

# Programming Design Worksheet - Redfield

## for CS1310 (programs 2-7) and CS1311 (programs 1-6)

Copy this file. Type and past images to create new documents for designs.  
Print it for class (if you must miss, submit one file to Designs).

First name **Davide**      Last name **Russillo**

Design for program name **Transpose**

### DATA

#### Variables needed in WORDS for main and globally

array of names  
input file  
output file  
longest name length  
number variable for iteration  
number variable for iteration

#### C DECLARATIONS for main & global

```
char names[20][60];  
FILE *in;  
FILE *out;  
int max_length = 0;  
int i;  
int j;
```

*(STARTING TicTacToe:put image; or draw: Insert, Drawing; or put at end of the file)*

draw in RAM with possible values

### **Algorithm to PSEUDOCODE level** for each function

(remember to indent under if, switch, while, do-while, for)

#### **main:**

```
open input file
open output file

for each name
    for each character
        replace it with ' '
for each name
    read it from the input file
    remove the newline at the end
for each name
    if the length of the name is greater than max_length
        set max_length to length of name
for each character until index of max_length
    for each row
        if the character on that row is not null
            print the character and two spaces to screen
            print the character and two spaces to output file
        else
            print three spaces to screen
            print three spaces to output file
    print a newline

close input file
close output file
```

### **OTHER part of the design** (see assignment - *input or sample output*)

Doom Eternal  
Minecraft  
Grand Theft Auto V  
Rainbow Six Siege  
Super Mario Bros  
Garfield Kart  
Mario Kart Wii  
Ultimate Pool  
Hand Simulator  
Red Dead Redemption 2  
Watch Dogs  
American Truck Simulator  
Batman Arkham Asylum  
Just Cause 3  
Superliminal  
SUPERHOT  
Assetto Corsa  
Boneworks  
Hitman  
Max Payne 3