**ក្រុមទី ៨**

| 1 | សុខ​ រក្សា |
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| 2 | សួងខុន ម៉ារ៉ាឌី |
| 3 | ហ៊ាត​ គឹមណាក់ |
| 4 | អឿន ឆេងហាវ |

| Week4 Lab4 (Source Code) |
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| // Bubble sort in C++ #include <iostream> using namespace std; //display element of array void Display\_array(int array[4]) {  cout<<"The array elements is->\n"<<endl;  for(int i=0; i<4; i++)  {  cout<<"\t"<<array[i];  }  cout<<endl; } //swap between 2 position of array void swap\_element( int array[4]){  int pos1,pos2,temp;  cout<<"Swap between 2 position"<<endl;    cout<<"Enter Position 1: ";  cin>>pos1;  cout<<"Enter Position 2: ";  cin>>pos2;  temp = array[pos1];  array[pos1] = array[pos2];  array[pos2] = temp;    cout << "Position ("<<pos1<<","<<pos2<<") have been sorted-> \n"<<endl;    for(int i=0; i<4; i++)  {  cout<<"\t"<<array[i];  }  cout << endl; } //sort array in order small to big void Asecending\_order(int array[4]){  int i, j, temp;  cout << "Unordered array-> \n"<<endl;  for(i=0; i<4; i++)  {  cout <<"\t"<< array[i];  }  cout << endl;    for(i=0; i<4; i++)  {  for(j=0; j<4; j++)  {  if(array[j]>array[i])  {  temp = array[i];  array[i] = array[j];  array[j] = temp;  }  }  }  cout << "Increment order(s->b)\n"<<endl;  for(i=0; i<4; i++)  {  cout<< "\t"<<array[i];  }  cout << endl; } //reverse array big to small void Descending\_order(int array[4]){  int i, j, temp;    for(i=0; i<4; i++)  {  for(j=0; j<4; j++)  {  if(array[j]<array[i])  {  temp = array[i];  array[i] = array[j];  array[j] = temp;  }  }  }  cout << "Reverse order(b->s)\n"<<endl;  for(i=0; i<4; i++)  {  cout<< "\t"<<array[i];  }  cout << endl; } //display all option void display\_all(int array[4]){  Display\_array(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;  swap\_element(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;    Asecending\_order(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;  Descending\_order(array);   } int main(){  system("cls");  int arr\_size = 4;  int array[arr\_size]={12,3,1,5};  int op;  string choice;  cout<<"Menu option"<<endl;  cout<<"1. Display array"<<endl;  cout<<"2. Swap between 2 position"<<endl;  cout<<"3. Sort array by Ascending"<<endl;  cout<<"4. Sort array by Descending"<<endl;  cout<<"5. display all options "<<endl;  cout<<"Input your number option: ";  cin>>op;  do{  switch(op){  case 1:{  Display\_array(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;  }  break;    case 2:{  swap\_element(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;  }  break;  case 3:{  Asecending\_order(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;    }  break;  case 4:{  Descending\_order(array);  cout<<"\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_"<<endl;  }  break;  case 5:{  display\_all(array);  }  break;  }  cout << "Do you want to continue another option?(Y/N or yes/no):";  cin >> choice;    if(choice == "Y" || choice == "y"||choice=="Yes"||choice=="yes"){    cout<<"Input your option: ";  cin>>op;  }else{  cout<<"option exited!! ";  break;  }  }while(true);  return 0;   } |
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