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/*
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Assignment: HW7.15
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This program reads ints into an array until the user inputs 0.
*/
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#include <iostream>
#include <string>

using namespace std;

int* read_data(int& size) {

    int * arr = new int[size];
    int * temp = new int[size];
    int n = 0;
    int counter = 0;

    for (int i = 0; i < size; i++) {
        arr[i] = 0;
        temp[i] = 0;
    }

    while (cin >> n && n != 0) {

        if (counter == size) {
            size *= 2;
            temp = new int[size];
            for (int i = 0; i < size; i++) {
                temp[i] = arr[i];
            }
            for (int i = 0; i < size; i++) {
                arr[i] = temp[i];
            }
        }
        arr[counter] = n;
        counter++;

    }

    size = counter;

    int * retVal = new int[size];
    for (int i = 0; i < size; i++) {
        retVal[i] = arr[i];
    }

    delete[] arr;
    delete[] temp;

    return retVal;
}

int main() {
    int size = 10;
    int *arr;
    cout << "Enter any integer. 0 means stop." << endl;
```

```
arr = read_data(size);

cout << "New size is: " << size << endl;
cout << "Current array state: " << endl;

for (int i = 0; i < size; i++) {
    cout << arr[i] << endl;
}

delete[] arr;

return 0;
}
```