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#include <stdlib.h>
#include <stdio.h>
#include <string.h>
#include <fcntl.h>
#include <signal.h>
#include <stdlib.h>
#include <time.h>
#include <sys/shm.h>
#include <sys/stat.h>
#include <sys/mman.h>
#include <stdbool.h>

#define ROCK 1
#define PAPER 2
#define SCISSORS 3

void throw();
void determine_round_winner();
void determine_winner();

int fd[2];
//strings that represent rock, paper, scissors in array
const char *rps[3];
//scores for the game
int player_one_score;
int player_two_score;
//round choices
int player_one_choice;
int player_two_choice;

int main(int argc, char** argv) {
    rps[0] = "Rock";
    rps[1] = "Paper";
    rps[2] = "Scissors";

    player_one_score = 0;
    player_two_score = 0;

    signal(SIGUSR1, throw);

    const int SIZE = sizeof(int);
    const char* playerOne = "PlayerOne";
    const char* playerTwo = "PlayerTwo";

    int num_rounds = atoi(argv[1]);

    printf("Beginning %d Rounds...\n", num_rounds);
    printf("Fight\n");
    printf("-----\n");

    for(int i=0; i<num_rounds; i++) {
        printf("Round %d:\n", i+1);
        kill(getpid(), SIGUSR1);
        wait(NULL);
        determine_round_winner();
        printf("-----\n");
    }
    determine_winner();
    return 0;
}

void throw() {
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pipe(fd);
pid_t p_one_id = fork();
if(!p_one_id) {
    close(fd[0]);
    srand(time(NULL) * getpid());
    int choice = rand() % 3 + 1;

    write(fd[1], &choice, sizeof(choice));
    close(fd[1]);
    exit(0);
} else {
    wait(NULL);
    close(fd[1]);
    read(fd[0], &player_one_choice, sizeof(player_one_choice));
    close(fd[0]);
}

pipe(fd);
pid_t p_two_id = fork();
if(!p_two_id) {
    close(fd[0]);
    srand(time(NULL) * getpid());
    int choice = rand() % 3 + 1;

    write(fd[1], &choice, sizeof(choice));
    close(fd[1]);
    exit(0);
} else {
    wait(NULL);
    close(fd[1]);
    read(fd[0], &player_two_choice, sizeof(player_two_choice));
    close(fd[0]);
}
}

void determine_round_winner() {
    bool player_one_win = false;
    bool player_two_win = false;

    if(player_one_choice != player_two_choice) {
        if(player_one_choice == ROCK && player_two_choice == PAPER) {
            player_two_win = true;
        } else if(player_one_choice == ROCK && player_two_choice == SCISSORS) {
            player_one_win = true;
        } else if(player_one_choice == PAPER && player_two_choice == ROCK) {
            player_one_win = true;
        } else if(player_one_choice == PAPER && player_two_choice == SCISSORS) {
            player_two_win = true;
        } else if(player_one_choice == SCISSORS && player_two_choice == ROCK) {
            player_two_win = true;
        } else {
            player_one_win = true;
        }
    }
}

printf("Child 1 throws %s!\n", rps[player_one_choice - 1]);
printf("Child 2 throws %s!\n", rps[player_two_choice - 1]);
if(player_one_win) {
    printf("Child 1 Wins!\n");
    player_one_score++;
} else if(player_two_win) {
    printf("Child 2 Wins!\n");
}
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    player_two_score++;
} else {
    printf("Draw!\n");
}
}

void determine_winner() {
    printf("-----\n");
    printf("Results:\n");
    printf("Child 1: %d\n", player_one_score);
    printf("Child 2: %d\n", player_two_score);

    if(player_one_score > player_two_score) {
        printf("Child 1 Wins!\n");
    } else if(player_two_score > player_one_score) {
        printf("Child 2 Wins!\n");
    } else {
        printf("Draw!\n");
    }
}
```