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| **Solution Assignment 01** | **04-04-2023** |

1. Write a function that takes in an array of unique integers in the range from 0 to n, where n is the length of the array, and returns the missing number.

#include <iostream>

#include <algorithm>

using namespace std;

void dispArray(int arr[], int len)

{

    for (int i = 0; i < len; i++)

    {

        cout << arr[i] << " ";

    }

}

void checkMissing(int arr[], int range)

{

    int j = 0;

    cout << endl << "Missing Elements : ";

    for (int i = 0; i < range; i++)

    {

        if (arr[j] != i)

        {

            cout << i << " ";

        }

        else

        {

            j++;

        }

    }

}

int main()

{

    int len, range;

    int arr[len];

    cout << "Enter Number of Elements of array : ";

    cin >> len;

    cout << "Enter Range (n) : ";

    cin >> range;

    cout << "Enter Elememts of Array : " << endl;

    for (int i = 0; i < len; i++)

    {

        cin >> arr[i];

    }

    cout << "Array : ";

    dispArray(arr, len);

    sort(arr, arr + len);

    cout << endl << "Sorted Array : ";

    dispArray(arr, len);

    checkMissing(arr, range);

}

1. Write a program to reverse a given string.

#include <iostream>

using namespace std;

//Function for reversing a string getting a string as a parameter

string reversedString(string str)

{

    string s;

    for (int i = str.length(); i >= 0; i--)

    {

        s.push\_back(str[i]);    // pushing each last character to a new string

    }

    return s;

}

// Function to Display a String

void dispString(string title, string str)

{

    cout << endl << title << " : " << str;

}

// Function to Get a String from user

string getString(string str)

{

    cout << "Enter a string : ";

    cin >> str;

    return str;

}

int main()

{

    string str = "";

    str = getString(str);

    dispString("Orignal String", str);

    dispString("Reversed", reversedString(str));

}