**Lab manual 04**

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**Problem 01:**

#include<bits/stdc++.h>

using namespace std;

int main()

{

int i,j,n;

cout<<"Enter Array Size: ";

cin>>n;

int ara[n];

cout<<"Enter Data: ";

for(i=0;i<n;i++)

cin>>ara[i];

for(i=0;i<n;i++)

{

for(j=0;j<n-i-1;j++)

{

if(ara[j]<ara[j+1])

swap(ara[j],ara[j+1]);

}

}

cout<<"Descending Order: ";

for(i=0;i<n;i++)

cout<<ara[i]<<' ';

cout<<endl;

return 0;

}

**Problem 02:**

#include<bits/stdc++.h>

using namespace std;

int main()

{

int i,j,n;

cout<<"Enter Array Size: ";

cin>>n;

int ara[n];

cout<<"Enter Data: ";

for(i=0;i<n;i++)

cin>>ara[i];

for(i=0;i<n;i++)

{

for(j=0;j<n-i-1;j++)

{

if(ara[j]>ara[j+1])

swap(ara[j],ara[j+1]);

}

}

cout<<"Ascending Order: ";

for(i=0;i<n;i++)

cout<<ara[i]<<' ';

cout<<endl;

return 0;

}

**Problem 03:**

#include<bits/stdc++.h>

using namespace std;

int main()

{

int i,j,n,k;

cout<<"Enter Array Size: ";

cin>>n;

int ara[n];

cout<<"Enter Data: ";

for(i=0;i<n;i++)

cin>>ara[i];

for(i=1;i<n;i++)

{

int x=ara[i];

j=i;

while(j>0 && ara[j-1]<x)

{

ara[j]=ara[j-1];

j--;

}

ara[j]=x;

}

cout<<"Descending Order: ";

for(i=0;i<n;i++)

cout<<ara[i]<<' ';

cout<<endl;

return 0;

}

**Problem 04:**

#include<bits/stdc++.h>

using namespace std;

int main()

{

int i,j,n,k;

cout<<"Enter Array Size: ";

cin>>n;

int ara[n];

cout<<"Enter Data: ";

for(i=0; i<n; i++)

cin>>ara[i];

for(i=1; i<n; i++)

{

int x=ara[i];

j=i;

while(j>0 && ara[j-1]>x)

{

ara[j]=ara[j-1];

j--;

}

ara[j]=x;

}

cout<<"Ascending Order: ";

for(i=0; i<n; i++)

cout<<ara[i]<<' ';

cout<<endl;

cout<<"Difference btn max-min= "<<ara[n-1]-ara[0]<<endl;

return 0;

}

**Problem 05:**

#include<bits/stdc++.h>

using namespace std;

int main()

{

int i,j,n,k;

cout<<"Enter Array Size: ";

cin>>n;

int ara[n];

double sum=0;

cout<<"Enter Data: ";

for(i=0;i<n;i++){

cin>>ara[i];

sum+=ara[i];

}

for(i=1;i<n;i++)

{

int x=ara[i];

j=i;

while(j>0 && ara[j-1]>x)

{

ara[j]=ara[j-1];

j--;

}

ara[j]=x;

}

cout<<"Ascending Order: ";

for(i=0;i<n;i++)

cout<<ara[i]<<' ';

cout<<endl;

cout<<"Avg = "<<(sum/n)<<endl;

return 0;

}