

Princeton University

COS 217: Introduction to Programming Systems

Assembler and Linker Output for hello.S via gdb

```
--> gcc -c -o hello.o hello.S
```

```
--> gdb hello.o
```

```
GNU gdb 4.17
```

```
Copyright 1998 Free Software Foundation, Inc.
```

```
GDB is free software, covered by the GNU General Public License, and you are  
welcome to change it and/or distribute copies of it under certain conditions.
```

```
Type "show copying" to see the conditions.
```

```
There is absolutely no warranty for GDB. Type "show warranty" for details.
```

```
This GDB was configured as "sparc-sun-solaris2.6"...(no debugging symbols found)...
```

```
(gdb) x/8i main
```

```
0x0 <main>:      save  %sp, -96, %sp  
0x4 <main+4>:    sethi %hi(0), %o0  
0x8 <main+8>:    mov  %o0, %o0 ! 0x0 <main>  
0xc <main+12>:   call 0xc <main+12>  
0x10 <main+16>:  nop  
0x14 <main+20>:  clr  %i0      ! 0x0 <main>  
0x18 <main+24>:  ret  
0x1c <main+28>:  restore
```

```
(gdb) x/8x main
```

```
0x0 <main>:      0x9de3bfa0      0x11000000      0x90122000      0x40000000  
0x10 <main+16>:  0x01000000      0xb0102000      0x81c7e008      0x81e80000
```

```
(gdb) quit
```

```
--> gcc -o hello hello.o
```

```
--> gdb hello
```

```
GNU gdb 4.17
```

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```
This GDB was configured as "sparc-sun-solaris2.6"...
```

```
(gdb) x/8i main
```

```
0x10658 <main>:  save  %sp, -96, %sp  
0x1065c <main+4>:  sethi %hi(0x11000), %o0  
0x10660 <main+8>:  or   %o0, 0x1ac, %o0 ! 0x111ac <pcGreeting>  
0x10664 <main+12>: call 0x213c8 <printf>  
0x10668 <main+16>:  nop  
0x1066c <main+20>:  clr  %i0      ! 0x0  
0x10670 <main+24>:  ret  
0x10674 <main+28>:  restore
```

```
(gdb) x/8x main
```

```
0x10658 <main>:  0x9de3bfa0      0x11000044      0x901221ac      0x40004359  
0x10668 <main+16>: 0x01000000      0xb0102000      0x81c7e008      0x81e80000
```

```
(gdb) quit
```

```
-->
```