```c
#include<reg51.h>

#define LCDDATA P2        //LCD

sbit E  = P3^6;           //LCD REST
sbit RS = P3^7;           //LCD ENABLE

sbit GREEN=P3^1;          // STATION
sbit RED1=P3^2;
sbit RED2=P3^3;
sbit RED3=P3^4;
sbit BLUE=P3^5;

sbit BUZZER=P3^0;          //INDICATION BUZZER

//sbit START=P3^7;  // SART FOR LCD
sbit START=P0^7;    // SART FOR LCD

sbit C3=P1^2;
sbit C2=P1^1;
sbit C1=P1^0;
sbit R1=P1^6;
sbit R2=P1^5;
sbit R3=P1^4;
sbit R4=P1^3;

void my_delay(double t)
{int i,j;
  for(i=0;i<t;i++)
    for(j=0;j<1000;j++);
}
void trainMoving();
int checkTicket();
void lcd_datawrite(unsigned char);       // LCD COMMANND &
DATAWRITE FUNCTION
void lcd_cmd(unsigned char);
void my_delay(double);
void lcd_data(char *str)
{char i =0;
 while(str[i] !='\0')lcd_datawrite(str[i++]);
}
void printDot(char i)
{for(;i>0;i--)
  lcd_datawrite('.');
}
void lcd_cmd(unsigned char value)
{ LCDDATA=value;
  RS=0;E=1;my_delay(2);E=0;
}
void lcd_datawrite(unsigned char temp)
{ RS=1;E=1;
  LCDDATA=temp;my_delay(2);E=0;
}
void lcd_initialize()
```

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{  lcd_cmd(0x38);my_delay(1);   // 2 line 5x7 matrix
   lcd_cmd(0x38);my_delay(1);
   lcd_cmd(0x38);my_delay(1);
   lcd_cmd(0x0c);my_delay(1);   // display on cursor off
   lcd_cmd(0x01);my_delay(1);   // clear display screen
   lcd_cmd(0x06);my_delay(1);   // shift display right
}

int i ;
void main()
{   int startlcd=-1;

     lcd_initialize();

   while(1)
   {
       startlcd= checkTicket();
       trainMoving();

   }
}
int  checkTicket()
{ int n=0;
  lcd_data("Welcome to ");
  lcd_cmd(0xc0);                             // next line
  lcd_data("Chandigarh Metro");
  my_delay(400);
  lcd_cmd(0x01);
  lcd_data("Enter Ticket no");
  lcd_cmd(0xc0);                             // next line
  while(1)
  { C1=0;C2=C3=1;R1=R2=R3=R4=1;
   if(R1==0){lcd_datawrite('1');n=n*10+1;while(R1==0);}
   if(R2==0){lcd_datawrite('4');n=n*10+4;while(R2==0);}
   if(R3==0){lcd_datawrite('7');n=n*10+7;while(R3==0);}
   if(R4==0){lcd_datawrite('C');while(R4==0);
             lcd_cmd
(0x01);                                       //CLEAR
             lcd_data("Enter Ticket no");lcd_cmd
(0xc0);         // next line
             n=0;
          }
    C2=0;C1=C3=1;R1=R2=R3=R4=1;
    if(R1==0){lcd_datawrite('2');n=n*10+2;while((R1==0));}
    if(R2==0){lcd_datawrite('5');n=n*10+5;while(R2==0);}
    if(R3==0){lcd_datawrite('8');n=n*10+8;while(R3==0);}
    if(R4==0){lcd_datawrite('0');n=n*10+0;while(R4==0);}
    C3=0;C2=C1=1;R1=R2=R3=R4=1;
    if(R1==0){lcd_datawrite('3');n=n*10+3;while(R1==0);}
    if(R2==0){lcd_datawrite('6');n=n*10+6;while(R2==0);}
    if(R3==0){lcd_datawrite('9');n=n*10+9;while(R3==0);}
    if(R4==0)
     {if(n==220||n==350||n==430)//||n==450)
       { lcd_cmd(0x01);
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            lcd_data("Correct Ticket");
            lcd_cmd(0xc0);                       // next line
            lcd_data("Enjoy Journey");
            my_delay(300);
            lcd_cmd(0x01);
            return 1;
        }
        else
        {lcd_cmd(0x01);
         lcd_data("InCorrect Ticket");
         lcd_cmd(0xc0);                       // next line
         n=0;
         return 0;
        }
         while(R4 == 0 ) ;
     }
     my_delay(10);
  }
}
void trainMoving()
{   GREEN=0;
    lcd_data("Station-17.....");
    my_delay(800);                           //stading on - "station
17"
    GREEN=1;
    for(i=1 ; i<=5 ; i++)
    { my_delay(400);
     if (i>3)
     {BUZZER=0;}
     lcd_cmd(0x01);                    //clear lcd
     lcd_cmd(0x80);
     printDot(i) ;
     lcd_data("Station-17");
     printDot(5-i) ;
     if(i==5)
     { lcd_cmd(0xc0);// next line
       lcd_data("reaching..stn 22");
       my_delay(700);
     }
    }
    BUZZER=1;
    /////////////////////////////////////////////
    RED1=0;
    lcd_cmd(0x01);                    //clear lcd
    lcd_data("Station-22.....");
    my_delay(800);                           //stading on - "station
22"
    RED1=1;
    for (i=1 ; i<=5 ; i++)
    {  my_delay(400);
       if (i>2)
       {BUZZER=0; }
       lcd_cmd(0x01); //clear lcd
       lcd_cmd(0x80);
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```
        printDot(i) ;
        lcd_data("Station-22");
        printDot(5-i) ;
        if (i==5)
        { lcd_cmd(0xc0);// next line
          lcd_data("reaching..stn 35");
          my_delay(700);
        }
}
BUZZER=1;
////////////////////////////////////////////
RED2=0;
lcd_cmd(0x01);                    //clear lcd
lcd_data("Station-35.....");
my_delay(800);                    //stading on - "station 35"
RED2=1;
for (i=1 ; i<=5 ; i++)
{ my_delay(400);
  if (i>2)
  { BUZZER=0; }
  lcd_cmd(0x01);                  //clear lcd
  lcd_cmd(0x80);
  printDot(i) ;
  lcd_data("Station-35");
  printDot(5-i) ;
  if (i==5)
  { lcd_cmd(0xc0);            // next line
    lcd_data("reaching..stn 43");
    my_delay(700);
  }
}
BUZZER=1;
////////////////////////////////////////////
RED3=0;
lcd_cmd(0x01);                    //clear lcd
lcd_data("Station-43.....");
my_delay(800);                    //stading on - "station 43"
RED3=1;
for (i=1 ; i<=5 ; i++)
{  my_delay(400);
   if (i>2)
   {BUZZER=0;}
   lcd_cmd(0x01);              //clear lcd
   lcd_cmd(0x80);
   printDot(i) ;
   lcd_data("Station-43");
   printDot(5-i);
   if (i==5)
   { lcd_cmd(0xc0);            // next line
     lcd_data("reaching..stn 45");
     my_delay(700);
   }
}
BUZZER=1;
```

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////////////////////////////////////////////////
BLUE=0;
lcd_cmd(0x01);                  //clear lcd
lcd_data("Station-45..End");
my_delay(800);                  //stading on - "station 45"
BLUE=1;

lcd_cmd(0x01);
P1=0xff;
}
```