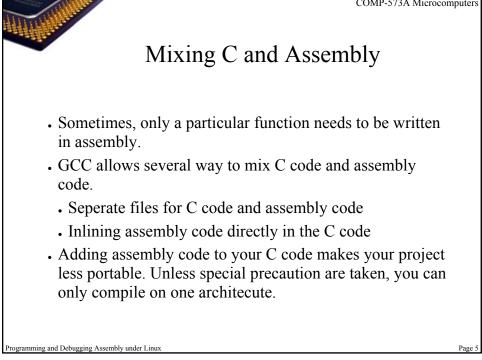
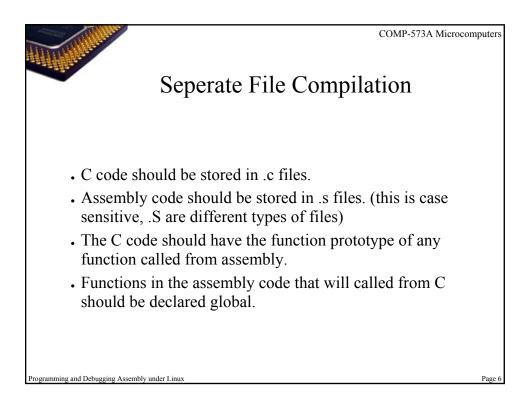
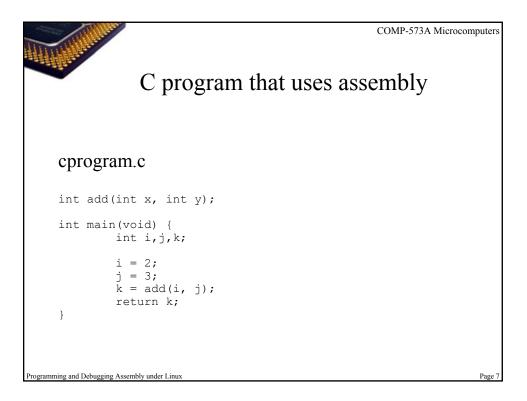


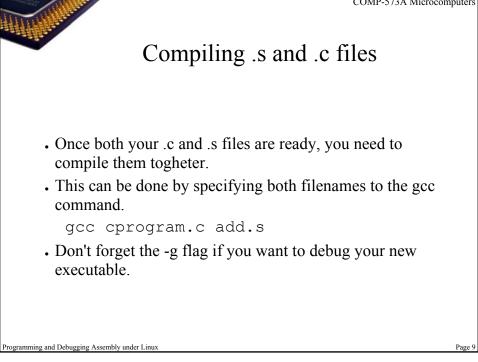
		COMP-573A Microcomputers
HULL MARKE		
	Assembly Ouput	
• Assembly	produced by GCC is easy to reco	ognize:
.file "Hellow .sectio	orld.c" n .rodata	
.LCO: .string .text	"Hello World"	
.globl main		
.type	main,@function	
main:		
pushl	-	
	%esp, %ebp \$8, %esp	
SUDI	so, sesp	
 pushl	\$.LC0	
-	printf	
addl	\$16, %esp	
leave		
ret		
.Lfel:		
.size		
.ident	"GCC: (GNU) 3.2.2 20030222 (Red Hat Linux	3.2.2
Programming and Debugging Assembly	under Linux	Page 4

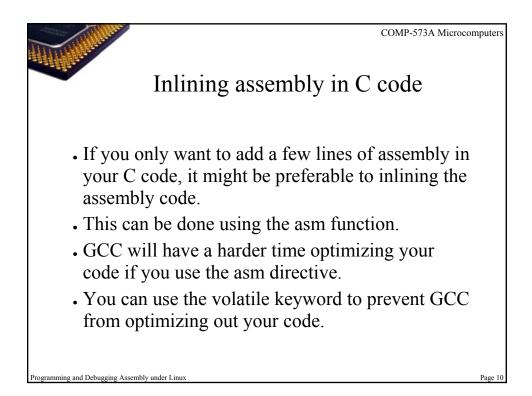






	Asser	COMP-573A Microcom	puters
add.s	.text		
.globl		add, @function	
add:	movl	<pre>%ebp %esp, %ebp 12(%ebp), %eax 8(%ebp), %eax %ebp</pre>	
Programming and Debugging A	Assembly under Lin	ux	Page 8





Page 1

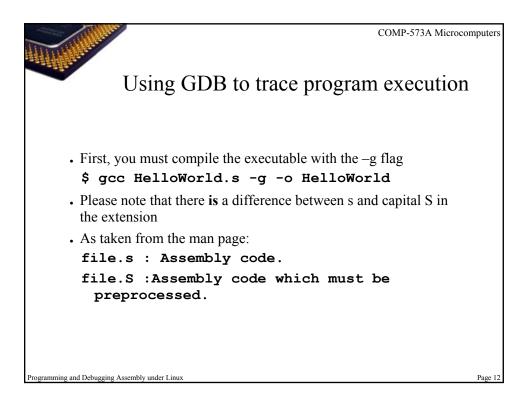
Using the asm function

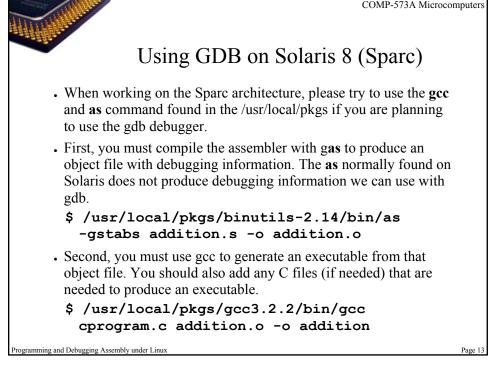
add.c

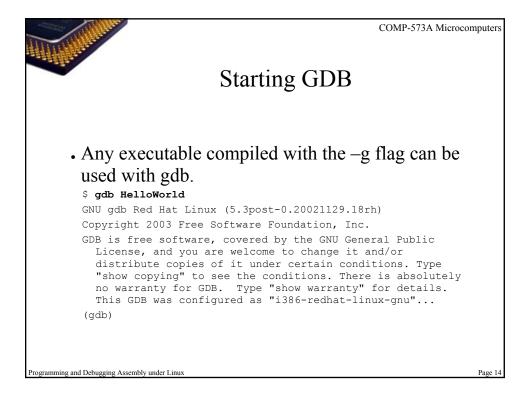
```
int add(int x, int y) {
    asm volatile ("movl 12(%ebp), %eax");
    asm volatile ("addl 8(%ebp), %eax");
}
```

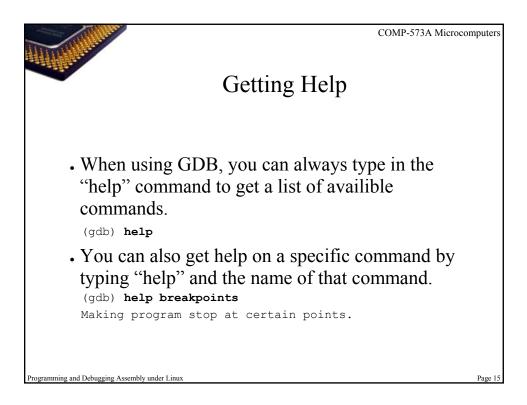
- It is possible to have more than one assembly instruction in the asm function.
- More information asm is available on the Internet.

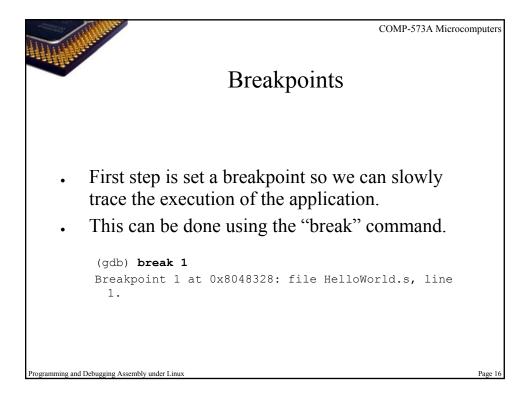
Programming and Debugging Assembly under Linux



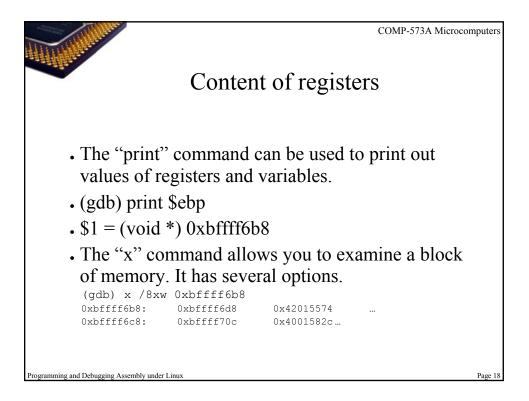






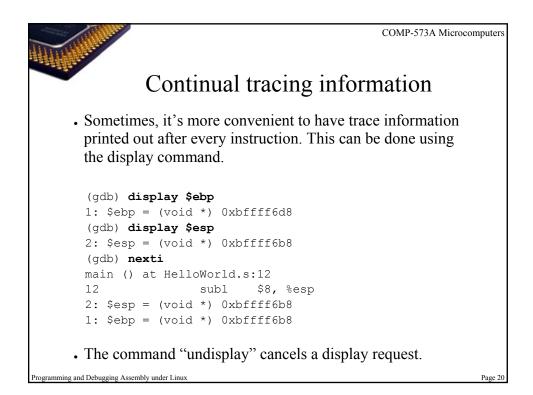


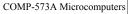


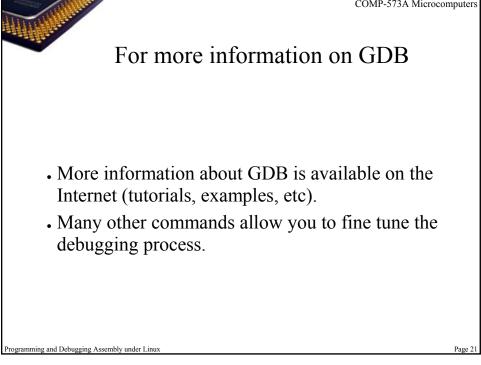


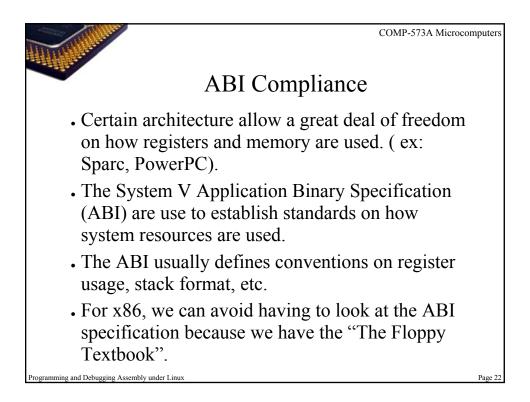
• The "info	register" comm ntent of every re	egister Information and gives us a quick overview gister.	inputer
	0×1	1	
eax ecx	0x1 0x42015554	1107383636	
edx	0x42015554 0x40016bc8	1073834952	
ebx	0x42130a14	1108544020	
esp	0xbffff6b8	0xbfff6b8	
ebp	0xbffff6d8	0xbfff6d8	
esi		1073828704	
edi	0x8048370	134513520	
eip	0x8048329	0x8048329	
eflags	0x346	838	
CS	0x23	35	
SS	0x2b	43	
ds	0x2b	43	
es	0x2b	43	
fs	0x0	0	
gs	0x33	51	
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- THE











- The Floppy Textbook (1999 edition)
- Using the GNU Assembler (gas)
 <u>http://www.gnu.org/manual/gas/html_chapter/as_toc.html</u>
- Man Pages : Gcc and Gdb
- GDB Tutorial http://www.cs.princeton.edu/%7Ebenjasik/gdb/gdbtut.html

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