Code For All Project Of TINKER CAD

1.LED

```
int led1 = 13;
int led2 = 11;
int led3 = 10;
int led4 = 7;
int led5 = 5;
int led6 = 3;
// the setup routine runs once when you press reset:
void setup() {
  // initialize the digital pin as an output.
  pinMode(led1, OUTPUT);
  pinMode(led2, OUTPUT);
  pinMode(led3, OUTPUT);
  pinMode(led4, OUTPUT);
  pinMode(led5, OUTPUT);
  pinMode(led6, OUTPUT);
}
// the loop routine runs over and over again forever:
void loop() {
  digitalWrite(led1, HIGH);
  delay(80);
  digitalWrite(led1, LOW);
  digitalWrite(led3, HIGH);
  delay(80);
  digitalWrite(led3, LOW);
  digitalWrite(led5, HIGH);
  delay(80);
  digitalWrite(led5, LOW);
  digitalWrite(led6, HIGH);
  delay(80);
  digitalWrite(led6, LOW);
  digitalWrite(led4, HIGH);
  delay(80);
  digitalWrite(led4, LOW);
  digitalWrite(led2, HIGH);
  delay(80);
  digitalWrite(led2, LOW);
  delay(500);
}
```

2.LED

```
int led1 = 13;
int led2 = 11;
int led3 = 10;
int led4 = 7;
int led5 = 5;
int led6 = 3;
// the setup routine runs once when you press reset:
void setup() {
  // initialize the digital pin as an output.
  pinMode(led1, OUTPUT);
  pinMode(led2, OUTPUT);
  pinMode(led3, OUTPUT);
  pinMode(led4, OUTPUT);
  pinMode(led5, OUTPUT);
  pinMode(led6, OUTPUT);
}
// the loop routine runs over and over again forever:
void loop() {
  digitalWrite(led6, HIGH);
  delay(80);
  digitalWrite(led2, LOW);
  digitalWrite(led2, HIGH);
  delay(80);
  digitalWrite(led6, LOW);
  digitalWrite(led6, HIGH);
  delay(80);
  digitalWrite(led2, LOW);
  digitalWrite(led5, HIGH);
  delay(80);
  digitalWrite(led3, LOW);
  digitalWrite(led4, HIGH);
  delay(80);
  digitalWrite(led4, LOW);
  digitalWrite(led5, HIGH);
  delay(80);
  digitalWrite(led5, LOW);
  delay(500);
}
```

3.POWER UNDER SEVERAL CONDITION

```
void setup() {
  pinMode(7, INPUT);
  pinMode(13, OUTPUT);
}
void loop() {
  bool x = digitalRead(7);
  if(x == 1) {digitalWrite(13, 1);
  delay(200);
  digitalWrite(13, 0);
            delay(200);}
  else digitalWrite(13, 0);
  // put your main code here, to run repeatedly:
}
```

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CHAT BOT

```
. void setup(){
Serial.begin(9600);
}
void loop(){
  if(Serial.available()){
    String x = Serial.readString();
    if(x == "how old are you?") Serial.println("40");
    if(x == "how  are you?") Serial.println("not so good");
    if(x == "tumi ki bhat khao") Serial.println("mara khai");
  }
}
```

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RELAY

```
int buttonstate = 0;
void setup(){
pinMode(2, INPUT_PULLUP);
pinMode(13, OUTPUT);
Serial.begin(9600);
}
void loop(){
  buttonstate = digitalRead(2);
  Serial.println(buttonstate);
```

```
  digitalWrite(13, buttonstate);
}
```

6.

SEVERAL PROGRAME UNDER SERIAL INPUT

```
char x;
void setup(){
  Serial.begin(9600);
  pinMode(13, OUTPUT);
  pinMode(12, OUTPUT);
  pinMode(8, OUTPUT);
  pinMode(7, OUTPUT);
}
void loop(){
  if(Serial.available()){
    x = Serial.read();
   if(x == 'a') digitalWrite(13,HIGH);
   else if(x == 'b') digitalWrite(12, LOW);
   else if(x == 'c') digitalWrite(8, HIGH);
   else if(x == 'd') digitalWrite(7, LOW);
  }
}
```

7.POWER UNDER SEVERAL CONDITION

```
int x;
void setup(){
  pinMode(7, INPUT);
  pinMode(12,OUTPUT);
  Serial.begin(9600);
}
void loop(){
 x = digitalRead(7);
 Serial.println(x);
 if(x == 1) digitalWrite(12, HIGH);
 else if(x ==0) digitalWrite(12, LOW);
 }
```

8. POWER UNDER SEVERAL CONDITION

```
int x;
void setup(){
  pinMode(7, INPUT);
  pinMode(13,OUTPUT);
```

```
  Serial.begin(9600);
}
void loop(){
 x = digitalRead(7);
 Serial.println(x);
 if(x == 1) digitalWrite(13, HIGH);
 else if(x ==0) digitalWrite(13, LOW);}
```

9. POWER UNDER SEVERAL CONDITION

```
float x;
void setup(){
Serial.begin(9600);
pinMode(13,OUTPUT);
}
void loop(){
x = analogRead(0);
Serial.println(x);
if(x>=680.5)digitalWrite(13,HIGH);
else if(x<680.5)digitalWrite(13,LOW);
}
```

10. POWER UNDER SEVERAL CONDITION

```
float x;
void setup(){
Serial.begin(9600);
pinMode(13,OUTPUT);
}
void loop(){
x = analogRead(0);
Serial.println(x);
if(x>=511.5)digitalWrite(13,HIGH);
else if(x<511.5)digitalWrite(13,LOW);
}
```

11. POWER UNDER SEVERAL CONDITION

```
int x;
void setup(){
  Serial.begin(9600);
}
void loop(){
  x = analogRead(0);
  x = map(x,0,1023,0,255);
  analogWrite(11,x);
  Serial.println(x);
   x = analogRead(1);
  x = map(x,0,1023,0,255);
```

```
  analogWrite(10,x);
   x = analogRead(2);
  x = map(x,0,1023,0,255);
  analogWrite(9,x);
}
```

12.SERIAL INPUT

```
char x;
void setup(){
  Serial.begin(9600);
  pinMode(13, OUTPUT);


}
void loop(){
  if(Serial.available()){
 String  x = Serial.readString();
   if(x == "ON") digitalWrite(13,HIGH);
   else if(x == "OFF") digitalWrite(13, LOW);

  }
}
```

13.LED

```
#define red 11
#define green 10
#define blue 9
#define red1 6
#define green1 5
#define blue1 3
void setup()
{
}
void loop(){
for(int i=0; i<=255; i++){
  analogWrite(red,i); delay(10);
}
for(int i=0; i<=255; i++){
  analogWrite(green1,i); delay(10);
}
for(int i=0; i<=255; i++){
  analogWrite(blue,i); delay(10);
}
```

```
for(int i=0; i<=255; i++){
  analogWrite(red1,i); delay(10);
}
for(int i=0; i<=255; i++){
  analogWrite(blue,i); delay(10);
}
for(int i=0; i<=255; i++){
  analogWrite(green,i); delay(10);
}
for(int i=255; i>=0; i--){
  analogWrite(red1,i); delay(10);
}
for(int i=255; i>=0; i--){
  analogWrite(green,i); delay(10);
}
for(int i=255; i>=0; i--){
  analogWrite(red1,i); delay(1);
}
for(int i=255; i>=0; i--){
  analogWrite(blue1,i); delay(1);
}
for(int i=255; i>=0; i--){
  analogWrite(green,i); delay(10);
}
for(int i=255; i>=0; i--){
  analogWrite(red,i); delay(10);
}
}
```

14CONTROL FAN SERIAL INPUT

```
char x;
#define lmf 2
#define lmb 6
#define rmf 4
#define rmb 5
#define lms 3
#define rms 11
#define speed 100
void setup()
{
  Serial.begin(9600);
  pinMode(lmf,OUTPUT);
  pinMode(lmb,OUTPUT);
  pinMode(rmf,OUTPUT);
  pinMode(rmb,OUTPUT);
  analogWrite(lms, speed);
```

```
   analogWrite(rms, speed);
}
void loop(){
if(Serial.available()) {
  String x = Serial.readString();
  if(x == "F"){
    forward();
  }
    else if(x == "B"){
    backward();
  }
   else  if(x == "L"){
    left();
  }
   else  if(x == "R"){
    right();
  }
}
}
void forward(){
  digitalWrite(lmf, 1);
  digitalWrite(lmb, 0);
  digitalWrite(rmf, 0);
  digitalWrite(rmb, 1);
}
void backward(){
  digitalWrite(lmf, 0);
  digitalWrite(lmb, 1);
  digitalWrite(rmf, 1);
  digitalWrite(rmb, 0);
}
void left(){
  digitalWrite(lmf, 1);
  digitalWrite(lmb, 0);
  digitalWrite(rmf, 1);
  digitalWrite(rmb, 0);
}
void right(){
  digitalWrite(lmf, 0);
  digitalWrite(lmb, 1);
  digitalWrite(rmf, 0);
  digitalWrite(rmb, 1);
}
```

15. POWER UNDER SEVERAL CONDITION

```
char x;
void setup(){
  Serial.begin(9600);
  pinMode(12, OUTPUT);
   pinMode(11, OUTPUT);
}
void loop(){
  if(Serial.available()){
 String  x = Serial.readString();
   if(x == "ON"|| x == "iu"){
     digitalWrite(12,1);
     digitalWrite(11,0);
   }
   else if(x == "ON2"){
    digitalWrite(12,0);
    digitalWrite(11,1);
  }
  else{
    digitalWrite(12,0);
     digitalWrite(11,0);
  }
}
}
```

16. POWER UNDER SEVERAL CONDITION

```
#include<Servo.h>
Servo Q;
Servo W;
void setup()
{
  Q.attach(11);
  W.attach(9);

}
void loop()
{
  {  int x = analogRead(A0);
  x = map(x,0,1023,0,180);
   Q.write(180-x);}
  { int y = analogRead(A1);
  y = map(y,0,1023,0,180);
   W.write(180-y);}

}
```

17.COOLING

```
int temp = A0;

int fan = 13;


int x = 0;


void fanOn(){
  digitalWrite(fan, HIGH);
}
void fanOff(){
  digitalWrite(fan, LOW);
}


void setup()
{

  pinMode(fan, OUTPUT);

  pinMode(temp, INPUT);
  Serial.begin(9600);
}

void loop(){


   float x = analogRead(0);
  x = x*5000;
  x = x/1024;
  x = x-497;
  x = x/10;


  if( x>= 30){

    fanOn();

```

```
  }
  else if(x <= 20 ){

    fanOff();

  }


}
```

18. MOTION DETECT

```
float readUltrasonicDistance(int triggerPin, int echoPin){
  pinMode(triggerPin, OUTPUT);
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);
  float distance = pulseIn(echoPin, HIGH) * 0.017;
  delay(30);
  return (distance<300)? distance : 0;
}
void setup(){
  Serial.begin(9600);
  pinMode(13, OUTPUT);
}
void loop(){
  float cm = readUltrasonicDistance(7, 7);
  Serial.print(cm);
  Serial.println("cm");
  if(cm < 10 && cm !=0) digitalWrite(13,1);
  else digitalWrite(13,0);
  if(cm > 50 && cm<=250) digitalWrite(13,HIGH);
  else digitalWrite(13,LOW);
}
```

19. POWER UNDER SEVERAL CONDITION

```
void setup()
{
```

```
  Serial.begin(9600);
  pinMode(13, OUTPUT);
}
void loop()
{
  int x = analogRead(0);
   Serial.println(x);
  if(x<500) {
    digitalWrite(13, LOW);
    while(x<800) x = analogRead(0);
  }
  else digitalWrite(13, HIGH);
}
```

20. POWER UNDER SEVERAL CONDITION

```

void setup()
{
 // Serial.begin(9600);
  pinMode(13, OUTPUT);
}

void loop()
{
  int x = analogRead(0);
  // Serial.println(x);
  if(x<500) {
    digitalWrite(13, HIGH);
    while(x<800) x = analogRead(0);
  }
  else digitalWrite(13, LOW);


}
```

21.LCD SCREEN

```
#include <LiquidCrystal.h>
int seconds = 0;
LiquidCrystal display_1(12, 11, 5, 4, 3, 2);
void setup()
{
  display_1.begin(16, 2);
}
void loop()
```

```
{

  display_1.setCursor(0, 0);

  display_1.print("water level");

  int x = analogRead(0);
  display_1.setCursor(0, 1);
  display_1.print("Value:    ");
  display_1.print(x);
}
```

22. lCD

```
#include <Adafruit_LiquidCrystal.h>


Adafruit_LiquidCrystal lcd_1(0);

void setup()
{
   pinMode(7, INPUT);
  lcd_1.begin(16, 2);


}

void loop()
{
  bool x = digitalRead(7);
  if(x == 0){
     lcd_1.setCursor(0, 0);
     lcd_1.print("How are you?");


  lcd_1.setBacklight(1);
  delay(500); // Wait for 500 millisecond(s)
  lcd_1.setBacklight(0);
  delay(500); }// Wait for 500 millisecond(s)

  else {
      lcd_1.setCursor(0, 1);
  lcd_1.print("   Fine");
  lcd_1.setBacklight(1);
  delay(500); // Wait for 500 millisecond(s)
  lcd_1.setBacklight(0);
```

```
  delay(500); }// Wait for 500 millisecond(s)

  }
```