

C main function:

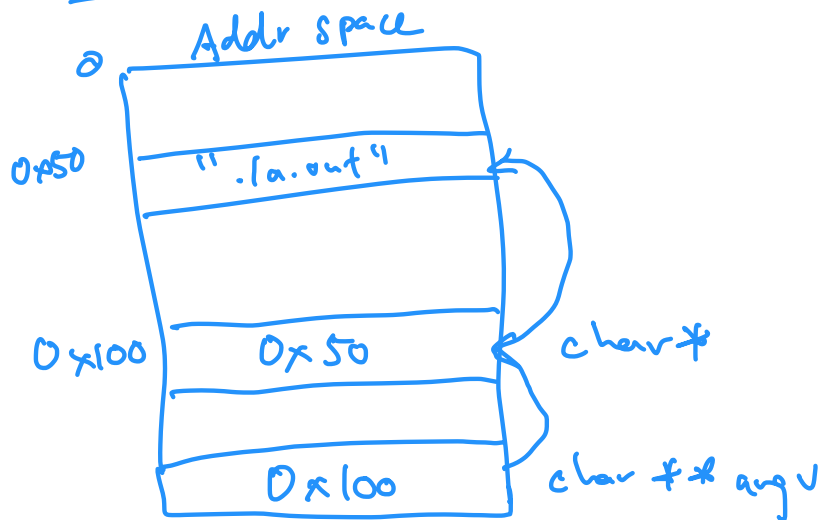
```
int main (int argc, char *argv[]) {  
    /  
    # command line args  
    }  
    }  
    }  
    }
```

array of char * containing the command line args

Ex: > ./a.out hello world

$argv = [". / a . out", "hello", "world"]$
 $argc = 3$

char * ~~argv~~ == char * argv[]



File I/O / Reading from Stdin

FILE* fopen (char * path, char * mode)

if NULL returned, cannot open file, e.g., file Does Not Exist

↳ "r": read } what you want to do
↳ "w": write } w/ the file

char * fgetc (char * buffer, int size, FILE * file_ptr)

size - 1 bytes

↳ reads from the file pointed to by file_ptr & stores in buffer

↳ if NULL returned, then reached end of file

List & List

\Rightarrow $\text{list} \rightarrow \text{contents}[i]. \text{contents}$

$(\&\text{list}). \text{contents}[0]. \text{contents}$

\Downarrow
String struct

```
struct List {
    int size;
    int capacity;
    String * contents;
};

struct String {
    int size;
    char * contents;
};
```

Ex: ("hello", "world")

$\left[\begin{array}{c} \text{contents=} \\ \{ \text{size} = 5, \text{"hello"} \} \end{array} , \begin{array}{c} \{ \text{size} = 5, \text{contents} = \text{"world"} \} \end{array} \right]$

String struct String struct

$\text{type of (list)} = \text{List} *$

$\text{typeof (list} \rightarrow \text{contents)} = \text{String} *$

$\text{typeof (list} \rightarrow \text{contents}[0]) = \text{String}$

$\text{typeof (\&list} \rightarrow \text{contents}[0]) = \text{String} *$

$\text{typeof (\&list} \rightarrow \text{contents}[1]) = \text{String} *$

$\text{typeof (list} \rightarrow \text{contents}[0]. \text{contents)} = \text{char} *$