

EE 354

Assembler to C link

```
//CSub.c                                This is the C subprogram
//PUBLIC (_CSub);
#pragma SRC
#pragma small
void _CSub(void)
{unsigned char i;
  for(i=0;i<10;i++);
  return;
}

;Assem2C                                This is the main code in assembler
;This program illustrates how to call a C subprogram from assembly
;language.
AsmSeg SEGMENT CODE
EXTRN CODE (_CSub)
CSEG at 0h
  ljmp Start
RSEG AsmSeg
Start: mov r6, 56h;
      mov r7, 78h;
      lcall _CSub
Here:  sjmp Here
      END
```

This was generated by the compiler as a result of the SRC directive

```
; .\CSub.SRC generated from: .\CSub.c
NAME CSUB
```

```
?PR?_CSub?CSUB          SEGMENT CODE
      PUBLIC      _CSub
; //CSub.c
; //PUBLIC (_CSub);
; #pragma SRC
; #pragma small
; void _CSub(void)

      RSEG ?PR?_CSub?CSUB
      USING 0
_CSub:
      ; SOURCE LINE # 5
;   {unsigned char i;
      ; SOURCE LINE # 6
;   for(i=0;i<10;i++);
      ; SOURCE LINE # 7
;---- Variable 'i?040' assigned to Register 'R7' ----
      CLR    A
      MOV    R7,A
?C0001:
      INC    R7
      CJNE  R7,#0AH,?C0001
;   return;
;   }
      ; SOURCE LINE # 9
?C0004:
      RET
; END OF _CSub

      END
```

To complete the project put the main assembly code and the assembly code generated from the C code in one project.