

SCS1312 Operating System Concepts

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```
int f()
{
    // Some stuff here

    f();

    return 0;
}
```

f :

```
    movl $20, %eax
    movl $10, %ebx
    ...
    ...
    ret
```

main.c

```
int main(void)
{
    // Some stuff here

    f();

    // Some other stuff here
    return 0;
}
```

main.s

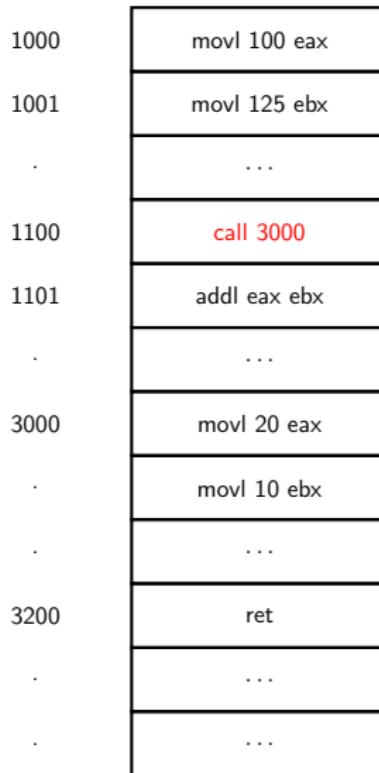
```
main:  
    movl $100, %eax  
    movl $125, %ebx  
    ...  
    ...  
    call _f  
    addl %eax, %ebx  
    ...  
    ...  
    ...
```

Address Binding

1000	movl 100 eax
1001	movl 125 ebx
.	...
1100	call 3000
1101	addl eax ebx
.	...
3000	movl 20 eax
.	movl 10 ebx
.	...
3200	ret
.	...
.	...

Compile-Time Address Binding

Address Binding



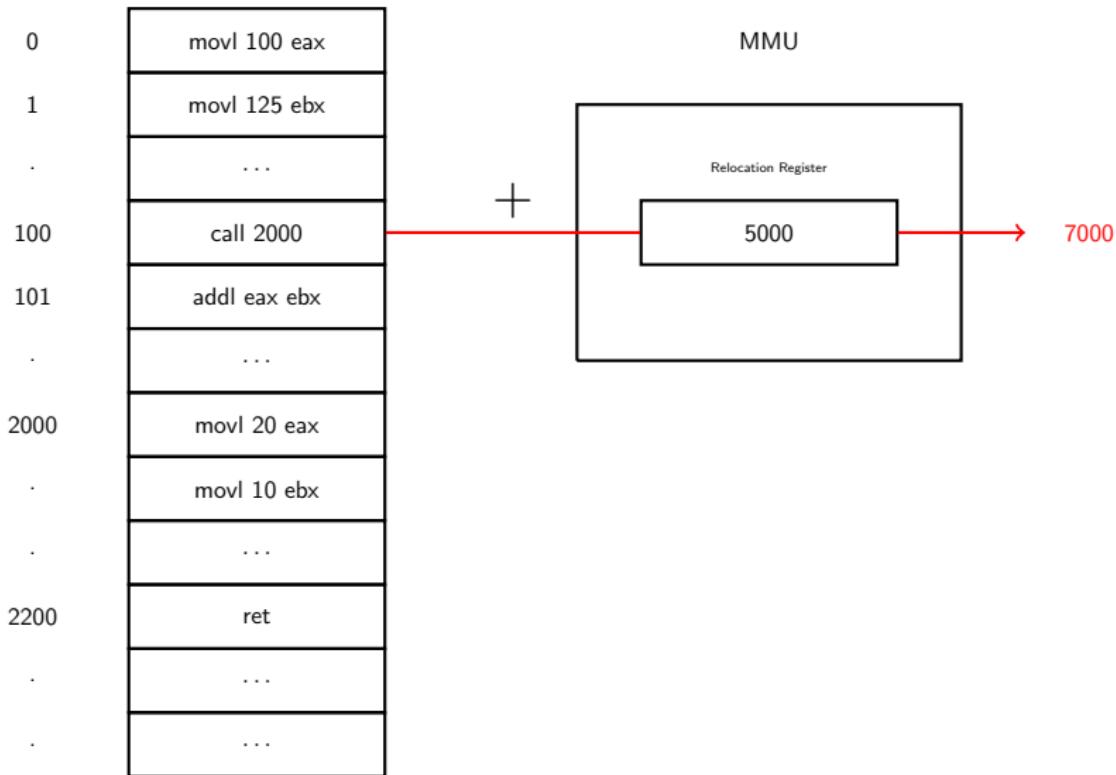
Address Binding

0	movl 100 eax
1	movl 125 ebx
.	...
100	call 2000
101	addl eax ebx
.	...
2000	movl 20 eax
.	movl 10 ebx
.	...
2200	ret
.	...
.	...

Load-Time Address Binding

5000	movl 100 eax
5001	movl 125 ebx
.	...
5100	call 7000
101	addl eax ebx
.	...
7000	movl 20 eax
.	movl 10 ebx
.	...
2200	ret
.	...
.	...

Logical Vs Physical



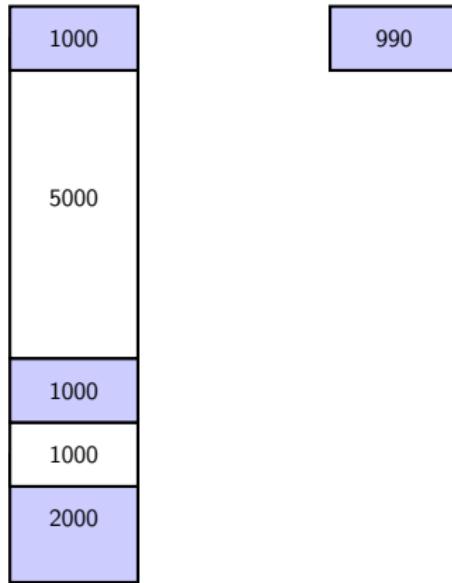
Runtime Address Binding ???

Swap-out and Swap-in

Addresses Inside Programs

```
int *p;  
  
p = &x;  
p++;
```

Allocating Memory



- Best fit
- Worst fit
- First Fit

Allocating Memory

