Write a program to Do the following:
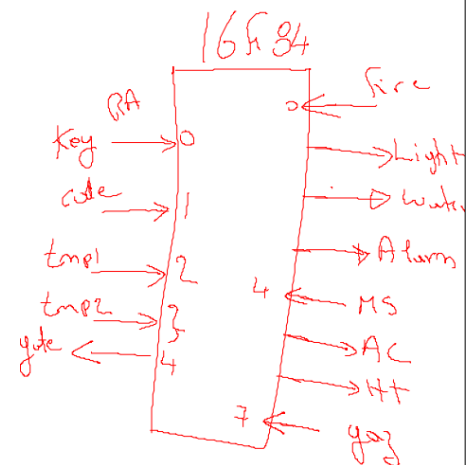
if code == old key
{
Light ON,
MS off
open gate
if temperature is "00"
    AC, Ht off
Elsif temp = "01"
    AC ON, Ht off
Elsif temp = "10"
    Ht ON, AC off
}
Else gate closed,
    Lights off
    MS ON

End

@ any time
if Fire
    D-op water
    AC, Ht off
    Alarm ON
    open gate
    Loop to drop
    wait until Key
if MS
    closed gate
    Alarm ON
    Ht ON
    flush with
    wait until Key
if gas
    check fire
    open gate
    Alarm

16F84

RA
Key → 0
code → 1
tmp1 → 2
tmp2 → 3
gate ← 4

0 ← Fire
→ Light
→ Water
→ Alarm
4 ← MS
→ AC
→ Ht
7 ← gas

```
#include    "16F84.inc"
#Define   Key     PortA,0
    "     Lock    "    ,1
    (     tmp1    "    ,2
    |     tmp2    "    ,3
    |     yote    "    ,4
#   |     Fire    PortB,7
    |     Lite        1
    |     water       2
    }     Alarm       3
          Gus  - - - -4
          AC          5
          HT          6
          MS
CBlock  0X0C
      variab- - - -
endC
```

```
ORG 0x000
yoto  Main

ORG 0X004
{save w, Status

BtFSS   INTCON,(RBIF)
yoto            RBOINT

BtFSS           Fire
yoto            GusINT
Fire1  BSF      water
       BSF      yote
       BSF      Alarm
       BCF      HT
       BCF      AC
       BtFSS    Key
       yoto     $-1
       yoto     Main
```

Cos,fire

```
GusINT  BSF  yote
        BSF  Alarm
        BtFSC fire
        yoto Fire Exet

        BCF  INTCON,RBIF
        yoto Restore
RBUINT       BCF  yute
             BSF  Alarm
BSF INtonGIE BSF  HT
             BSR  Ligth
             Bule Delay.
             BCF  Light
             Cule Delay.
             BtFSS Key
             yoto  $-5
             yoto  Main
```

```
Restore
         { Restore w, Status
         RETFIE

Main     Code Setup
         BtFSS   Key
         goto    $-1
         BtFSS   code
         goto    $-3
         BSF     light
         BSF     [MS off]
         BCF     Intcon,INTE
```

```
RealTmp  BtFSC   tmp1
         goto
         BtFSC   tmp2
         goto         HtON

         BCF     AC
         BCF     HL
         goto    RealTmp
ACON BSF        AC
         BCF     HL
         goto    RealTmp
         BSF     Ht
         BCF     Ac
         goto    RealTmp
```

```
Setup CLRF      PortA
         CLRF   PortB
         BSF    Status, RP0
         MovLw  B'00001111'
         Movwf  TRISA
         MovLw  B'10010001
         Movwf  TRISB
         MovLw  B'1001000'
         Movwf  Intcon
         BCF
         RETURN Status,RP0
```