6th

a)

```
int LED=13;
void setup()
{
 pinMode(LED, OUTPUT);
}
void loop(){
 digitalWrite(LED, HIGH);
 delay(1000); // Wait for 1000 millisecond(s)
 digitalWrite(LED, LOW);
 delay(1000); // Wait for 1000 millisecond(s)
}
```

b)

```
const int LED=8;
void setup()
{pinMode(LED, OUTPUT);}
void loop(){
 for(int b=0;b<=255;b++){
   analogWrite(LED,b);
}
 delay(1000);
 for(int b=255;b>=0;b--){
   analogWrite(LED,b);
 }
 delay(1000);
}
```

7th

```
void setup() {
 pinMode(A0, OUTPUT); pinMode(A1, OUTPUT); pinMode(A2, OUTPUT);
pinMode(A3, OUTPUT); pinMode(A4, OUTPUT); pinMode(A5, OUTPUT);
pinMode(2, OUTPUT); pinMode(3, OUTPUT); pinMode(4, OUTPUT);
 Serial.begin(9600);
}
void loop() {
 digitalWrite(A0, HIGH);  digitalWrite(A1, LOW);   digitalWrite(A2, LOW);
 digitalWrite(A3, LOW);  digitalWrite(A4, HIGH); digitalWrite(A5, LOW);
 digitalWrite(2, LOW);   digitalWrite(3, LOW);   digitalWrite(4, HIGH);
 Serial.println("Junction 1: STOP, Junction 2: READY, Junction 3: GO");
 delay(5000);
 digitalWrite(A0, LOW);digitalWrite(A1, HIGH);digitalWrite(A2, LOW);
 digitalWrite(A3, LOW);digitalWrite(A4, LOW); digitalWrite(A5, HIGH);
 digitalWrite(2, HIGH); digitalWrite(3, LOW);digitalWrite(4, LOW);
 Serial.println("Junction 1: READY, Junction 2: GO, Junction 3: STOP");
 delay(5000);
 digitalWrite(A0, LOW);
 digitalWrite(A1, LOW);
 digitalWrite(A2, HIGH);
 digitalWrite(A3, HIGH);
 digitalWrite(A4, LOW);
 digitalWrite(A5, LOW);
 digitalWrite(2, LOW);
 digitalWrite(3, HIGH);
 digitalWrite(4, LOW);
 Serial.println("Junction 1: GO, Junction 2: STOP, Junction 3: READY");
 delay(5000);
}
```

8th

Sender

```
char mystr[10] = "Nithin";
void setup() {
  Serial.begin(9600);
}
void loop() {
  Serial.write(mystr,6);
  delay(1000);
}
```

Receiver

```
#include <LiquidCrystal.h>
char mystr[10];
LiquidCrystal lcd_1(12, 11, 5, 4, 3, 2);
void setup()
{
  lcd_1.begin(16, 2); Serial.begin(9600);
}
void loop()
{
   Serial.readBytes(mystr, 6);
 lcd_1.print(mystr);
 delay(5000);
  lcd_1.clear();
}
```

11th

Light control

```
// C++ code
//
int led=7;
int read=A3;
void setup()
{
  pinMode(led, OUTPUT);
  pinMode(read,INPUT);
}

void loop()
{
  if(analogRead(read)>500)
    digitalWrite(led,0);
  else
    digitalWrite(led,1);



}
```

11th

Fan control

```
// C++ code
//
int motor=7;
int read=A3;
void setup()
{
  pinMode(motor, OUTPUT);
  pinMode(read,INPUT);
}

void loop()
{
  if(analogRead(read)<170)
    digitalWrite(motor,0);
  else
    digitalWrite(motor,1);

}
```