```c
#include "stm32f10x.h"
volatile int i=0;
int main(){
  //PortA_2 analog giris, PortA_10 led cikis
  RCC->APB2ENR |= (1<<2) | (1<<9) | (1<<11);  //PortA, ADC ve TIM1
  //PortA_2 Potansiyometre
  GPIOA->CRL &= ~(1<<10);
  //PortA_10 LED
  GPIOA->CRH |= (0xf<<8);
  GPIOA->CRH &= ~(1<<10);
  //Timer Ayarlari
  TIM1->CCMR2 |= (6<<4);
  TIM1->CCER |= (1<<8);
  TIM1->BDTR |= (1<<15);
  TIM1->ARR = 4095;
  TIM1->PSC = 0;
  TIM1->CCR3 = 0;
  TIM1->CR1 |= 1;
  // ADC Ayarlari
  RCC->CFGR |= (1<<15);  //ADCPRE 6
  ADC1->SMPR2 |= (0x7);   //1,5 cycle
  ADC1->SQR1 &= ~(0xf<<20); //1 giris olacagini belirttik
  ADC1->SQR3 |= 2;  //Hangi pinden giris olacagini belirttik
  ADC1->CR2 |= 1;  //Adc on
  ADC1->CR2 |= (1<<20);
  ADC1->CR2 |= (0x7<<17);
  ADC1->CR2 |= (1<<2);  //Kalibrasyon
  while(ADC1->CR2 & (1<<2)){ }
  while(1){
    ADC1->CR2 |= (1<<22);  //basla
    while(!(ADC1->SR & (1<<1))){ } //bitmesini bekle
    TIM1->CCR3 = ADC1->DR & 0xfff;  // degeri pwm olarak ayarla
    for(i=0;i<500000;i++) {}   //saniyede 10 kontrol için biraz bekle
  }
}
```