

CIS-11 Bubble Sort Project

Team Night Watch

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Bubble Sort

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Part 1: Application overview

Why are we doing this?

- Our goal is to attempt an increase in productivity by helping the users find tasks that would be completed faster, this would allow several tasks to be done before a big project that will take up the time of the workers since the smaller projects would be delayed otherwise. What it will do is correctly organize items from lowest to highest based on numerical value. The values of these numbers are up to the user and can be changed at a whim. The highest priority items for example can receive the lowest numbers while less important items can receive higher numbers. This will help simplify the workflow for the workers.
- The people that will highly benefit from this application are people who are going to have to sort and sift through these highly important items, ensuring that they end up in the places that they need to be. When it comes to these items, having a way to know how to neatly organize them quickly is essential. Not only will it help those organizing the items but the higher-ups can be satisfied knowing that the work is being done efficiently and properly.
- We are currently working on this project because we are desiring a way to improve our productivity. We work on it now instead of later since the lack of time would ensure we are unable to finish the project. If we were to fail at completing this project we would bring dishonor to our ancestors and their cows.

Business Process

- Upon searching for the business application of most other bubble sort projects we have concluded their usefulness are noticeable when it comes to arranging product catalogs by price, or even organising employee lists by seniority, and many other ways of arranging numbers in a list.

User Roles and Responsibilities

- The system will help the production workers better manage and organize all the items that they are working with. It will organize the numbers from lowest to highest, helping them know which items are the highest value produced and which are the less important items. It would reduce the time needed to find and figure out where everything goes so that they are able to finish the work more efficiently. -Workers (Production and shipment)
- When receiving the produce and items, they will easily be able to tell which items are the highest importance. They will be able to see what number value has been assigned the item and immediately know what area that they are needed in and how to organize them. This will reduce the amount of time that is needed for the organization and allow for further client assistance and satisfaction.
- The higher ups including the managers and bosses will be satisfied seeing that their productivity is at an all-time higher. They will be able to see that their workers are being much more efficient and having more time to work so that they can do other tasks. While yes, they may need to spend some time to collaborate with our company, the pay out in production and increase in efficiency will make it a worthwhile investment. Another use that it may have is being able to sort their workers by ranks quite easily with assigning each rank a numerical value then deciding how to arrange them however they would like.
- The clients will be able to enjoy the benefits as well as they will be easily able to be assured that the products that they are receiving have been dealt with efficiently and left in perfect condition. With the workers being able to have more to do with the increased efficiency will be able to receive assistance from the workers more often. It is something that will positively affect every part involved.

Production Rollout

Our application is useful for every single type of business no matter how large or small the company is. Even when starting off as a small company, appearing and being organized is essential to being taken seriously by the clients and competitors. The same goes double for even larger companies as appearances are everything, being able to have that professional appearance while also keeping efficiency is invaluable. This is what we truly sell in just a single app that we worked hard to create. We will go to companies that are struggling to reach deadlines and offer them a couple of tests to see if they enjoy the product. They will be able to do a survey that will allow them to give feedback on whether they are satisfied with our app. If they are then we are able to go through talks of negotiation.

Part II - Functional Requirements

The intended way this code runs is after the user sets a number from 0 to 100 in the location x3100 to x3107, a loop shall run that will subtract the numbers set in an ascending order. By this we mean that it goes from what was placed in x3100 subtracted by x3101 then x3101 to x3102 and so on. The code will expect negatives to continue to the next location this will show for example that the number located in x3100 would be less than x3101. If the result is positive it shall branch to have the numbers switch the location for example if x3101 was less than x3100 the subtraction will result in a positive and the numbers in those locations will swap locations. After this action it shall jump back to the start of the loop and check again the same way until the numbers are organised in an order from least to highest. If there happens to be empty numbers or equal numbers the code will not attempt to switch the two or more equal numbers. Lastly the resulting numbers shall be popped in the screen.

Scope

Our project will consist of multiple phases as the code is rather simple to create and execute but extremely effective at what it does. The company will find that it is easy to recreate this code for their own use which is what sets us apart from others. It is simple and easily remade for many others to use quickly rather than taking ages to set up with multiple phases.

Usability

We want to make the interface and ui as pretty as possible for the company to enjoy but we are unable to do that with time restraints and limited adjustments to aesthetic but making it more pleasing to view would be one of the goals.

Enhancement requests

Date	Enhancement	Requested by	Notes	Priority	Release No/status

Part III - Appendices

- [Our Survey](#)
- Some problems that our application could solve is overcoming menial tasks such as organizing items from least to most important and allow for workers to focus on other tasks.
- While we believe that our product is **best** suited for small to medium scale companies, we believe that we can grow it to be even fit larger scale companies who may need the help of our app.

Pseudo Code

```
#include<iostream>
using namespace std;
int main(){
int N1,N2,N3,N4,N5,N6,N7,N8;
int sN1,sN2,sN3,sN4,sN5,sN6,sN7,sN8;
int stop;
cout<< "Type the 8 numbers you will want from 0 to 100"<<endl;
cin >> N1;
cin >> N2;
cin >> N3;
cin >> N4;
cin >> N5;
cin >> N6;
cin >> N7;
cin >> N8;
sN1=N1;
sN2=N2;
sN3=N3;
sN4=N4;
sN5=N5;
sN6=N6;
sN7=N7;
sN8=N8;
Do{
```

```

if (N1<N2 || N1== N2){
if (N2<N3 || N2== N3){
//And so on till we reach N8 then if N7<N8, stop = 1 and the loop ends.
}Else{
N2=sN3;
N3=sN2;
sN2=N2
sN3=N3
}
}Else{
N1=sN2;
N2=sN1;
sN1=N1
sN2=N2
}
}while (stop==0);
cout << N1 << “,”<< N2 << “,”<< N3 << “,”<< N4 << “,”<< N5 << “,”<< N6 << “,”
<< N7 << “,”<< N8 << endl;
Return 0;
}

```

