general purpose registers

%eax	%ebx	%ecx	%edx	%esi	%edi

stack pointer

%esp

base pointer

%ebp
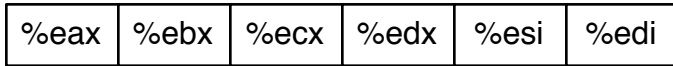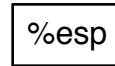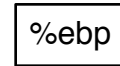
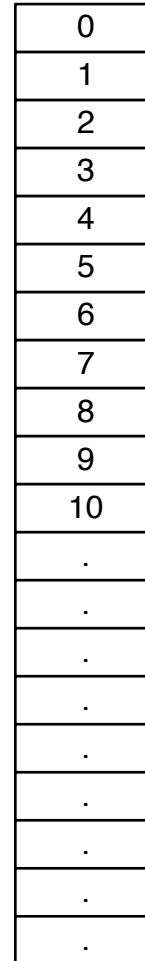## Program

```
        .file   "test.c"
        .section        .rodata
.LC0:
        .string "hello world!\n"
        .text
.globl main
        .type   main,@function
main:
        pushl   %ebp
        movl    %esp, %ebp
        subl    $8, %esp
        andl    $-16, %esp
        movl    $0, %eax
        subl    %eax, %esp
        subl    $12, %esp
        pushl   $.LC0
        call    printf
        addl    $16, %esp
        movl    $0, %eax
        leave
        ret
.Lfe1:
        .size   main,.Lfe1-main
        .section        .note.GNU-stack,"",@progbits
        .ident  "GCC: (GNU) 3.2.3 20030502 (Red Hat Linux 3.2.3-54)"
```

Memory

0
1
2
3
4
5
6
7
8
9
10
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.
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Stack

0
1
2
3
4
5
6
7
8
9
10
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