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#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <sys/wait.h>
```

```
// Function to sort the array
```

```
void sortArray(int arr[], int n) {
    for (int i = 0; i < n - 1; i++) {
        for (int j = 0; j < n - i - 1; j++) {
            if (arr[j] > arr[j + 1]) {
                int temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
            }
        }
    }
}
```

```
// Function to reverse the array
```

```
void reverseArray(int arr[], int n) {
    int start = 0;
    int end = n - 1;
    while (start < end) {
        int temp = arr[start];
        arr[start] = arr[end];
        arr[end] = temp;
        start++;
        end--;
    }
}
```

```

int main() {

    int n;

    printf("Enter the number of elements in the array: ");

    scanf("%d", &n);

    int arr[n];


    printf("Enter the elements of the array: ");

    for (int i = 0; i < n; i++) {

        scanf("%d", &arr[i]);

    }


    // Forking a child process

    pid_t pid = fork();


    if (pid < 0) {

        // Error occurred

        fprintf(stderr, "Fork failed\n");

        return 1;

    } else if (pid == 0) {

        // Child process

        char *args[n + 2]; // Extra space for program name and NULL terminator

        args[0] = "./display_reverse"; // Name of the program to execute


        // Converting array elements to strings

        for (int i = 0; i < n; i++) {

            args[i + 1] = (char *)malloc(10 * sizeof(char)); // Assuming the max length of an integer is 10

            sprintf(args[i + 1], "%d", arr[i]);

        }

        args[n + 1] = NULL; // Terminating the argument list


        // Executing the display_reverse program

```

```
    execve(args[0], args, NULL);

} else {
    // Parent process
    wait(NULL); // Wait for the child to finish

    // Sort the array
    sortArray(arr, n);

    // Displaying the sorted array
    printf("Sorted Array: ");
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }
    printf("\n");

    // Reverse the sorted array
    reverseArray(arr, n);

    // Displaying the array in reverse order
    printf("Array in Reverse Order: ");
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }
    printf("\n");
}

return 0;
}
```