**LAB 6**

**Objectives**

Introduce with arrays

**Task 1**

Write a program that display 10 integer numbers of following array.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 4 | 5 | 7 | 8 | 9 | 12 | 15 | 16 | 100 |

#include<iostream>

using namespace std;

int main()

{

int num[10]={3,4,5,7,8,9,12,15,16,100};

for (int i=0;i<10;i++)

{

cout<<"["<<num[i]<<"] ";

}

cout<<endl;

cout<<"\n";

system ("pause");

return 0;

}

**Task 2**

Write a C++ Program that takes 15 characters as input in array and print them.

#include<iostream>

using namespace std;

int main()

{

char alpha[15];

for (int i=0;i<15;i++)

{

cout<<"Enter alphabet: ";

cin>>alpha[i];

}

cout<<endl;

for (int i=0;i<15;i++)

{

cout<<alpha[i];

}

cout<<endl;

system ("pause");

return 0;

}

**Task 3**

Write a C++ Program that takes 10 integers as input and print in reverse order.

#include<iostream>

using namespace std;

int main()

{

int num[10];

for (int i=1;i<=10;i++)

{

cout<<"Enter integer number: ";

cin>>num[i];

}

cout<<endl;

for (int i=10;i>=1;i--)

{

cout<<"["<<num[i]<<"] ";

}

cout<<endl;

system ("pause");

return 0;

}

**Task 4**

Write a program that takes 10 numbers as input and print their sum and average.

#include<iostream>

using namespace std;

int main()

{

float ave,num[10],sum=0;

for (int i=0;i<10;i++)

{

cout<<"Enter number: ";

cin>>num[i];

}

for (int i=0;i<10;i++)

{

cout<<num[i]<<endl;

sum=sum+num[i];

}

cout<<"\_\_\_"<<endl;

cout<<sum<<" is the sum of 10 number"<<endl;

cout<<"\n";

ave=float (sum/10);

cout<<"Average of 10 number is "<<ave<<endl;

cout<<"\n";

system ("pause");

return 0;

}

**Task 5**

Write a C++ Program that takes 10 integers number as input and sort the array in ascending order.

#include <iostream>

using namespace std;

int main()

{

int num[10],temp;

for (int n=0;n<10;n++)

{

cout<<"Enter Number : ";

cin>>num[n];

}

for (int i=0;i<10;i++)

{

for (int j=0;j<9;j++)

{

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

{

temp=num[j];

num[j]=num[j+1];

num[j+1]=temp;

}

}

}

cout<<"\n";

for (int k=0;k<10;k++)

{

cout<<num[k]<<" ";

}

cout<<endl;

system("Pause");

return 0;

}

**Task 6**

Write a program that prints 2x2 matrix of following values

{2,2}{10,12}

#include <iostream>

#include<iomanip>

using namespace std;

int main()

{

int num[2][2]={{2,2},{10,12}};

for (int i=0;i<2;i++)

{

for (int j=0;j<2;j++)

{

cout<<"num["<<i<<"]["<<j<<"]="<<num[i][j]<<endl;

}

}

cout<<"\n";

for (int i=0;i<2;i++)

{

for (int j=0;j<2;j++)

{

cout<<setw(5)<<num[i][j];

}

cout<<endl;

}

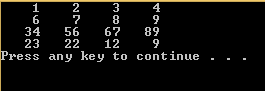
system("Pause");

return 0;

}

**Task 7**

Write a pogram that prints 4 x 4 matrix.



#include<iostream>

#include<iomanip>

using namespace std;

int main()

{

int num[4][4]={{1,2,3,4},{6,7,8,9},{34,56,67,89},{23,22,12,9}};

for (int i=0;i<4;i++)

{

for (int j=0;j<4;j++)

{

cout<<"num["<<i<<"]["<<j<<"]="<<num[i][j]<<endl;

}

}

cout<<"\n";

for (int i=0;i<4;i++)

{

for (int j=0;j<4;j++)

{

cout<<setw(5)<<num[i][j];

}

cout<<endl;

}

system("Pause");

return 0;

}