Tute 1

COMP1521 24T2

Jack Robbers

content

- course intro
- scope
- command line arguments
- compilation steps

whoami

Jack Robbers

6th Year Electrical Engineering / Computer Science

the worst part of uni

icebreaker(s)

links

- course website
- j.robbers@unsw.edu.au
- tute code and slides:
  github.com/JackRobbers/comp1521

a note

what you find easy might not be easy for others

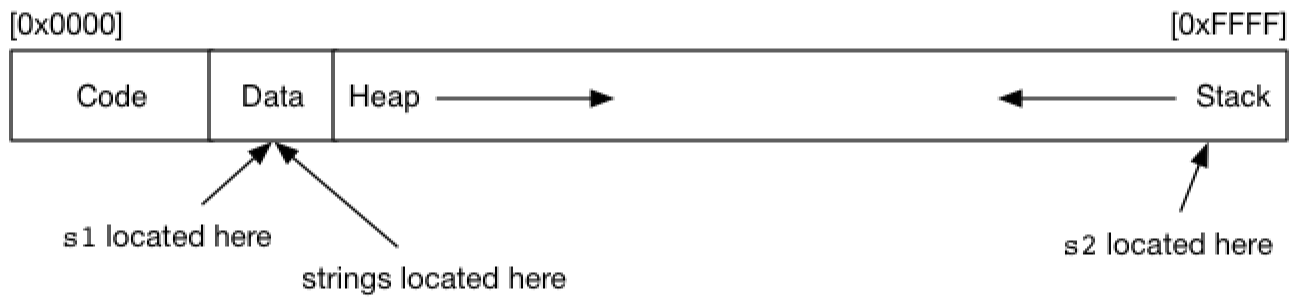
be nice

what's different between s1 and s2?

```c
#include <stdio.h>

char *s1 = "abc";

int main(void) {
  char *s2 = "def";
  // ...
}
```


[0x0000]
[0xFFFF]
Code
Data
Heap
Stack
s1 located here
strings located here
s2 located here

```c
#include <stdio.h>

int *get_num_ptr(void);

int main(void) {
    int *num = get_num_ptr();
    printf("%d\n", *num);
}

int *get_num_ptr(void) {
    int x = 42;
    return &x;
}
```

```c
#include <stdio.h>

int main(void) {
    char str[10];
    str[0] = 'H';
    str[1] = 'i';
    printf("My message is: %s\n", str);
    return 0;
}
```

```c
#include <stdio.h>

int main(void) {
   int i = 0;
   while (i < 10) {
      printf("%d\n", i);
      i++;
   }
   return 0;
}
```

how could we rewrite this as a for loop?

command line arguments

In groups, write a program called "print_arguments" that prints the command line arguments to a program. What does your program output when you run

```
print_arguments COMP1521 24T1
```

If you get time, write another program to find the sum of the arguments e.g `sum_arguments 1 2 3 4 5` should print out "15"

steps of compilation

- pre processor - replaces #includes and #defines. - `-E`
- compiler - produces assembly for the targetted machine - `-S`
- assemble - produce machine (binary) code - `-c`