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Lab11

Mandatory Part

Part I GDB

In factorial function, instead of return factorial(n-1)*n, I use a variable named temp to store factorial(n-1) then return the product of n and temp.

```
long factorial(int n)
{
    if (n) {
        int temp = factorial(n - 1);
        return n * temp;
    }

    else return 1;
}
```

Part II ASan

(1) In main(), when calling quickSort() function, variable high should be n - 1 instead of n.

```
int main()
{
    int arr[] = {10, 7, 8, 9, 1, 5};
    int n = sizeof(arr)/sizeof(arr[0]);
    quickSort(arr, 0, n-1);
    printf("Sorted array: n");
    printArray(arr, n);
    return 0;
}
```

(2) In printArray(), in for loop, the terminate condition should be i <= size - 1 or i < size instead of i <= size.

```
void printArray(int arr[], int size)
{
    int i;
    for (i=0; i <= size - 1; i++)
        printf("%d ", arr[i]);
    printf("\n");
}
```