Fundamentals of programming

Lab Manual 8

Home task

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ME-15 Section A

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1. Take an array and find the most repeated element in that array.

```cpp
int main(){
    int num[10],rep[10];
    int i,j,k,z,repeat,lar,max;
    repeat=0;
    lar=-1;
    //asking user to enter elemnets in the array
    cout<<"enter the elements in the array: "<<endl;
    for(i=0;i<10;i++){
        cin>>num[i];
    }
    //using nested for loop to get repeated elements
    for(j=0;j<10;j++){
        for (k=1;k<10;k++){
            if (num[j]==num[k])
            {repeat=repeat+1;
            }
        }
        rep[j]=repeat;
        repeat=0;
    }
    //using another for loop to get the most repeated element
    for(z=0;z<10;z++){
        if (rep[z]>=lar){
            lar=rep[z];
            max=z;
        }
    }
    cout<<"most repeated number is "<<num[max];
}
```
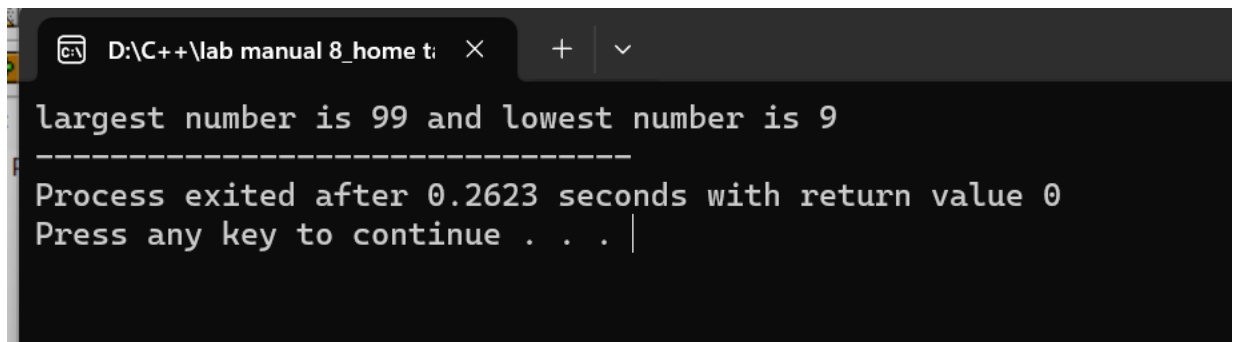
```
D:\C++\lab manual 8_home t    X    +    ⌄

enter the elements in the array:
1
2
3
4
2
5
6
2
7
3
most repeated number is 2
--------------------------------
Process exited after 10.94 seconds with return value 0
Press any key to continue
```

2.   **Let's say an array is a[8] = {13, 15, 17, 9, 99, 77, 65, 43}. Find largest and smallest element.**

```
int main(){
      int lar,low,i;
      int a[8] = {13, 15, 17, 9, 99, 77, 65, 43};
      lar=-1;
      low=9999;
      //using for loop and if statemnet to compare elements of array amd
find largest and lowest number
      for (i=0;i<8;i++){
            if (a[i]>lar){
                  lar=a[i];
            }
            if (a[i]<low){
                  low=a[i];
            }
      }
      cout<<"largest number is "<<lar<<" and lowest number is "<<low;

}
```

3. **Develop a program that takes 5 array elements from user. Swap position [2] element with position [4] element. (Hint: Use the same method of swapping values we used for variables using a third variable temp).**

```cpp
int main(){
    int num[5];
    int i,j,temp;
    //asking user to enter numbets
    cout<<"enter the elements in the array: "<<endl;
    for(i=0;i<5;i++){
        cin>>num[i];
    }
    //swapping the 2nd and 4th element using temp variable
    temp=num[3];
    num[3]=num[1];
    num[1]=temp;
    //outputting rearranged elements
    cout<<"resorted elements in array are: "<<endl;
    for(j=0;j<5;j++){
        cout<<num[j]<<endl;
    }
```

```
enter the elements in the array:
1
2
3
4
5
resorted elements in array are:
1
4
3
2
5


--------------------------------
Process exited after 5.726 seconds with ret
```