

```

//                                Milos Topic
//                                09/15/99
//                                CIS-112  problem #13
//                                Computer Science II

#include
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#include
class array1
{
    public:
        array1() {}
        void title();
        void fillit(int arr[],int size);
        void reverse(int arr[],int m);
        void reverse1(int arr[],int m);
        void printit(int arr[],int size);
        void printit1(int arr[],int size);
        void middle(int arr[],int size);
    private:
};

void array1::fillit(int arr[],int size)
{
    ifstream infile("c:\\bc45\\bin\\pmshop\\cpp\\top.dat", ios::in);
    int i = 0;
    while(i < size)
    {
        infile >> arr[i];
        i=i++;
    }
}

void array1::title()
{
    cout << "\n\n Milos Topic                                09/15/99";
    cout << "\n\n Problem #13";
    cout << "\n\n ***MIDDLE and SWAP***";
    cout << "\n";
}

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void array1::reverse(int arr[], int m)
{
    int i = m - 1;
    cout << "\n";
    cout << "\n\n The elements to the left of the middle in reverse order:\n ";
    while(i >= 0)
    {
        cout << arr[i] << " ";
        i = i-1;
    }

}

void array1::reverse1(int arr[], int m)
{
    int i = 14;
    cout << "\n";
    cout << "\n\n The elements to the right of the middle in reverse order:\n ";
    while(i >= m + 1)
    {
        cout << arr[i] << " ";
        i = i-1;
    }

}

void array1::printit(int arr[],int size)
{
    int z=0;
    cout << "\n The numbers are:\n ";
    while(z < size)
    {
        cout << arr[z] << " ";
        z=z++;
    }

    getch();
}

void array1::middle(int arr[], int size)
{
    int m=0;

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        m = (0 + size-1)/2;
        cout << "\n\n The middle number is: ";
        cout << arr[m];
    }
void main()
{
    const int size=15;
    int arr[15];
    int m = 0;
    m = (0 + 14)/2;
    array1 a;
    a.fillit(arr,size);
    a.title();
    a.printit(arr,size);
    a.reverse(arr,m);
    a.reverse1(arr,m);
    a.middle(arr,size);
}

```

***** OUTPUT *****

Milos Topic

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Problem #13

MIDDLE and SWAP

The numbers are:

90 23 36 47 53 34 67 93 38 29 87 66 76 90 80

The elements to the left of the middle in reverse order:

67 34 53 47 36 23 90

The elements to the right of the middle in reverse order:

80 90 76 66 87 29 38

The middle number is: 93