

CSC209 Week 10 Notes

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C Pre-Processor 1 of 1

- Macros

- Starts with ‘# define’
- Can also be an expression with parameters

```
1  #define WITH_TAX(x) ((x) * 1.08) //<- NOTE: there is no space
2  between WITH_TAX and (x)
```

* IMPORTANT: Always surround macro variables with parenthesis

```
1  #define WITH_TAX(x) (x * 1.08)
2
3  int main() {
4      double purchase = 9.99;
5      double purchase2 = 12.49;
6
7      printf("%f\n", WITH_TAX(purchase + purchase2)); //<-
8  will result in purchase + purchase2 * 1.08.
9  }
```

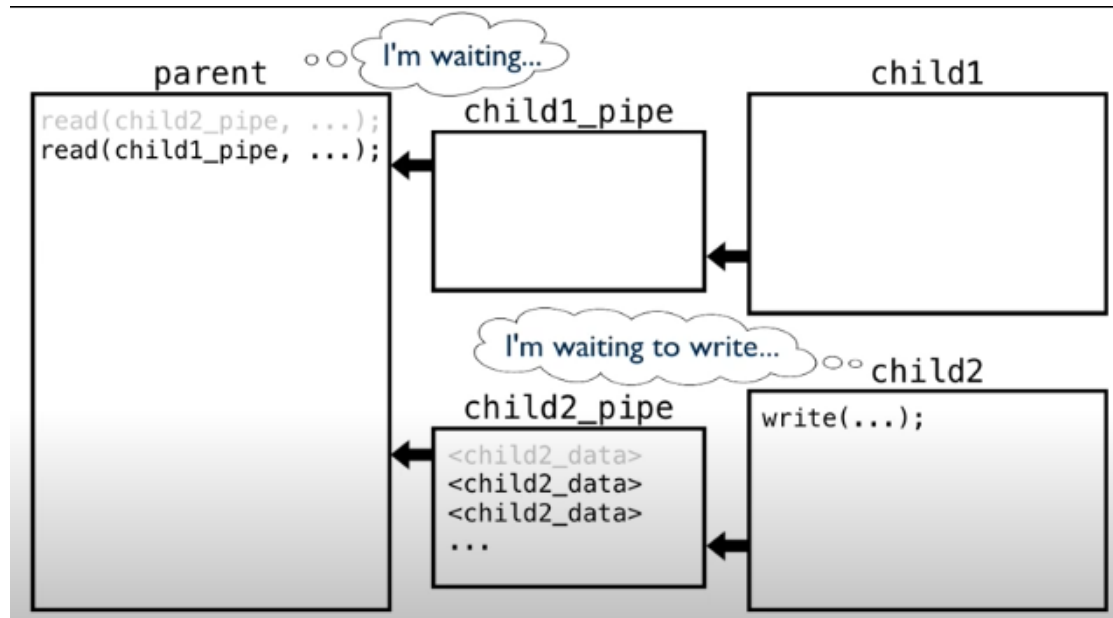
Listing 1: macros_example_1.c

Select 1 of 2

- The problem with Blocking Reads

- *read* waits until a pipe is non-empty, and reads one at a time
- suppose there are multiple-children with *write*, then there may be
 1. One child with empty pipe

2. One child with filling contents, i.e. 'hello', 'hi there!'
- Parent waits for empty pipe, causing blocking



- *select* ← solution
 - * monitors file descriptors, waiting until one or more of the file descriptors become ready