

Aaron Perkel  
CS2210  
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```
aaronperkel in lab09 $ vim move.s
aaronperkel in lab09 $ as -o move.o move.s
aaronperkel in lab09 $ ld -o move move.o
aaronperkel in lab09 $ ./move
aaronperkel in lab09 $ echo $?
20
```

6. Display the number 20

```
aaronperkel in lab09 $ vim helloworld.s
aaronperkel in lab09 $ as -o helloworld.o helloworld.s
aaronperkel in lab09 $ ld -o helloworld helloworld.o
aaronperkel in lab09 $ ./helloworld
Hello World
aaronperkel in lab09 $
```

12. Hello World

```
.global _start
_start:
MOV R7, #4      @ syscall number
MOV R0, #1      @ stdout
MOV R2, #34     @ string is 34 characters long
LDR R1, =string @ string located at 'string:'
SWI 0

_exit:
MOV R7, #1      @ exit syscall
SWI 0

.data
string:
.ascii "Hello World, this is Aaron Perkel\n"
this is your name". Assemble, link, and run the program. Take a screenshot of the
```

```
aaronperkel in lab09 $ as -o helloworld.o helloworld.s
aaronperkel in lab09 $ ld -o helloworld helloworld.o
aaronperkel in lab09 $ ./helloworld
Hello World, this is Aaron Perkel
```

13. Modified hello world

```
aaronperkel in lab09 $ vim add.s
aaronperkel in lab09 $ as -o add.o add.s
aaronperkel in lab09 $ ld -o add add.o
aaronperkel in lab09 $ ./add
18
aaronperkel in lab09 $
```

```
.global _start
_start:
MOV R1, #5
MOV R2, #6
MOV R3, #7
ADDS R0, R1, R2
ADDS R0, R0, R3
MOV R7, #1
SWI 0
```

11. Adding

```
[aaronperkel in lab09 $ make helloworld  
as -o helloworld.o helloworld.s  
ld -o helloworld helloworld.o
```

```
[aaronperkel in lab09 $ ./helloworld  
Hello World, this is Aaron Perkel
```

15. make hello world