUTPUT);
}

void loop() // run over and over again
{
  motorOnThenOff();
  //motorOnThenOffWithSpeed();
  //motorAcceleration();
}

/*
 * motorOnThenOff() - turns motor on then off
 * (notice this code is identical to the code we
 * used for
 * the blinking LED)
 */

void motorOnThenOff(){
  int onTime = 2500; //on time
  int offTime = 1000; //off time
  digitalWrite(motorPin, HIGH);
  // turns the motor On
  delay(onTime); // waits for onTime milliseconds
  digitalWrite(motorPin, LOW);
  // turns the motor Off
  delay(offTime); // waits for offTime milliseconds
}

void motorOnThenOffWithSpeed(){
  int onSpeed = 200; // a number between
  //0 (stopped) and 255 (full speed)
  int onTime = 2500;
  int offSpeed = 50; // a number between
  //0 (stopped) and 255 (full speed)
  int offTime = 1000;
  analogWrite(motorPin, onSpeed);
  // turns the motor On
  delay(onTime); // waits for onTime milliseconds
  analogWrite(motorPin, offSpeed);
  // turns the motor Off
  delay(offTime); // waits for offTime milliseconds
}

void motorAcceleration(){
  int delayTime = 50; //time between each speed step
  for(int i = 0; i < 256; i++){
    //goes through each speed from 0 to 255
    analogWrite(motorPin, i); //sets the new speed
    delay(delayTime); // waits for delayTime milliseconds
  }
}
```

```
}  
for(int i = 255; i >= 0; i--){  
  //goes through each speed from 255 to 0  
  analogWrite(motorPin, i); //sets the new speed  
  delay(delayTime); //waits for delayTime milliseconds  
}  
}
```

---

## **LATIHAN**

**Lakukan memprogram motor DC dengan menggunakan beberapa variabel dan Konstanta pada Tipe Data bahasa C for Arduino.**

LAPORAN HASIL PERCOBAAN: