

Homework 10 Sol

Ans 1

main.c	foo.c
<pre>char *p = "hello"; void foo(); int main { foo(); retur</pre>	<pre>#include <stdio.h> extern char *p; int n = 2014; static char *p2 = "hello ipads!" void foo() { printf("%s %d", p, n); } static void foo1() { printf("%s", p2); }</pre>

Indicate the type of the following symbols, e.g. **defined global, referenced global or local**

File	Symbol	Type
main.c	p	defined global
	foo	referenced global
foo.c	p	referenced global
	n	defined global
	p2	local
	foo	defined global
	foo1	local

Ans 2

<pre>#include <stdio.h> char c = 5; int a[5]; void foo(int x) { static int y = 7; int b = x + 1; printf("%d\n", b); }</pre>

Indicate the location of the following symbols, e.g. **.data**, **.bss**, **.text** or **stack**.

Symbol	Location
c	.data
a	. bss
y	.data
b	. stack
foo	. text

Problem 3:

1. Complete the following relocation records:

RELOCATION RECORDS FOR [.text]:

OFFSET	TYPE	VALUE
0000000c	R_386_PC32	p3
00000012	R_386_32	xp
0000001f	R_386_PC32	f2

RELOCATION RECORDS FOR [.data]:

OFFSET	TYPE	VALUE
00000004	R_386_32	x

2. If p3 is relocated to 0x080483f3 and p1 is relocated to 0x080483d0, what will the underlined instruction be changed to after linking?

e8 18 00 00 00

Problem 4:

yes1