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ROLL-2005757

BRANCH-CSE (SLOT-1)

https://github.com/Kingsky1t/OOP_Lab_2005757

Q1. WAP to allocate memory for two arrays dynamically. The size of the arrays is given as input. Merge the two arrays into a third array (no sorting required). Deallocate the memory of the first two arrays. Display the elements of the merged (third) array.

```
#include <iostream>
using namespace std;
int main() {
    int n1,n2;
    cout<<"enter the number of elements in first array:";
    cin>>n1;
    int *p=new int[n1];
    cout<<"enter the elements:";
    for(int i=0;i<n1;i++) {
     cin>>*(p+i);
    }
    cout<<"enter the number of elements in second array:";
    cin>>n2;
    int *q=new int[n2];
    cout<<"enter the elements:";
    for(int i=0;i<n2;i++) {
     cin>>*(q+i);
    }
    int *r=new int[n1+n2];
    int i;
    for(i=0;i<n1;i++) {
     *(r+i)=*(p+i);
    }
    for(int x=0;x<n2;x++) {
     *(r+i)=*(q+x);
     i++;
    }
    delete[] p;
    delete[] q;
    cout<<"the new array is:";
    for(int x=0;x<n1+n2;x++) {
     cout<<*(r+x)<<" ";
    }
    return 0;
}
```

OUTPUT:

enter the number of elements in first array:3

enter the elements:1 2 3

enter the number of elements in second array:5

enter the elements:6 7 8 9 0

the new array is:1 2 3 6 7 8 9 0

Q2. WAP to enter a multiline string. Remove all the multiple blank spaces by copying the string to another string. Deallocate the memory for first string. Display the second string.

```
#include <iostream>
#include <string>
using namespace std;
int main() {
    string s1,s2;
    cout<<"enter the string:";
    getline(cin,s1);
    int count=s1.length();
    s2.resize(count);
    for(int i=0;i<count;i++) {
     if(s1.at(i)!=' ')
                s2.at(i)=s1.at(i);
     }
    cout<<"the new string after removing spaces is:";
    cout<<s2;
}
```

OUTPUT

enter the string:my name is shaunak chandra

the new string after removing spaces is:mynameisshaunakchandra

Q3. WAP to enter an integer. Ask the user if he wants to enter another integer. Continue input of integers till user stops.Display all the integers. Use dynamic memory allocation. [Hint: Form link list].

```
#include <iostream>
using namespace std;

int main() {
    struct node {
     int info;
     struct node *next;
    };
    struct node *start=new struct node();
    start=NULL;
```

```
    char ch;
    do{
     int x;
     cout<<"enter a number:";
     cin>>x;
     struct node *first=new struct node();
     first->info=x;
     first->next=NULL;
     if(start==NULL) {
              start=first;
     }
     else{
              struct node *ptr=start;
              while(ptr->next!=NULL){
                       ptr=ptr->next;
              }
              ptr->next=first;
     }
     cout<<"Do you want to enter another number? y or n:";
     cin>>ch;
    }while(ch=='y');
    struct node *ptr=start;
    cout<<"the intergers entered are:";
    while(ptr!=NULL) {
     cout<<ptr->info<<" ";
     ptr=ptr->next;
    }
}
```

OUTPUT

```
enter a number:12
Do you want to enter another number? y or n:y
enter a number:7
Do you want to enter another number? y or n:y
enter a number:9
Do you want to enter another number? y or n:y
enter a number:5
Do you want to enter another number? y or n:y
enter a number:30
Do you want to enter another number? y or n:n
the intergers entered are:12 7 9 5 30
```