1. Changing the Clock rate of ESP 32 Microcontroller.(Practical)

#define GPIO\_pin 5

uint32\_t Freq = 0;

 void setup()

{

  pinMode(GPIO\_pin, OUTPUT);

  Serial.begin(115200);

  // Display the default CPU frequency (240 MHz)

  Serial.print("Default CPU Frequency: ");

  Serial.print(getCpuFrequencyMhz());

  Serial.println(" MHz");

  // Set the CPU frequency to 80 MHz for consumption optimization

  setCpuFrequencyMhz(10);

  // Print the XTAL crystal frequency

  Serial.print("XTAL Crystal Frequency: ");

  Serial.print(getXtalFrequencyMhz());

  Serial.println(" MHz");

  // Print the CPU frequency

  Serial.print("CPU Frequency: ");

  Serial.print(getCpuFrequencyMhz());

  Serial.println(" MHz");

  // Print the APB bus frequency

  Serial.print("APB Bus Frequency: ");

  Serial.print(getApbFrequency());

  Serial.println(" Hz");

}

 void loop()

{

  digitalWrite(GPIO\_pin, 1);

  digitalWrite(GPIO\_pin, 0);

}

1. Reading the default clock rate of ESP 32 Microcontroller. (Skill)

#define GPIO\_pin 5

 uint32\_t Freq = 0;

 void setup()

{

  pinMode(GPIO\_pin, OUTPUT);

  Serial.begin(115200);

  Freq = getCpuFrequencyMhz();

  Serial.print("CPU Freq = ");

  Serial.print(Freq);

  Serial.println(" MHz");

  Freq = getXtalFrequencyMhz();

  Serial.print("XTAL Freq = ");

  Serial.print(Freq);

  Serial.println(" MHz");

  Freq = getApbFrequency();

  Serial.print("APB Freq = ");

  Serial.print(Freq);

  Serial.println(" Hz");

}

 void loop()

{

  digitalWrite(GPIO\_pin, 1);

  digitalWrite(GPIO\_pin, 0);

}