

Project Title: VMS (Vaccination Management System)

Programming Fundamentals



Submitted To: Ma'am Aneesa

**Submitted By:
Saad Fahim**

Introduction:

Our project name is VMS.

VMS means that Vaccination Management System. This program is about a vaccination system for hospital management. where the staff can easily add records of person/persons', delete records, add vaccines and search the data. It starts taking personal information about Person/persons' then make the report of him/her. If the staff need to know about someone, they can easily take the data from this system using ID number.

There is another option that adding vaccine to this program. Already there are 150 vaccines. If management needs add more vaccines, they can add to VMS and can see how many vaccines are available at the moment.

Objectives:

Nowadays, Vaccination Process is very important. Because it should be more accuracy and easily. VMS is best solution for that. Each and every data is entering by the staff. So, it is more accuracy. End of the registration hospital have all the data. So, government and health department also can see what is the current situation of covid-19 and who had done the vaccines. It will help to maintain the health of peoples. Many of people died because of covid-19. Some of them didn't vaccine properly. This will motivate the people to vaccination.

What we learn from this project:

We learn from this program how to use different functions globally. In this program we use different switch-case, if/if-else, while. We also use different loops and function/process of that loop that which loop is used when and where. In this program we used files also. Now we have an idea about file handling. How to create a file and how to update the file using temporary file. (Example; delete function)

Code:

```
#include<iostream>
#include<iomanip>
#include<fstream>
#include<string>
using namespace std;
int pi[50]={50};
int    mod[50]={50};
int    sin[50]={50};

struct detail
{
    string d_name;
    int d_id;
    string d_gender;
    int d_age;
    string d_prof;
    int d_bp;
    int d_temp;
    string d_add;
    int d_contact;
    string d_vac;
```

```

};

void new_rec()           // 1. Data Entry Function
{
    detail d;
    cout<<"*****"<<endl;
;
    cout<<"\t\t\t ENTER THE DETAILS \t\t\t"<<endl;
    cout<<"*****"<<endl;
;
    cout<<"-----"<<endl;
    cout<<"\n Enter the Data "<<endl;

    fstream write;
        write.open("record_list.txt", ios::app);
        cout<<"Enter Your Name: ";
        cin.get();
        getline(cin, d.d_name);
        cout<<"Enter Your ID Card Number: ";
        cin>>d.d_id;
        cout<<"Enter Your Gender[M/F]: ";
        cin>>d.d_gender;
        cout<<"Enter Your Age: ";
        cin>>d.d_age;
        cout<<"Enter Your Profession: ";
        cin.get();
        getline(cin, d.d_prof);
        cout<<"Enter Your Blood Peasure: ";
        cin>>d.d_bp;
        cout<<"Enter Your Body Temperature [*C]: ";
        cin>>d.d_temp;
        cout<<"Enter Your Address: ";
        cin.get();
        getline(cin, d.d_add);
        cout<<"Enter Your Contact Number: ";
        cin>>d.d_contact;
        cout<<"Enter the vaccine[P/M/S] "<<endl;
        cout<<"Pfizer [P] / Moderna [M] / Sinopharm [S]";
        cin>>d.d_vac;
            write << d.d_name << endl;
            write<<d.d_id<<endl;
            write<<d.d_gender<<endl;

```

```

        write<<d.d_age<<endl;
        write << d.d_prof << endl;
        write<<d.d_bp<<endl;
        write<<d.d_temp<<endl;
        write << d.d_add << endl;
        write<<d.d_contact<<endl;
        write<<d.d_vac<<endl;
        write.close();
    cout<<"-----"<<endl;
    cout<<" YOUR DATA HAS BEEN SUCCESSFULLY INSERTED "<<endl;
    cout<<"-----"<<endl;
}

void pi_add()
{
    int pi_n,i=0;
    cout<<"How many Pizer vaccine you want to add? "<<endl;
    cin>>pi_n;
    pi[i]=pi[i]+pi_n;
    cout<<"Now Total Number of Pizer Vaccine is "<<pi[i]<<endl;
}

void mod_add()
{
    int mod_n,i=0;
    cout<<"How many Moerna vaccine you want to add? "<<endl;
    cin>>mod_n;
    mod[i]=mod[i]+mod_n;
    cout<<"Now Total Number of Pizer Vaccine is "<<mod[i]<<endl;
}

void sin_add()
{
    int sin_n,i=0;
    cout<<"How many Sinopharm vaccine you want to add? "<<endl;
    cin>>sin_n;
    sin[i]=sin[i]+sin_n;
    cout<<"Now Total Number of Pizer Vaccine is "<<sin[i]<<endl;
}

void add_vac()    // 4. Add more vaccine function
{
    char ch;

```

```

        cout<<"-----"<<endl;
        cout<<"Currently Available Vaccines"<<endl;
        cout<<"-----"<<endl;
        cout<<"\tPfizer   [P] : "<<pi[o]<<endl;
        cout<<"\tModerna  [M] : "<<mod[o]<<endl;
        cout<<"\tSinopharm [S] : "<<sin[o]<<endl;
        cout<<"-----"<<endl;
        cout<<"Which vaccine are you going to add [P/M/S] : ";
        cin>>ch;

        switch(ch)
        {
            case 'P':
            case 'p':
                pi_add();
                break;
            case 'M':
            case 'm':
                mod_add();
                break;
            case 'S':
            case 's':
                sin_add();
                break;
            default:
                cout<<"Invalid Choice!! Enter the correct choice ";
                break;
        }
    }

    void dis_vac() // 3. available vaccine function
    {
        cout<<"*****"
        *****"<<endl;cout<<endl;
        cout<<"\t\t\t Available Vaccines \t\t\t"<<endl;
        cout<<"-----"<<endl;cout<<endl;
        cout<<"\t\tPfizer   [P] : "<<pi[o]<<endl;
        cout<<"\t\tModerna  [M] : "<<mod[o]<<endl;
        cout<<"\t\tSinopharm [S] : "<<sin[o]<<endl;
        cout<<"-----"<<endl;cout<<endl;cout<<endl;
    }

    void table()

```

```

{

    cout<<"=====+=====+=====
=====+=====+===== "<<endl;

        cout<<"Name ";
        cout<<setw(15)<<"ID No.";
        cout<<setw(15)<<"Gender";
        cout<<setw(15)<<"Age";
        cout<<setw(15)<<"Profession";
        cout<<setw(15)<<"B.P";
        cout<<setw(15)<<"Temarature";
        cout<<setw(15)<<"Address";
        cout<<setw(15)<<"Contact No";
        cout<<setw(15)<<"Vaccine"<<endl;
        cout<<"-----
----- "<<endl;

}

void display(detail d)
{
    cout<<d.d_name<<setw(15);
    cout<<d.d_id<<setw(15);
    cout<<d.d_gender<<setw(15);
    cout<<d.d_age<<setw(15);
    cout<<d.d_prof<<setw(15);
    cout<<d.d_bp<<setw(15);
    cout<<d.d_temp<<setw(15);
    cout<<d.d_add<<setw(15);
    cout<<d.d_contact<<setw(15);
    cout<<d.d_vac;
    cout<<endl;

}

void dis_2(detail d)
{
    cout<<"Name      : "<<d.d_name<<endl;
    cout<<"ID Number  : "<<d.d_id<<endl;
    cout<<"Gender     : "<<d.d_gender<<endl;
    cout<<"Age        : "<<d.d_age<<endl;
    cout<<"Profession   : "<<d.d_prof<<endl;
    cout<<"B.P         : "<<d.d_bp<<endl;

```

```

        cout<<"Temperature[*C]: "<<d.d_temp<<endl;
        cout<<"Address      : "<<d.d_add<<endl;
        cout<<"Contact      : "<<d.d_contact<<endl;
        cout<<"Vaccine Name  : "<<d.d_vac<<endl;
    }

void view_all() // 2. View all Data Function
{
    detail d;
    ifstream read;
    read.open("record_list.txt");
    while(read>>d.d_name>>d.d_id>>d.d_gender>>d.d_age>>d.d_prof>>d.d_bp>>d.d_temp>
>d.d_add>>d.d_contact>>d.d_vac)
    {

        //read>>d.d_name>>d.d_id>>d.d_gender>>d.d_age>>d.d_prof>>d.d_bp>>d.d_temp>>d.d_
add>>d.d_contact>>d.d_vac;
        /*read>>d.d_name;
        read>>d.d_id;
        read.ignore();
        getline(read,d.d_gender);
        read>>d.d_age;
        read.ignore();
        getline(read,d.d_prof);
        read>>d.d_bp;
        read>>d.d_temp;
        read.ignore();
        getline(read,d.d_add);
        read>>d.d_contact;
        read.ignore();
        getline(read,d.d_vac);*/
        display(d);
    }
    read.close();
}

int search()          // 5. Search Function
{
    int nid;
    detail d;
    cout<<"*****"<<endl;cout<<endl;

```



```

        cout<<"Enter The ID Number to Search"<<endl;
        cin>>nid;
        ifstream read;
        string s;
        cout<<"-----"<<endl;
        cout<<"\t\tThis is the data of ID "<<nid<<endl;
        cout<<"-----"<<endl;
        read.open("record_list.txt");
        while(!read.eof())
        {
            read>>d.d_name;
            read>>d.d_id;
            read.ignore();
            getline(read,d.d_gender);
            read>>d.d_age;
            read.ignore();
            getline(read,d.d_prof);
            read>>d.d_bp;
            read>>d.d_temp;
            read.ignore();
            getline(read,d.d_add);
            read>>d.d_contact;
            read.ignore();
            getline(read,d.d_vac);
            if (d.d_id == nid) {
                dis_2 (d);
                return d.d_id;
            }
            cout<< "Can not find " <<nid <<endl;
        }
        read.close();
    }

void del_data()          // 6. Delete Data Function
{
    int id;
    cout<<"\t\t*****"<<endl;
    cout<<"\t\t\tDELETE RECORDS \t\t"<<endl;
    cout<<"\t\t*****"<<endl;
    cout<<"Enter your ID: ";
    cin>>id;
    cout << "\n\tDo you want to detlete id of "<<id<<" (y/n) : ";
    char choice;

```

```

cin >> choice;
if (choice == 'y') {
    detail d;
    ofstream new_file;
    new_file.open("updated_file.txt");
    ifstream read;
    read.open("record_list.txt");
    while(!read.eof())
    {
        read>>d.d_name;
        read>>d.d_id;
        read.ignore();
        getline(read,d.d_gender);
        read>>d.d_age;
        read.ignore();
        getline(read,d.d_prof);
        read>>d.d_bp;
        read>>d.d_temp;
        read.ignore();
        getline(read,d.d_add);
        read>>d.d_contact;
        read.ignore();
        getline(read,d.d_vac);

        if(d.d_id!=id)
        {
            new_file<<d.d_name<<endl;
            new_file<<d.d_id<<endl;
            new_file<<d.d_gender<<endl;
            new_file<<d.d_age<<endl;
            new_file<<d.d_prof<<endl;
            new_file<<d.d_bp<<endl;
            new_file<<d.d_temp<<endl;
            new_file<<d.d_add<<endl;
            new_file<<d.d_contact<<endl;
            new_file<<d.d_vac<<endl;
        }
    }
    new_file.close();
    read.close();
    remove("record_list.txt");
    rename("updated_file.txt","record_list.txt");
    cout<<"\t\t Record is Succcessfully Deleted."<<endl;
}

```

```

    }
else{
    cout << "\n\tRecord not deleted";
}
}

void develop()          // 7. Developers Function
{
    int choice;
    cout<<"\t\t*****"<<endl;
        cout<<"\t\t\t DEVELOPERS \t\t"<<endl;
        cout<<"\t\t*****"<<endl;
    cout<<"\t1. Saad Fahim"<<endl;
    cout<<"-----"<<endl;
    cout<<endl;
        cout<<"Name           : "<<"Saad Fahim"<<endl;
        cout<<"Department      : "<<"CS"<<endl;
        cout<<"Batch             : "<<"Batch 2"<<endl;
        cout<<"Contact No       : "<<" +94-766533626"<<endl;
        cout<<"Email            : "<<"saadfahim2012@gmail.com"<<endl;
        cout<<endl;
    cout<<"\t2. Ifras Inaan"<<endl;
    cout<<"-----"<<endl;
    cout<<endl;
        cout<<"Name           : "<<"Ifras Inaan"<<endl;
        cout<<"Department      : "<<"CS"<<endl;
        cout<<"Batch             : "<<"Batch 2"<<endl;
        cout<<"Contact No       : "<<" +94-769056573"<<endl;
        cout<<"Email            : "<<"ifrasinaan@gmail.com"<<endl;
        cout<<"\n"<<endl;
}

void about()            // 8. about Function
{
    cout<<"\t\t\t*****"<<endl;
    cout<<"\t\t\t About Vaccination Management System.\n"<<endl;
    cout<<"\t\t\t*****"<<endl;
    cout<<"\t This program is about a vaccination system for hospital management."<<endl;
    cout<<"\tIn this Program we can enter the data of who want to take vaccine from  
hospital."<<endl;
        cout<<"\tAfter adding the data of some person, can see the summary of all the  
data's"<<endl;

```

```

        cout<<"\t\tIf the hospital management needs to more vaccines there is an option also.In  
that option we can add the new vaccines too."<<endl;  
        cout<<"\t\tHowever,If hospital management needs to delete some data they can delete the  
datas from using delete opition."<<endl;  
        cout<<endl;cout<<endl;  
        cout<<"\t\tSTAY HOME STAY SAFE"<<endl;  
        cout<<endl;  
    }  
  
void menu()  
{  
    cout<<"\t\t*****"  
*****<<endl;  
    cout<<"\t\t\"<<endl;  
    cout<<"\t\t|\"<<endl;  
    cout<<"\t\t| VACCINATION MANAGEMENT SYSTEM  
|"<<endl;  
    cout<<"\t\t|\"<<endl;cout<<endl;  
    cout<<"\t\t\"<<endl;  
  
    cout<<"\t\t*****"  
*****<<endl;  
    cout<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t1. Enter New record "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t2. View All Data "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t3. Available Vaccines "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t4. Add More Vaccines "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t5. Search Record "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t6. Delete Record "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t7. Developers "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t8. About "<<endl;  
    cout<<endl;  
    cout<<setw(10)<<"\t\t\t9. Exit "<<endl;  
    cout<<endl;  
}

```

```
int main()
{
    int choice;
    while(true)
    {
        menu();
        cout<<"\t\tEnter Your Choice: ";
        cin>>choice;
        switch(choice)
        {
            case 1:
                system("cls");
                new_rec();
                break;
            case 2:
                system("cls");
                table();
                view_all();
                break;
            case 3:
                system("cls");
                dis_vac();
                break;
            case 4:
                system("cls");
                add_vac();
                break;
            case 5:
                system("cls");
                search();
                break;
            case 6:
                system("cls");
                del_data();
                break;
            case 7:
                system("cls");
                develop();
                break;
            case 8:
                system("cls");
                about();
                break;
```

```
        case 9:
            exit(0);
        default:
            cout<<"Invalid Number!! Enter the correct number ";
            break;
    }
}
```

Output:

Menu



Choice 1

```
*****
ENTER THE DETAILS
*****
-----

Enter the Data
Enter Your Name: Abdu
Enter Your ID Card Number: 5
Enter Your Gender[M/F]: M
Enter Your Age: 33
Enter Your Profession: S.E
Enter Your Blood Peasure: 56
Enter Your Body Temperature [*C]: 33
Enter Your Address: Mill
Enter Your Contact Number: 455678
Enter the vaccine[P/M/S]
Pfizer [P] / Moderna [M] / Sinopharm [S]M
-----
YOUR DATA HAS BEEN SUCCESSFULLY INSERTED
-----
```

Choice 2

D:\VMS_Project\Vaccine Management System Project.exe

Name	ID No.	Gender	Age	Profession	B.P	Temarature	Address	Contact No	Vaccine
Saad	1	M	22	Student	22	33	Galle	123456789	M
Anas	2	M	13	Student	6	44	Galle	2345667	M
John	4	M	23	Workor	55	33	USA	34567	M

Choice 3

```
C:\Users\saadf\OneDrive\Documents\PF_Project\Vaccine Management System Project.exe
*****
Available Vaccines
-----
Pfizer      [P] : 50
Moderna     [M] : 50
Sinopharm   [S] : 50
-----
```

Choice 4

```
C:\Users\saadf\OneDrive\Documents\PF_Project\Vaccine Management System Project.exe
-----
Currently Available Vaccines
-----
Pfizer      [P] : 50
Moderna     [M] : 50
Sinopharm   [S] : 50
-----
Which vaccine are you going to add [P/M/S] : p
How many Pizer vaccine you want to add?
100
Now Total Number of Pizer Vaccine is 150
```


Choice 5

```
C:\Users\saadf\OneDrive\Documents\PF_Project\Vaccine Management System P
*****

Enter The ID Number to Search
1
-----
                        This is the data of ID 1
-----
Name           : Saad
ID Number      : 1
Gender         : M
Age            : 22
Profession     : Student
B.P            : 22
Temperature[*C]: 33
Address        : Galle
Contact        : 123456789
Vaccine Name   : M
-----
```

Choice 6

```
C:\Users\saadf\OneDrive\Documents\PF_Project\Vaccine Management System Project.exe
*****

                        DELETE RECORDS
*****

Enter your ID: 3

You want to delete record (y/n) : y
Record is Successsfully Deleted.
```

Choice 7

```
C:\Users\saadf\OneDrive\Documents\PF_Project\Vaccine Management System Project.exe
*****
                        DEVELOPERS
*****

1. Saad Fahim
-----

Name       : Saad Fahim
Department : CS
Batch      : Batch 2
Contact No : +94-766533626
Email      : saadfahim2012@gmail.com

2. Ifras Inaan
-----

Name       : Ifras Inaan
Department : CS
Batch      : Batch 2
Contact No : +94-769056573
Email      : ifrasinaan@gmail.com
```

Choice 8

```
C:\Users\saadf\OneDrive\Documents\PF_Project\Vaccine Management System Project.exe
*****
About Vaccination Management System.
*****

This program is about a vaccination system for hospital management.
In this Program we can enter the data of who want to take vaccine from hospital.
After adding the data of some person, can see the summary of all the data's
If the hospital management needs to more vaccines there is an option also. In that option we can add the new vaccines too.
However, If hospital management needs to delete some data they can delete the datas from using delete option.

STAY HOME STAY SAFE
```