```
#include <LiquidCrystal.h>
#include <TM1637Display.h>
#include <Keypad.h>

int state = 0;

#define red 4
#define yellow 9
#define green 10
#define buzz 40

const uint8_t Setrip[] = {SEG_G, SEG_G, SEG_G, SEG_G};
uint8_t data[] = {0xff, 0xff, 0xff, 0xff};
uint8_t blank[] = {0x00, 0x00, 0x00, 0x00};

int stage = 0;
int a, b, c, d, total = 0;
int pot, pota;
int count = 9999;
int set_val = 0, real = 0;
String input;

#define CLK 2
#define DIO 3
TM1637Display display(CLK, DIO);

const int RS = 11, EN = 12, D4 = 5, D5 = 6, D6 = 7, D7 = 8;
LiquidCrystal lcd(RS, EN, D4, D5, D6, D7);

const int ROW_NUM = 4;
const int COLUMN_NUM = 4;

char keys[ROW_NUM][COLUMN_NUM] = {
  {'1', '2', '3', 'A'},
  {'4', '5', '6', 'B'},
  {'7', '8', '9', 'C'},
  {'*', '0', '#', 'D'}
};

byte pin_rows[ROW_NUM] = {36, 34, 32, 30};
byte pin_column[COLUMN_NUM] = {28, 26, 24, 22};
Keypad keypad = Keypad(makeKeymap(keys), pin_rows, pin_column, ROW_NUM,
COLUMN_NUM);
unsigned int number = 0;
```

```
void setup() {
  display.clear();
  pinMode(buzz, OUTPUT);
  pinMode(red, OUTPUT);
  pinMode(yellow, OUTPUT);
  pinMode(green, OUTPUT);
  pinMode(38, OUTPUT);
  digitalWrite(38, HIGH);

  display.setBrightness(0x0a);
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print("-Masih Ada-");
  lcd.setCursor(0, 1);
  lcd.print("-Kesempatan-");
  delay(2000);

  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("-Input PIN-");

  for (int i = 0; i < 3; i++) {
    digitalWrite(red, HIGH);
    delay(100);
    digitalWrite(red, LOW);
    delay(100);
    digitalWrite(yellow, HIGH);
    delay(100);
    digitalWrite(yellow, LOW);
    delay(100);
    digitalWrite(green, HIGH);
    delay(100);
    digitalWrite(green, LOW);
    delay(100);
  }
  digitalWrite(yellow, HIGH);

  uint8_t segments[] = {0xFF, 0xFF, 0xFF, 0xFF};
  display.setSegments(segments);
  delay(1000);
  display.showNumberDec(0);
}
```

```
void loop() {
  if (stage == 0)
  {
    lcd.setCursor(0, 0);
    lcd.print("-Input PIN-");
    digitalWrite(yellow, HIGH);
    display.showNumberDec(0, true);
    stage = 1;
  }

  else if (stage == 1)
  {
    char key = keypad.getKey();
    if (key) {
      if (isDigit(key)) {
        if (input.length() < 4) { // Periksa panjang input sebelum menambahkan digit
          int e = key - '0';
          a = b;
          b = c;
          c = d;
          d = e;
          total = (a * 1000) + (b * 100) + (c * 10) + d;
          input += key;
          display.showNumberDec(total, true);
        }
      }
      else
      {
        if (key == 'A') {
          if (input == "0287") {
            digitalWrite(yellow, LOW);
            lcd.clear();
            lcd.setCursor(0, 0);
            lcd.print("- correct !! -");
            for (int i = 0; i < 2; i++) {
              digitalWrite(green, HIGH);
              digitalWrite(buzz, HIGH);
              display.showNumberDec(0, true);
              delay(100);
              digitalWrite(green, LOW);
              digitalWrite(buzz, LOW);
              display.setSegments(blank);
              delay(100);
            }
```

```
  lcd.clear();
  total = a = b = c = d = 0;
  input = "";
  display.showNumberDec(0, true);
  stage = 2;
  lcd.setCursor(0, 0);
  lcd.print("-Set Value:-");
}
else
{
  digitalWrite(yellow, LOW);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("- incorrect !! -");
  for (int i = 0; i < 4; i++) {
    digitalWrite(red, HIGH);
    digitalWrite(buzz, HIGH);
    display.showNumberDec(0, true);
    delay(100);
    digitalWrite(red, LOW);
    digitalWrite(buzz, LOW);
    display.setSegments(blank);
    delay(100);
  }
  total = a = b = c = d = 0;
  input = "";
  display.showNumberDec(total, true);
  stage = 0;
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("-Input PIN-");
  display.showNumberDec(0, true);
  stage = 1;
  for (int i = 0; i < 3; i++) {
    digitalWrite(red, HIGH);
    delay(100);
    digitalWrite(red, LOW);
    delay(100);
    digitalWrite(yellow, HIGH);
    delay(100
```