

Assignment

AICT 1(O)



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- **Text form of the code:-**

```
#include <iostream>
using namespace std;

float calculateAverage(float matric_per, float fsc_per) {
    return (matric_per + fsc_per) / 2.0;
}

void checkEligibilityAndSeats(float avg, int seats, string pref1, string pref2, string pref3) {
    if (avg >= 60 && seats > 0) {
        cout << "So you are eligible for the " << pref1 << endl;
        cout << "Also seats are available in the 1st Preference" << endl;
    }
    else if (avg >= 55 && seats > 0) {
        cout << "SO you are eligible for " << pref2 << endl;
        cout << "Also seats are available in the 2nd Preference" << endl;
    }
    else if (avg >= 50 && seats > 0) {
        cout << " SO you are eligible for the " << pref3 << endl;
        cout << "Also seats are available in the 3rd Preference" << endl;
    }
    else if (seats <= 0 && avg >= 50) {
        cout << "Sorry, no seats available." << endl;
    }
    else {
        cout << "You are not eligible for any preference." << endl;
    }
}

int main() {
    string name, phone, address, pref1, pref2, pref3;
    int age = 0, seats = 50;
    float matric_per = 0.0, fsc_per = 0.0;
    float avg;

    cout << "Enter your Name: ";
    cin >> name;

    cout << "Enter your Age: ";
    cin >> age;
    if (age < 0) {
        cout << "Please enter a valid age." << endl;
        return 0;
    }

    cout << "Enter your Phone: ";
    cin >> phone;

    cout << "Enter your Address: ";
    cin >> address;

    cout << "Enter your Matric percentage: ";
    cin >> matric_per;
    if (matric_per < 0 || matric_per > 100) {
```

```
    cout << "Please enter a valid percentage." << endl;
    return 0;
}

cout << "Enter your Inter percentage: ";
cin >> fsc_per;
if (fsc_per < 0 || fsc_per > 100) {
    cout << "Please enter a valid percentage." << endl;
    return 0;
}

cout << "Enter your First Preference (60 -100)% ";
cin >> pref1;

cout << "Enter your Second Preference (55-60)% : ";
cin >> pref2;

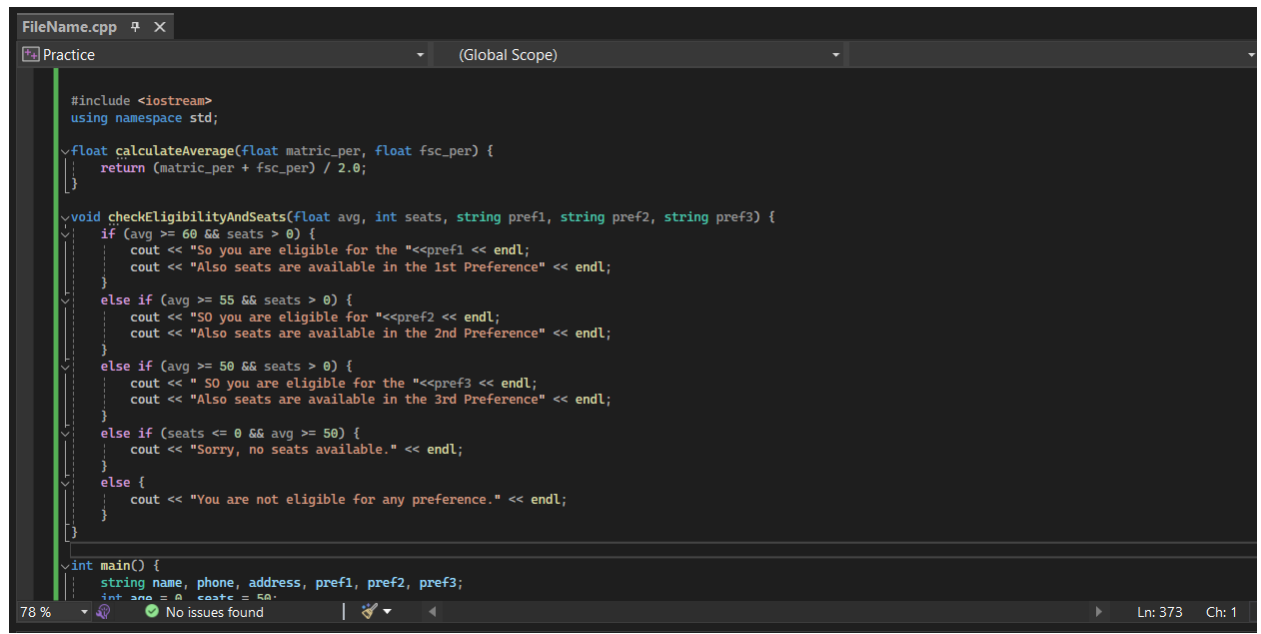
cout << "Enter your Third Preference (50-55)% : ";
cin >> pref3;

avg = calculateAverage(matric_per, fsc_per);
cout << "Your average is = " << avg << endl;

checkEligibilityAndSeats(avg, seats, pref1, pref2, pref3);

return 0;
}
```

- **Code with Functions:-**



```
FileName.cpp  X
Practice (Global Scope)

#include <iostream>
using namespace std;

float calculateAverage(float matric_per, float fsc_per) {
    return (matric_per + fsc_per) / 2.0;
}

void checkEligibilityAndSeats(float avg, int seats, string pref1, string pref2, string pref3) {
    if (avg >= 60 && seats > 0) {
        cout << "So you are eligible for the " << pref1 << endl;
        cout << "Also seats are available in the 1st Preference" << endl;
    }
    else if (avg >= 55 && seats > 0) {
        cout << "So you are eligible for " << pref2 << endl;
        cout << "Also seats are available in the 2nd Preference" << endl;
    }
    else if (avg >= 50 && seats > 0) {
        cout << "So you are eligible for the " << pref3 << endl;
        cout << "Also seats are available in the 3rd Preference" << endl;
    }
    else if (seats <= 0 && avg >= 50) {
        cout << "Sorry, no seats available." << endl;
    }
    else {
        cout << "You are not eligible for any preference." << endl;
    }
}

int main() {
    string name, phone, address, pref1, pref2, pref3;
    int age = 0, seats = 50;
    float matric_per = 0.0, fsc_per = 0.0;
    float avg;

    cout << "Enter your Name: ";
    cin >> name;

    cout << "Enter your Age: ";
    cin >> age;
    if (age < 0) {
        cout << "Please enter a valid age." << endl;
        return 0;
    }

    cout << "Enter your Phone: ";
    cin >> phone;

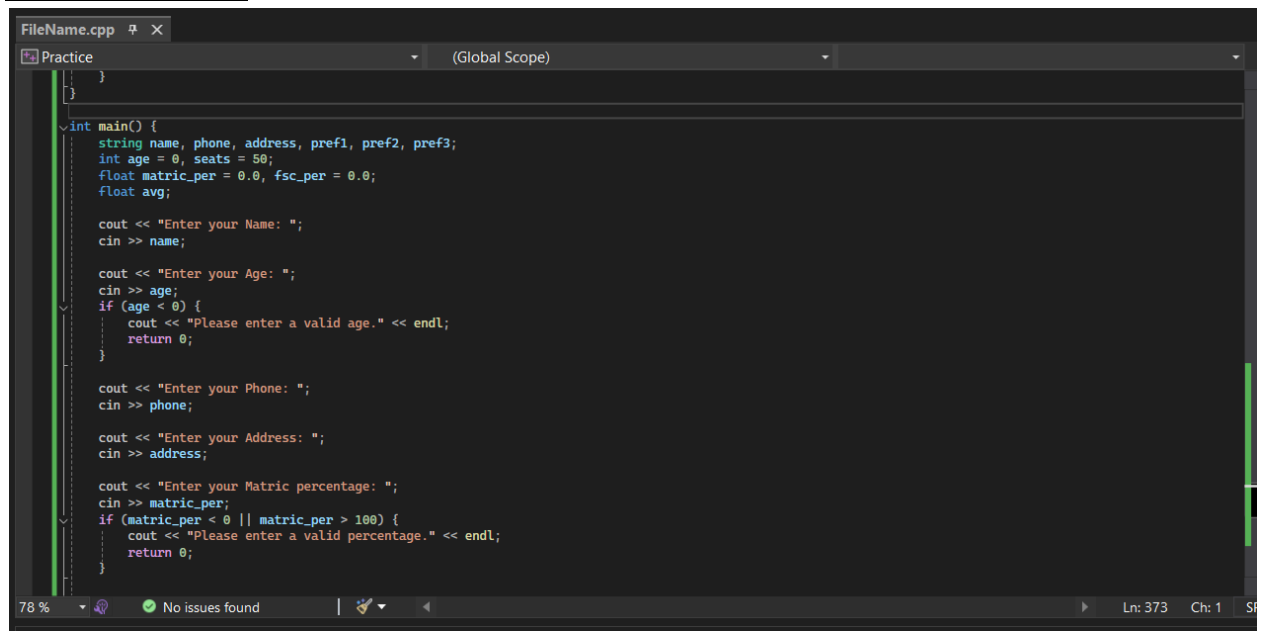
    cout << "Enter your Address: ";
    cin >> address;

    cout << "Enter your Matric percentage: ";
    cin >> matric_per;
    if (matric_per < 0 || matric_per > 100) {
        cout << "Please enter a valid percentage." << endl;
        return 0;
    }

    avg = calculateAverage(matric_per, fsc_per);
    checkEligibilityAndSeats(avg, seats, pref1, pref2, pref3);
}
```

Fig 1.1 shows that Eligibility criteria for admission

- **User details:-**



```
FileName.cpp  X
Practice (Global Scope)

}

int main() {
    string name, phone, address, pref1, pref2, pref3;
    int age = 0, seats = 50;
    float matric_per = 0.0, fsc_per = 0.0;
    float avg;

    cout << "Enter your Name: ";
    cin >> name;

    cout << "Enter your Age: ";
    cin >> age;
    if (age < 0) {
        cout << "Please enter a valid age." << endl;
        return 0;
    }

    cout << "Enter your Phone: ";
    cin >> phone;

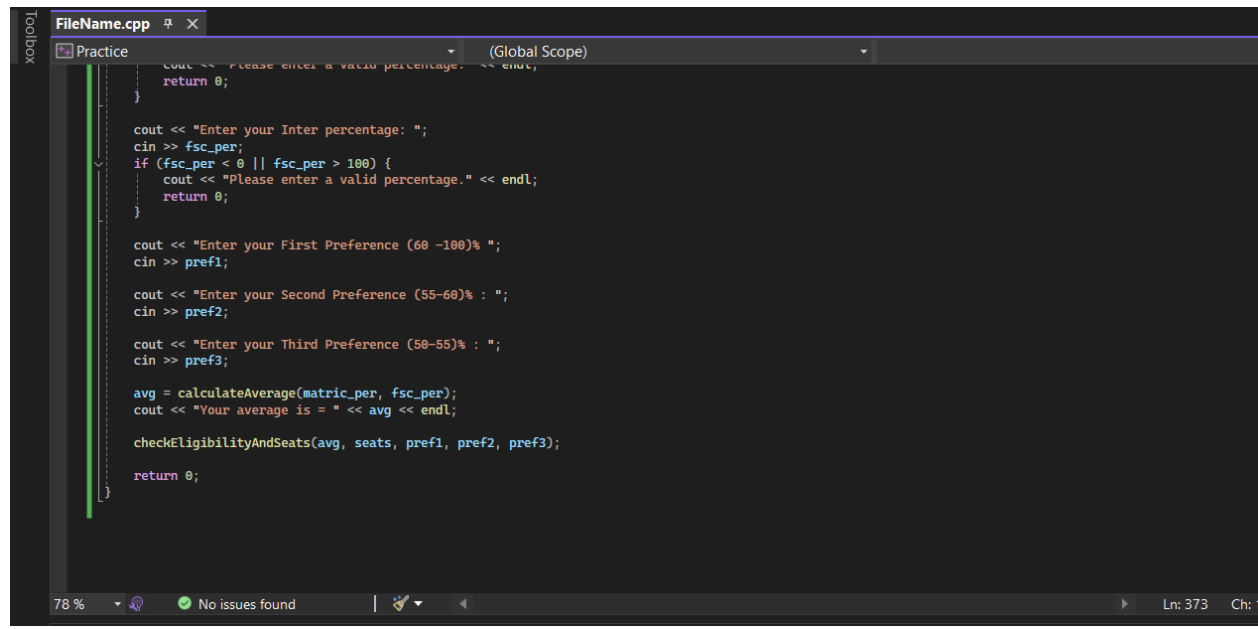
    cout << "Enter your Address: ";
    cin >> address;

    cout << "Enter your Matric percentage: ";
    cin >> matric_per;
    if (matric_per < 0 || matric_per > 100) {
        cout << "Please enter a valid percentage." << endl;
        return 0;
    }

    avg = calculateAverage(matric_per, fsc_per);
    checkEligibilityAndSeats(avg, seats, pref1, pref2, pref3);
}
```

Figure 1.2 shows that the User details

- **Check seats and Average:-**



The screenshot shows a C++ code editor with a file named 'FileName.cpp'. The code is as follows:

```
cout << "Please enter a valid percentage." << endl;
return 0;

cout << "Enter your Inter percentage: ";
cin >> fsc_per;
if (fsc_per < 0 || fsc_per > 100) {
    cout << "Please enter a valid percentage." << endl;
    return 0;
}

cout << "Enter your First Preference (60 -100)% ";
cin >> pref1;

cout << "Enter your Second Preference (55-60)% : ";
cin >> pref2;

cout << "Enter your Third Preference (50-55)% : ";
cin >> pref3;

avg = calculateAverage(matric_per, fsc_per);
cout << "Your average is = " << avg << endl;

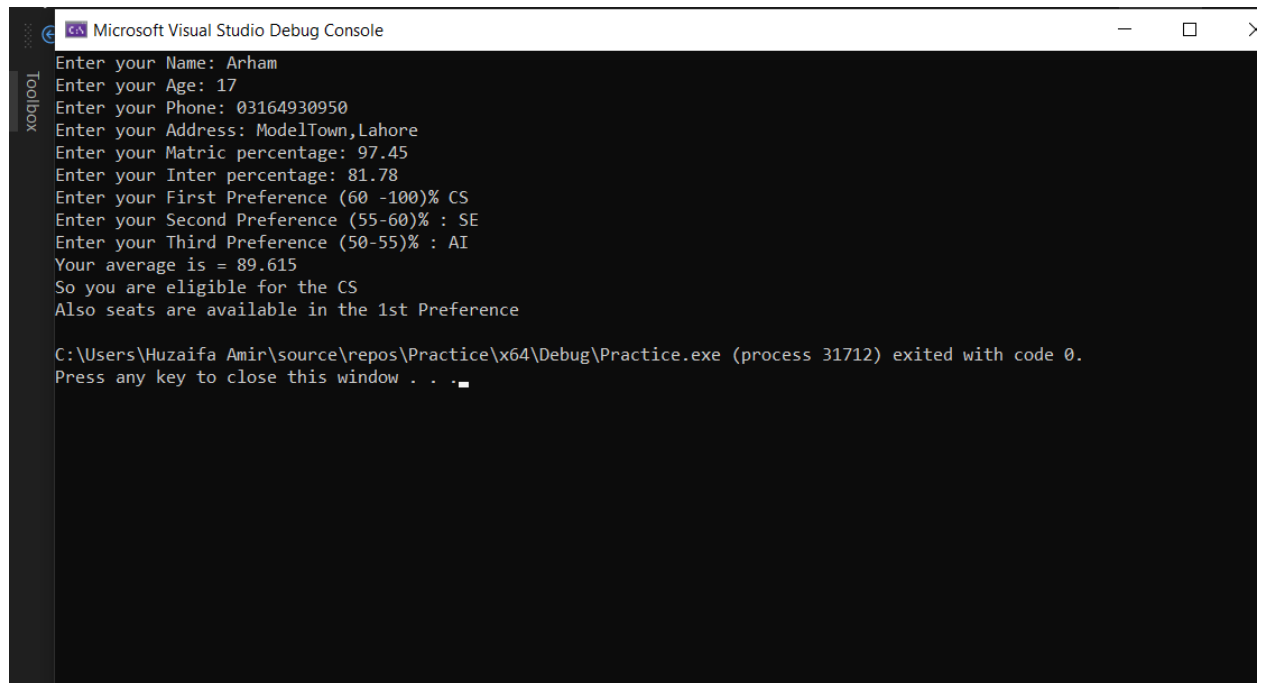
checkEligibilityAndSeats(avg, seats, pref1, pref2, pref3);

return 0;
```

The status bar at the bottom indicates '78 %' and 'No issues found'.

Figure 1.3 shows that we check seats and average

- **Compilation of the code:-**



The screenshot shows the Microsoft Visual Studio Debug Console with the following output:

```
Enter your Name: Arham
Enter your Age: 17
Enter your Phone: 03164930950
Enter your Address: ModelTown,Lahore
Enter your Matric percentage: 97.45
Enter your Inter percentage: 81.78
Enter your First Preference (60 -100)% CS
Enter your Second Preference (55-60)% : SE
Enter your Third Preference (50-55)% : AI
Your average is = 89.615
So you are eligible for the CS
Also seats are available in the 1st Preference

C:\Users\Huzaifa Amir\source\repos\Practice\x64\Debug\Practice.exe (process 31712) exited with code 0.
Press any key to close this window . . .
```

Figure 1.4 shows that compilation of code