**Object Oriented Programming C++**

**Term Project Report**

# Submitted By:

* BUSHRA MASOOD

**PROJECT NAME**

**Sportsmen data management system**

***“Application to enter, store and delete information regarding any of sportsmen*”**

**Introduction:**

This application is based on the concept to enter, store and delete the detail of the sportsmen. At first, the user has to pass through main menu then the user can add, view and remove the record. The whole project is designed in ‘object oriented programming using C++’ language and different variables and strings have been used for the development of this project. This project is easy to operate and understand by the users.

**Methodology:**

Basic method and logical steps used in the project are below:

* + **Class date //**simple class
  + **Class sportsmen** //composite class

//Parent class

* + **Class cricket //**child class
  + **Class hockey //**child class
  + **Class games //**child class
  + **Class data //**child class

# main()

**Files:**

Multiple cpp and header files used in this project are:

# date.h

* **date.cpp**

# sportsmen.h

* **sportsmen.cpp**

# cricket.h

* **cricket.cpp**

# hockey.h

* **hockey.cpp**

# games.h

* **games.cpp**

# inputdata.h

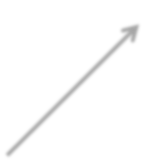
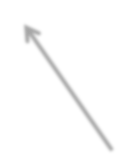
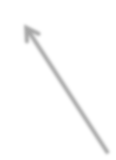
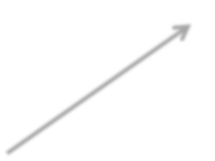
* **inputdata.cpp**

# source.cpp

**Helping Material:**

* Internet
* Book: Object oriented programming using c++

# Flowchart:



Sportsmen

Cricket

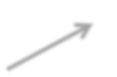
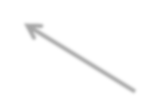
Hockey

Other games

Data

Date

**UML diagram:**





+setdata(string n, int a, string ad, string c, Date d):void

+setName(string n):void

+setAge(int a):void

+setAdress(string a):void

+setcountry(string c):void

+getName():string

+getAge():int

+getAddress()string

+getcountry():string

+ displaydata():void

+name:string

+age:int

+address:string

+country:string

+dateofbirth:Date

Sportsmen

+team:string

+national\_matches:int

+international\_matches:int

Cricket

+Setteam(string t):void

+Setnational\_matches(int n):void

+Setinternational\_matches(int i):void

+getteam():string

+getnational\_matches():int

+getinternational\_matches():int

+display():void

+team:string

+national\_matches:int

+international\_matches:int

Hockey

+team:string

+game:string

+national\_matches:int

+international\_matches:int

Games

+Setteam(string t):void

+Setgame(string t):void

+Setnational\_matches(int n):void

+Setinternational\_matches(int i):void

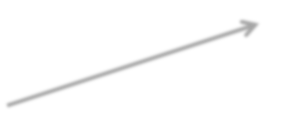
+getteam():string

+getgame():string

+getnational\_matches():int

+getinternational\_matches():int

+display():void



|  |  |
| --- | --- |
| Date |  |
| -day:int |
| -month:int |
| -year:int |
|  |
| +setDay(int):void |
| +setMonth(int):void  +setYear(int):void |
| + getDay():int  + getMonth():int  +getYear():int |
| +setdate(int,int,int):void |
| +printDob():void |



+start():void

+addsportsmen():void

+addcricketplayers():void

+addhockeyplayers():void

+addgameplayer():void

+viewrecord():void

+search(string):void

+delete():void

+delete\_all():void

Data

+Setteam(string t):void

+Setnational\_matches(int n):void

+Setinternational\_matches(int i):void

+getteam():string

+getnational\_matches():int

+getinternational\_matches():int

+display():void

# Code: Source.cpp:

#include<iostream>

#include<string> #include<fstream> #include<conio.h> #include<stdio.h> #include<stdlib.h> #include"date.h" #include"sportsmen.h" #include"cricket.h" #include"hockey.h" #include"games.h" #include"inputdata.h" using namespace std;

int main()

{

Data da;

char choice, choice1;

while (1) {

da.start();

system("pause");

system("cls");

cout << "\n\n\n\t\t\t====== MAIN MENU ======\n\t\t"; cout << "\t\t\t\t\n\t\t\t==>> SHOW MENU\t[1]\n\t";; cout << "\n\t\t\t==>> EXIT\t[2]\t\t";

cout << "\n\n\t\t\t======================\n\t\t"; cout << "\n\n ==>> Enter your choice : "; fflush(stdin);

choice = \_getche();

int q = 1; string n; switch (choice)

{

case '1':

while (q == 1) {

system("cls");

cout << "\n\t==>> Add cricketplayers.\t[1] \n"; cout << "\n\t==>> Add hockeyplayers.\t[2] \n"; cout << "\n\t==>> Add other game players.\t[3] \n"; cout << "\n\t==>> search record.\t[4] \n";

cout << "\n\t==>> Veiw record.\t[5] \n";

cout << "\n\t==>> Delete record of your choice.\t[6] \n"; cout << "\n\t==>> DELETE all record.\t[7] \n";

cout << "\n\t==>> EXIT.\t[0]\n";

cout << "\n\n ==>> Enter your choice : "; choice1 = \_getche();

switch (choice1)

{

case '1':

cout << "\n\nEnter detail of cricket players\n\n"; da.addcricketplayers();

break; case '2':

cout << " \n \n Enter detail of hockey players \n \n "; da.addhockeyplayers();

break;

\n ";

case '3':

cout << " \n \n Enter detail of other game players \n

da.addgameplayer(); break;

case '4':

cout << "\n\nEnter the name of player to search\n\n"; cin >> n;

da.search(n); break;

case '5':

cout << "\n\nVeiw all record\n\n"; da.viewrecord();

break;

case '6':

cout << "\n\nDelete player of your choice\n\n"; da.deleteP();

break; case '7':

cout << "\n\nDelete all record\n\n";

da.delete\_all(); break;

case '0':

exit(1); break;

}

}

}

}

# Date.h:

system("pause"); return 0;

#pragma once #include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> using namespace std;

class Date //Simple class

{

private:

int day; int month; int year;

public:

Date();

Date(int day, int month, int year); void setDay(int day);

void setMonth(int month);

void setYear(int year); int getDay();

int getMonth();

int getYear(); void setdate();

void printDob();

};

# Date.cpp:

#include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"date.h" using namespace std;

Date::Date()

{

day = 0;

month = 0;

year = 0;

}

Date::Date(int day, int month, int year)

{

this->day = day;

this->month = month; this->year = year;

}

void Date::setDay(int day)

{

this->day = day;

}

void Date::setMonth(int month)

{

this->month = month;

}

void Date::setYear(int year)

{

this->year = year;

}

int Date::getDay()

{

return day;

}

int Date::getMonth()

{

return month;

}

int Date::getYear()

{

return year;

}

void Date::setdate()

{

cout << "Enter date of birth : [yyyy - mm - dd] : "; cin >> day;

cin >> month; cin >> year;

}

void Date::printDob()

{

if ((day > 0 && day <= 31) || (month > 0 && month < 13))

{

cout << day << "-" << month << "-" << year << endl;

}

}

# Sportsmen.h:

#pragma once #include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"date.h" using namespace std;

class sportsmen //composite class //Parent class

{

public:

string name; int age;

string address; string country; Date dateofbirth;

sportsmen();

sportsmen(string n, int a, string ad, string c, Date d); void setdata(string n, int a, string ad, string c, Date d); void setName(string n);

void setAge(int a);

void setAdress(string a); void setcountry(string c); string getName();

int getAge();

string getAddress(); string getcountry();

void displaydata();

};

# Sportsmen.cpp:

#include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"date.h" #include"sportsmen.h" using namespace std;

sportsmen::sportsmen()

{

name = ""; age = 0; address = ""; country = ""; dateofbirth;

}

sportsmen::sportsmen(string n, int a, string ad, string c, Date d)

{

this->name = n; this->age = a; this->address = ad; this->country = c;

this->dateofbirth = d;

}

void sportsmen::setdata(string n, int a, string ad, string c, Date d)

{

this->name = n; this->age = a; this->address = ad; this->country = c; dateofbirth = d;

}

void sportsmen::setName(string n)

{

this->name = n;

}

void sportsmen::setAge(int a)

{

this->age = a;

}

void sportsmen::setAdress(string a)

{

this->address = a;

}

void sportsmen::setcountry(string c)

{

this->country = c;

}

string sportsmen::getName()

{

return name;

}

int sportsmen::getAge()

{

return age;

}

string sportsmen::getAddress()

{

return address;

}

string sportsmen::getcountry()

{

return country;

}

void sportsmen::displaydata()

{

cout << "Name : " << getName() << endl; cout << "Age : " << getAge() << endl;

cout << "Country : " << getcountry() << endl; cout << "Address : " << getAddress() << endl;

cout << "Date of birth : "; dateofbirth.printDob();

}

# Cricket.h:

#pragma once #include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h>

#include"sportsmen.h" using namespace std;

class cricketplayers : public sportsmen//Child class

{

public:

string team;

int national\_matches;

int international\_matches; cricketplayers();

cricketplayers(string n, int a, string ad, string c, Date d,string t, int na, int

i);

void Setteam(string t);

void Setnational\_matches(int n);

void Setinternational\_matches(int i); string getteam();

int getnational\_matches();

int getinternational\_matches();

void display();

};

# Cricket.cpp:

#include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"sportsmen.h" #include"cricket.h"

using namespace std; cricketplayers::cricketplayers()

{

team = ""; national\_matches = 0;

international\_matches = 0;

}

cricketplayers::cricketplayers(string n, int a, string ad, string c, Date d,string t, int na, int i)

{

this->team = t;

this->national\_matches = na; this->international\_matches = i;

}

void cricketplayers::Setteam(string t)

{

this->team = t;

}

void cricketplayers::Setnational\_matches(int n)

{

this->national\_matches = n;

}

void cricketplayers::Setinternational\_matches(int i)

{

this->international\_matches = i;

}

string cricketplayers::getteam()

{

return team;

}

int cricketplayers::getnational\_matches()

{

return national\_matches;

}

int cricketplayers::getinternational\_matches()

{

return international\_matches;

}

void cricketplayers::display()

{

sportsmen::displaydata();

cout << "team : " << team << endl;

cout << "National matches played : " << national\_matches << endl;

cout << "International matches played: " << international\_matches << endl;

}

# Hockey.h:

#pragma once #include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"sportsmen.h" using namespace std;

class hockeyplayers : public sportsmen//child class

{

public:

string team;

int national\_matches;

int international\_matches; hockeyplayers();

hockeyplayers(string n, int a, string ad, string c, Date d,string t, int na, int

i);

void Setteam(string t);

void Setnational\_matches(int n);

void Setinternational\_matches(int i); string getteam();

int getnational\_matches();

int getinternational\_matches(); void display();

};

# Hockey.cpp:

#include<iostream> #include<string> #include<fstream>

#include<conio.h> #include<stdlib.h> #include"sportsmen.h" #include"hockey.h" using namespace std;

hockeyplayers::hockeyplayers()

{

team = ""; national\_matches = 0;

international\_matches = 0;

}

hockeyplayers::hockeyplayers(string n, int a, string ad, string c, Date d,string t, int na, int i)

{

this->team = t;

this->national\_matches = na; this->international\_matches = i;

}

void hockeyplayers::Setteam(string t)

{

this->team = t;

}

void hockeyplayers::Setnational\_matches(int n)

{

this->national\_matches = n;

}

void hockeyplayers::Setinternational\_matches(int i)

{

this->international\_matches = i;

}

string hockeyplayers::getteam()

{

return team;

}

int hockeyplayers::getnational\_matches()

{

return national\_matches;

}

int hockeyplayers::getinternational\_matches()

{

return international\_matches;

}

void hockeyplayers::display()

{

sportsmen::displaydata();

**cout << "team : " << team << endl;**

cout << "National matches played : " << national\_matches << endl;

cout << "International matches played: " << international\_matches << endl;

}

# Game.h:

#pragma once #include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"sportsmen.h" using namespace std;

class games : public sportsmen//child class

{

public:

string team; string game;

int national\_matches;

int international\_matches; games();

games(string n, int a, string ad, string c, Date d,string t, string g, int na, int

i);

void Setteam(string t); void Setgame(string g);

void Setnational\_matches(int n);

void Setinternational\_matches(int i); string getteam();

string getgame();

int getnational\_matches();

int getinternational\_matches(); void display();

};

# Game.cpp:

#include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"games.h"

games::games()

{

team = "";

game = ""; national\_matches = 0;

international\_matches = 0;

}

games::games(string n, int a, string ad, string c, Date d,string t, string g, int na, int i)

{

this->team = t; this->game = g;

this->national\_matches = na; this->international\_matches = i;

}

void games::Setteam(string t)

{

this->team = t;

}

void games::Setgame(string g)

{

this->game = g;

}

void games::Setnational\_matches(int n)

{

this->national\_matches = n;

}

void games::Setinternational\_matches(int i)

{

this->international\_matches = i;

}

string games::getteam()

{

return team;

}

string games::getgame()

{

return game;

}

int games::getnational\_matches()

{

return national\_matches;

}

int games::getinternational\_matches()

{

return international\_matches;

}

void games::display()

{

sportsmen::displaydata();

cout << "team : " << team << endl; cout << "Game : " << game << endl;

cout << "National matches played : " << national\_matches << endl;

cout << "International matches played: " << international\_matches << endl;

}

# Inputdata.h:

#pragma once #include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"date.h" #include"sportsmen.h" #include"cricket.h" #include"hockey.h" #include"games.h"

using namespace std;

class Data : public cricketplayers, public hockeyplayers,public games //child class

{

public:

void start();

void addsportsmen();

void addcricketplayers(); void addhockeyplayers(); void addgameplayer(); void viewrecord();

void search(string); void deleteP();

void delete\_all();

};

# Inputdata.cpp:

#include<iostream> #include<string> #include<fstream> #include<conio.h> #include<stdlib.h> #include"date.h" #include"sportsmen.h" #include"cricket.h" #include"hockey.h" #include"games.h" #include"inputdata.h" using namespace std;

void Data::start()

{

endl;

cout << endl;

cout << "\t\t================================================================" <<

cout << endl;

cout << "\t\t\tOBJECT ORIENTED PROGRAMMING PROJECT" << endl;

cout << endl;

cout << "\t\t\t\t2nd SEMESTER" << endl; cout << endl;

cout << "\t\t\t BACHELOUR OF COMPUTER SCIENCE" << endl;

cout << endl;

cout << "\t\t APPLICATION TO ENTER, STORE AND DELETE INFORMATION REGARDING ANY OF

SPORTSMEN" << endl;

cout << endl;

cout << "\t\t\t\t DESIGNED BY" << endl; cout << endl;

cout << "\t\t\tBushra Masood";

cout << "\t\t01-134202-110" << endl; cout << endl;

cout << "\t\t\t\tSUBMITTED TO" << endl;

cout << endl;

cout << "\t\t\t\tDr Imran Siddiqi" << endl; cout << endl;

cout << "\t\t\t\t12 - JUNE - 2021" << endl; cout << endl;

cout << "\t\t=================================================================" <<

endl;

}

system("pause");

system("cls");

void Data::addsportsmen()

{

sportsmen s; Date d; ofstream ofile;

ofile.open("record.txt", ios::app); int a = 1;

if (ofile.is\_open())

{

//while (a)

{

cout << "Enter the name of player: "; cin >> s.name;

cout << "Enter the age : ";

cin >> s.age;

cout << "Enter country : "; cin >> s.country;

cout << "Enter address: "; cin >> s.address; d.setdate();

//Writing with in the file

ofile << " \n"; ofile << "Name : " << s.name << endl;

ofile << "Age : " << s.age << endl;

ofile << "Address : " << s.address << endl; ofile << "Country : " << s.country << endl; ofile << "Date of birth: "; d.printDob(); cout << endl;

}

}

}

void Data::addcricketplayers()

{

cricketplayers c; ofstream ofile;

ofile.open("record.txt", ios::app); int a = 1;

if (ofile.is\_open())

{

//while (a)

{

\n";

\n";

\n";

\n";

\n";

\n";

endl;

cout << " cout << "////////////////////////////////////////////////////////// cout << "

cout << "\*\*\*\*\*Record of cricket players\*\*\*\*\*" << endl; Data::addsportsmen();

cout << "Enter team: "; cin >> c.team;

cout << "Enter national\_matches played : "; cin >> c.national\_matches;

cout << "Enter international\_matches played : "; cin >> c.international\_matches;

cout << " cout << "////////////////////////////////////////////////////////// cout << "

//Writing with in the file

ofile << "team : " << c.team << endl;

ofile << "national\_matches : " << c.national\_matches << endl; ofile << "international\_matches : " << c.international\_matches <<

ofile << " \n";

}

}

}

void Data::addhockeyplayers()

{

hockeyplayers h;

ofstream ofile; ofile.open("record.txt", ios::app); int a = 1;

if (ofile.is\_open())

{

//while (a)

{

\n";

\n";

\n";

cout << " cout << "////////////////////////////////////////////////////////// cout << "

cout << "\*\*\*\*\*Record of Hockey players\*\*\*\*\*" << endl; Data::addsportsmen();

cout << "Enter team: ";

\n";

\n";

\n";

endl;

cin >> h.team;

cout << "Enter national\_matches played : "; cin >> h.national\_matches;

cout << "Enter international\_matches played : ";

cin >> h.international\_matches;

cout << " cout << "////////////////////////////////////////////////////////// cout << "

//Writing with in the file

ofile << "team : " << h.team << endl;

ofile << "national\_matches : " << h.national\_matches << endl; ofile << "international\_matches : " << h.international\_matches <<

ofile << " \n";

}

}

}

void Data::addgameplayer()

{

games g; ofstream ofile;

ofile.open("record.txt", ios::app); int a = 1;

if (ofile.is\_open())

{

//while (a)

{

\n";

\n";

\n";

\n";

\n";

\n";

endl;

cout << " cout << "////////////////////////////////////////////////////////// cout << "

cout << "\*\*\*\*\*Record of game players\*\*\*\*\*" << endl; Data::addsportsmen();

cout << "Enter team: ";

cin >> g.team;

cout << "Enter game : "; cin >> g.game;

cout << "Enter national\_matches played : "; cin >> g.national\_matches;

cout << "Enter international\_matches played : ";

cin >> g.international\_matches;

cout << " cout << "////////////////////////////////////////////////////////// cout << "

//Writing with in the file

ofile << "team : " << g.team << endl; ofile << "game : " << g.game << endl;

ofile << "national\_matches : " << g.national\_matches << endl; ofile << "international\_matches : " << g.international\_matches <<

ofile << " \n";

}

}

}

void Data::viewrecord()

{

string a; ifstream in;

in.open("record.txt");

while (!in.eof())

{

getline(in, a);

if (a == "")

cout << "Empty Record" << endl;

else

}

cout << a << endl;

in.close();

system("pause");

}

void Data::search(string m)

{

system("cls");

bool found = false; ifstream ifile; string s = "";

ifile.open("record.txt");

if (ifile.is\_open())

{

while (!ifile.eof())

{

ifile >> s; if (s == m)

{

found = true; cout << s; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; getline(ifile, s); cout << s << endl; break;

}

}

if (found == false) {

cout << "\n\nRecord Not Found!!\n\n";

}

system("pause");

}

}

void Data::deleteP()

{

bool found = false; system("cls"); string s = ""; char another = 'y'; do

{

string nam; ifstream rec; ofstream temp; int count = 0;

cout << "\n\nEnter sportsman name to delete : "; cin >> nam;

temp.open("temp.txt");

rec.open("record.txt");

while (!rec.eof()) {

rec >> s;

if (nam != s) {

temp << s; count++;

if (count == 3) {

temp << "\n"; count = 0;

}

}

else if (nam == s) {

found = true;

for (int i = 0; i < 8; i++) { getline(rec, s);

}

}

}

rec.close();

temp.close(); remove("record.txt"); rename("temp.txt", "record.txt"); if (found == true) {

cout << "Record deleted successfully.";

}

else {

}

cout << "\n\nRecord Not Found.\n\n";

cout << "\n\nDo you want to delete another? y/n : "; cin >> another;

} while (another == 'Y' || another == 'y'); system("pause");

}

void Data::delete\_all()

{

string a;

ofstream in; in.open("record.txt", ios::trunc); while (in)

{

in << "";

break;

}

in.close();

system("pause");

}

# Output:

