

## Algorithms Level 4



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## Problem # 65/4 Solution Using C++

```
#include <iostream>
#include <string>
#include <vector>

using namespace std;

struct stDate
{
    short Year;
    short Month;
    short Day;
};

vector<string> SplitString(string S1, string Delim)
{
    vector<string> vString;

    short pos = 0;
    string sWord; // define a string variable

    // use find() function to get the position of the delimiters
    while ((pos = S1.find(Delim)) != std::string::npos)
    {
        sWord = S1.substr(0, pos); // store the word
        if (sWord != "")
        {
            vString.push_back(sWord);
        }

        S1.erase(0, pos + Delim.length()); /* erase() until
        position and move to next word. */
    }

    if (S1 != "")
    {
        vString.push_back(S1); // it adds last word of the string.
    }

    return vString;
}
```



## Problem # 65/4 Solution Using C++

```
string ReplaceWordInString(string S1, string StringToReplace,
string sRepalceTo)
{
    short pos = S1.find(StringToReplace);
    while (pos != std::string::npos)
    {
        S1 = S1.replace(pos, StringToReplace.length(),
sRepalceTo);
        pos = S1.find(StringToReplace); //find next
    }
    return S1;
}

string DateToString(stDate Date)
{
    return to_string(Date.Day) + "/" + to_string(Date.Month) +
"/" + to_string(Date.Year);
}

stDate StringToDate(string DateString)
{
    stDate Date;
    vector <string> vDate;

    vDate = SplitString(DateString, "/");
    Date.Day = stoi(vDate[0]);
    Date.Month = stoi(vDate[1]);
    Date.Year = stoi(vDate[2]);

    return Date;
}
```



## Problem # 65/4 Solution Using C++

```
string FormateDate(stDate Date, string DateFormat = "dd/mm/yyyy")
{
    string FormattedDateString = "";
    FormattedDateString = ReplaceWordInString(DateFormat, "dd",
to_string(Date.Day));
    FormattedDateString = ReplaceWordInString(FormattedDateString,
"mm", to_string(Date.Month));
    FormattedDateString = ReplaceWordInString(FormattedDateString,
"yyyy", to_string(Date.Year));

    return FormattedDateString;
}

string ReadStringDate(string Message)
{
    string DateString;

    cout << Message;
    getline(cin >> ws, DateString);
    return DateString;
}

int main()
{
    string DateString = ReadStringDate("\nPlease Enter Date
dd/mm/yyyy? ");

    stDate Date = StringToDate(DateString);

    cout << "\n" << FormateDate(Date) << "\n";

    cout << "\n" << FormateDate(Date, "yyyy/dd/mm") << "\n";

    cout << "\n" << FormateDate(Date, "mm/dd/yyyy") << "\n";

    cout << "\n" << FormateDate(Date, "mm-dd-yyyy") << "\n";

    cout << "\n" << FormateDate(Date, "dd-mm-yyyy") << "\n";

    cout << "\n" << FormateDate(Date, "Day:dd, Month:mm,
Year:yyyy") << "\n";

    system("pause>0");
    return 0;
}
```