SGOPE EXAMPLES

C Programming for Scientists and Engineers with Applications by Rama Reddy and Carol Ziegler, Jones and Bartlett 2010.

<pre>#include <stdio.h> int main() { int a=10; printf("a=%d\n", a); { int b=5; printf("b=%d\n", b); { int c=40; printf("c=%d\n",c); } c = 40</stdio.h></pre>
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<pre>#include <stdio.h> int main() { int x=10; printf("x=%d\n", x);</stdio.h></pre>			
<pre>{ int x=5; printf("x=%d\n", x); { int x=40; printf("x=%d\n",x); } }</pre>	x = 40	x = 5 + 4	x = 10 + 15
<pre>x=x+4; printf("x=%d\n",x); x=x+15; printf("x=%d\n",x); return 0; }</pre>			

Example 3			
#include <stdio.h></stdio.h>			
void func1(void);			
void func2(void);			
void func3(void);			
<pre>int main(){</pre>			
int x=20; /* first x */			
<pre>printf("x=%d\n", x);</pre>	x = 20		
func1();			
x=x+10;			
<pre>printf("x=%d\n", x);</pre>	x = 30		
func2();			
x=x+40;			
<pre>printf("x=%d\n",x);</pre>	x = 70		
func3();			
return 0;	scope of		
}	1st x		
int x; /* second x */			
void func1(void) {			
x=5; printf("In func1 x=%d\n",x);		x = 5	
return;		x - 5	
recurn,			
void func2(void){		scope	
int x=0; /* third x */		of	
printf("In func2 x=%d\n", x);	x = 0	2nd x	
return;	scope of	Zna n	
}	3rd x		
void func3(void) {			
<pre>printf("In func3 x=%d\n", x);</pre>		x = 5	
return;			
,			
1			_

Example 4		
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#include <stdio.h></stdio.h>		
void func1(void);		
void func2(void);		
int main(){		
int x=5;		
<pre>printf("x=%d\n", x);</pre>	x = 5	
func1();		
x=x+5;		
printf("x=%d\n", x);	x = 10	
func2();		
x=x+5;		
printf("x=%d\n",x);	x = 15	
return 0;	X - 13	
recurn o;		
} 		
int x; /* external */		
void func1(void){		
x=6;		
<pre>printf("In funcl x=%d\n",x);</pre>	x = 6	
}		
void func2(void){		
x=x+10;		
printf("In func2 x=%d\n", x);	x = 16	
l struct (in rance & oa(n / A//	11 10	
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Example 5		
File 1		
#include <stdio.h></stdio.h>		
void funcl(void);		
void func2(void);		
<pre>int main(){</pre>		
extern int x;		
x=1;		
<pre>printf("x=%d\n", x);</pre>	x = 1	
func1();		
x=x+6;		scope
printf("x=%d\n", x);	x = 11	of
func2();	Λ 11	X
x=x+7;		Α
l '	20	
* · · · · · · · · · · · · · · · · · ·	X - 20	
return 0;		
}		
int x; /* external */		
void func1(void){		
<pre>printf("In funcl x=%d\n",x);</pre>	x = 1	scope
x=5;		of
}		Х
void func2(void){		continued
x=x+10;		
1	x = 21	
}		
<pre>printf("In func1 x=%d\n",x); x=5; } void func2(void){</pre>		of x

Example 6		
File 1		
#include <stdio.h></stdio.h>		
<pre>void funcl(void);</pre>		
<pre>void func2(void);</pre>		
<pre>int main(){</pre>		
extern int x;		
x=1;		
<pre>printf("x=%d\n", x);</pre>	x = 1	
func1();		
x=x+6;		
<pre>printf("x=%d\n", x);</pre>	x = 11	
func2();		
x=x+7;		
<pre>printf("x=%d\n",x);</pre>	x = 18	
return 0;		
}		
File 2		
int x; /* external */		
void func1(void) {		
x=5;		
<pre>printf("In func1 x=%d\n",x);</pre>	x = 5	
}		
void func2(void){		
int x=10;		
<pre>printf("In func2 x=%d\n", x);</pre>	x = 10	
}		