



Submitted to: lecturer Salman Irfan

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Assignment: University admission management system

CODE:

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

// Declaring variables
string programName1 = "BSCS", programName2 = "IT"; // Predefined program names
short maxSeats1 = 5, maxSeats2 = 5; // Set maximum seats for both programs to 5
short minPercentage1, minPercentage2;
short availableSeats1 = 5, availableSeats2 = 5; // Initially, 5 available seats for both programs
string studentName, studentEmail, studentPhone, studentCNIC, appliedProgram;
short marksObtained, totalMarks;
string admissionStatus;

int main() {
    int choice;

    // Main Menu
    cout << "\n--- University Admission Management System ---" << endl;
    cout << "1. Login as Admin" << endl;
    cout << "2. Apply as Student" << endl;
```

```
cout << "3. Exit" << endl;
cout << "Enter your choice: ";
cin >> choice;

if (choice == 1) {
    // Admin Login
    string username, password;
    cout << "\n--- Admin Login ---" << endl;
    cout << "Enter username: ";
    cin >> username;
    cout << "Enter password: ";
    cin >> password;

    if (username == "admin" && password == "admin123") {
        // Admin Dashboard
        cout << "\n--- Admin Dashboard ---" << endl;
        cout << "1. Set Minimum Eligibility Criteria" << endl;
        cout << "2. View Application Statuses" << endl;
        cout << "Enter your choice: ";
        int adminChoice;
        cin >> adminChoice;

        if (adminChoice == 1) {
            // Add Programs
            cout << "\n--- Set Minimum Eligibility Criteria ---" << endl;
            cout << "Program 1: " << programName1 << endl;
            cout << "Enter minimum eligibility percentage for " << programName1 << ": ";
            cin >> minPercentage1;

            cout << "Program 2: " << programName2 << endl;
            cout << "Enter minimum eligibility percentage for " << programName2 << ": ";
            cin >> minPercentage2;

            cout << "Eligibility criteria set successfully!" << endl;

        } else if (adminChoice == 2) {
            // View Applications
            cout << "\n--- Application Status ---" << endl;
```

```

        if (studentName.empty()) {
            cout << "No applications to display." << endl;
        } else {
            cout << "Name: " << studentName << endl;
            cout << "Program: " << appliedProgram << endl;
            cout << "Status: " << admissionStatus << endl;
        }
    } else {
        cout << "Invalid choice! Returning to main menu." << endl;
    }
} else {
    cout << "Invalid credentials! Returning to main menu." << endl;
}

} else if (choice == 2) {
    // Student Application
    cout << "\n--- Student Application Form ---" << endl;
    cout << "Enter your name: ";
    cin >> studentName;
    cout << "Enter your email: ";
    cin >> studentEmail;
    cout << "Enter your phone number: ";
    cin >> studentPhone;
    cout << "Enter your CNIC: ";
    cin >> studentCNIC;
    cout << "Enter your marks obtained: ";
    cin >> marksObtained;
    cout << "Enter total marks: ";
    cin >> totalMarks;

    // Program selection
    cout << "Select your preferred program: " << endl;
    cout << "1. " << programName1 << endl;
    cout << "2. " << programName2 << endl;
    int programChoice;
    cin >> programChoice;

    float percentage = (float)marksObtained / totalMarks * 100;

```

```

if (programChoice == 1) {
    cout << programName1 << endl;

    if (percentage >= minPercentage1) {
        if (availableSeats1 > 0) {
            cout << "Accepted" << endl;
            availableSeats1--; // Decrease available seats
            admissionStatus = "Accepted";
            appliedProgram = programName1;
        } else {
            cout << "Rejected (Seats full)" << endl;
            admissionStatus = "Rejected (Seats full)";
        }
    } else {
        cout << "Rejected (Does not meet criteria)" << endl;
        admissionStatus = "Rejected (Does not meet criteria)";
    }

} else if (programChoice == 2) {
    cout << programName2 << endl;

    if (percentage >= minPercentage2) {
        if (availableSeats2 > 0) {
            cout << "Accepted" << endl;
            availableSeats2--; // Decrease available seats
            admissionStatus = "Accepted";
            appliedProgram = programName2;
        } else {
            cout << "Rejected (Seats full)" << endl;
            admissionStatus = "Rejected (Seats full)";
        }
    } else {
        cout << "Rejected (Does not meet criteria)" << endl;
        admissionStatus = "Rejected (Does not meet criteria)";
    }

} else {

```

```

        cout << "Invalid program choice! Application incomplete." << endl;
        admissionStatus = "Incomplete";
    }

    // Display Admission Status
    cout << "--- Admission Status ---" << endl;
    cout << "Name: " << studentName << endl;
    cout << "Program: " << appliedProgram << endl;
    cout << "Status: " << admissionStatus << endl;

} else if (choice == 3) {
    cout << "Exiting... Thank you!" << endl;
} else {
    cout << "Invalid choice! Exiting program." << endl;
}

// Single return at the end
return 0;
}

```

Main Screen Display:

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> g++ .\universitymanagementsystem.cpp -o .\universitymanagementsystem.exe
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 1

```

Figure1: main screen

Admin screen:

```

PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> g++ .\universitymanagementsystem.cpp -o .\universitymanagementsystem.exe
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

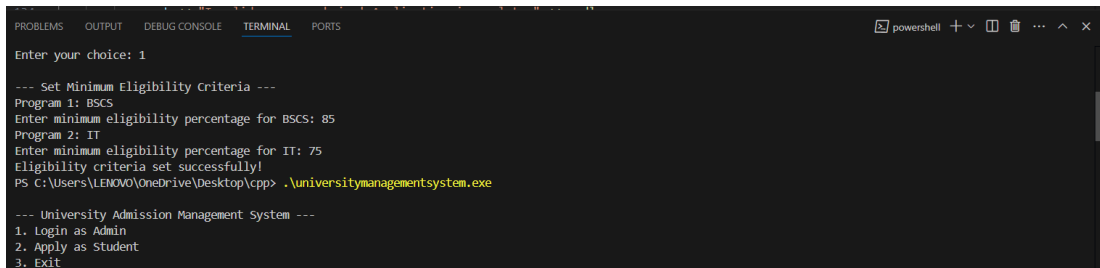
--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 1

--- Admin Login ---
Enter username: admin
Enter password: admin123

--- Admin Dashboard ---
1. Set Minimum Eligibility Criteria
2. View Application Statuses

```

Figure2: admin login



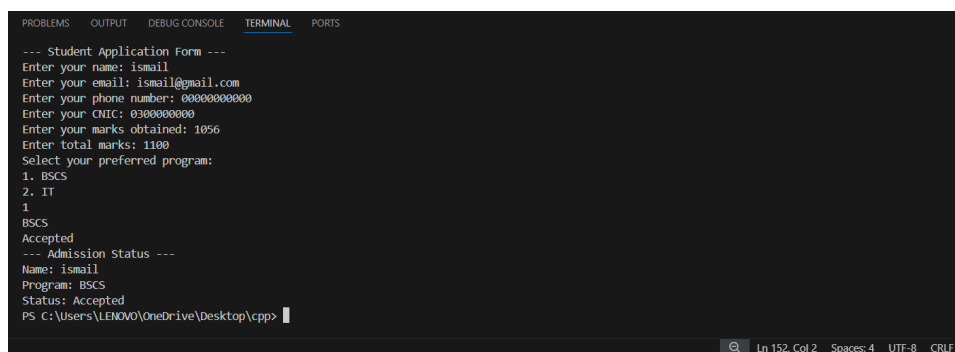
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Enter your choice: 1

--- Set Minimum Eligibility Criteria ---
Program 1: BSCS
Enter minimum eligibility percentage for BSCS: 85
Program 2: IT
Enter minimum eligibility percentage for IT: 75
Eligibility criteria set successfully!
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
```

Figure3: new program

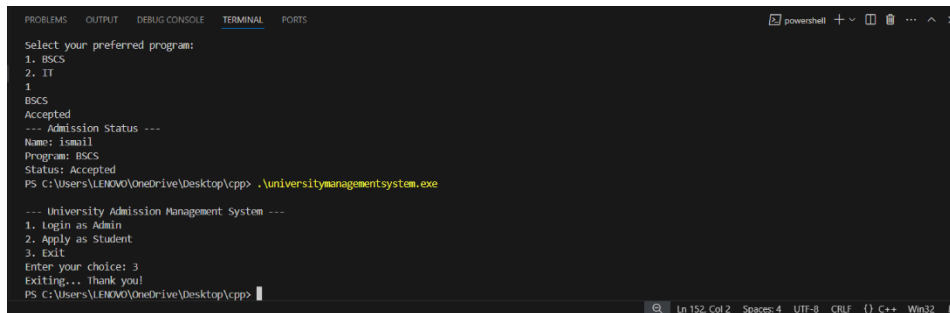
Student screen:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
--- Student Application Form ---
Enter your name: ismail
Enter your email: ismail@gmail.com
Enter your phone number: 0000000000
Enter your CNIC: 0000000000
Enter your marks obtained: 1056
Enter total marks: 1100
Select your preferred program:
1. BSCS
2. IT
1
BSCS
Accepted
--- Admission Status ---
Name: ismail
Program: BSCS
Status: Accepted
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> |
```

Figure 4: student application form

Exiting program:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Select your preferred program:
1. BSCS
2. IT
1
BSCS
Accepted
--- Admission Status ---
Name: ismail
Program: BSCS
Status: Accepted
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 3
Exiting... Thank you!
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> |
```

Figure 5: exit

Full screenshot of C++ code on vs code:

```
universitymanagementsystem.cpp > main()
#include <iostream>
using namespace std;

// Declaring variables
string programname1 = "BSCS", programname2 = "IT"; // Reservation program names
short reservation1 = 5, reservation2 = 5; // Set reservation seats for both program to 5
short reservation3 = 5, reservation4 = 5; // Reservation seats for both program
short reservation5 = 5, reservation6 = 5; // Reservation seats for both program
short reservation7 = 5, reservation8 = 5; // Reservation seats for both program
short reservation9 = 5, reservation10 = 5; // Reservation seats for both program
short reservation11 = 5, reservation12 = 5; // Reservation seats for both program
short reservation13 = 5, reservation14 = 5; // Reservation seats for both program
short reservation15 = 5, reservation16 = 5; // Reservation seats for both program
short reservation17 = 5, reservation18 = 5; // Reservation seats for both program
short reservation19 = 5, reservation20 = 5; // Reservation seats for both program
short reservation21 = 5, reservation22 = 5; // Reservation seats for both program
short reservation23 = 5, reservation24 = 5; // Reservation seats for both program
short reservation25 = 5, reservation26 = 5; // Reservation seats for both program
short reservation27 = 5, reservation28 = 5; // Reservation seats for both program
short reservation29 = 5, reservation30 = 5; // Reservation seats for both program
short reservation31 = 5, reservation32 = 5; // Reservation seats for both program
short reservation33 = 5, reservation34 = 5; // Reservation seats for both program
short reservation35 = 5, reservation36 = 5; // Reservation seats for both program
short reservation37 = 5, reservation38 = 5; // Reservation seats for both program
short reservation39 = 5, reservation40 = 5; // Reservation seats for both program
short reservation41 = 5, reservation42 = 5; // Reservation seats for both program
short reservation43 = 5, reservation44 = 5; // Reservation seats for both program
short reservation45 = 5, reservation46 = 5; // Reservation seats for both program
short reservation47 = 5, reservation48 = 5; // Reservation seats for both program
short reservation49 = 5, reservation50 = 5; // Reservation seats for both program
short reservation51 = 5, reservation52 = 5; // Reservation seats for both program
short reservation53 = 5, reservation54 = 5; // Reservation seats for both program
short reservation55 = 5, reservation56 = 5; // Reservation seats for both program
short reservation57 = 5, reservation58 = 5; // Reservation seats for both program
short reservation59 = 5, reservation60 = 5; // Reservation seats for both program
short reservation61 = 5, reservation62 = 5; // Reservation seats for both program
short reservation63 = 5, reservation64 = 5; // Reservation seats for both program
short reservation65 = 5, reservation66 = 5; // Reservation seats for both program
short reservation67 = 5, reservation68 = 5; // Reservation seats for both program
short reservation69 = 5, reservation70 = 5; // Reservation seats for both program
short reservation71 = 5, reservation72 = 5; // Reservation seats for both program
short reservation73 = 5, reservation74 = 5; // Reservation seats for both program
short reservation75 = 5, reservation76 = 5; // Reservation seats for both program
short reservation77 = 5, reservation78 = 5; // Reservation seats for both program
short reservation79 = 5, reservation80 = 5; // Reservation seats for both program
short reservation81 = 5, reservation82 = 5; // Reservation seats for both program
short reservation83 = 5, reservation84 = 5; // Reservation seats for both program
short reservation85 = 5, reservation86 = 5; // Reservation seats for both program
short reservation87 = 5, reservation88 = 5; // Reservation seats for both program
short reservation89 = 5, reservation90 = 5; // Reservation seats for both program
short reservation91 = 5, reservation92 = 5; // Reservation seats for both program
short reservation93 = 5, reservation94 = 5; // Reservation seats for both program
short reservation95 = 5, reservation96 = 5; // Reservation seats for both program
short reservation97 = 5, reservation98 = 5; // Reservation seats for both program
short reservation99 = 5, reservation100 = 5; // Reservation seats for both program

int main()
{
    int choice;

    cout << "----- University Admission Management System ----> << endl;
    cout << "1. Login as Admin" << endl;
    cout << "2. Apply as Student" << endl;
    cout << "3. Exit" << endl;
    cout << "Enter your choice: ";
    cin >> choice;

    if (choice == 1)
    {
        // Admin Login
        string username, password;
        cout << "----- Admin Login ----> << endl;
        cout << "Enter username: ";
        cin >> username;
        cout << "Enter password: ";
        cin >> password;

        if (username == "admin" & password == "admin123")
        {
            // Admin Dashboard
            cout << "----- Admin Dashboard ----> << endl;
            cout << "1. Set Minimum Eligibility Criteria" << endl;
            cout << "2. View Application Statuses" << endl;
            cout << "Enter your choice: ";
            int adminChoice;
            cin >> adminChoice;

            if (adminChoice == 1)
            {
                // Set Minimum Eligibility Criteria
                cout << "----- Set Minimum Eligibility Criteria ----> << endl;
                cout << "1. BSCS" << endl;
                cout << "2. IT" << endl;
                cout << "Enter minimum eligibility percentage for BSCS: ";
                int minEligibilityBSCS;
                cin >> minEligibilityBSCS;
                cout << "Enter minimum eligibility percentage for IT: ";
                int minEligibilityIT;
                cin >> minEligibilityIT;
                cout << "Eligibility criteria set successfully!" << endl;
            }
        }
    }
}
```

```
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> g++ .\universitymanagementsystem.cpp -o .\universitymanagementsystem.exe
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 1

--- Admin Login ---
Enter username: admin
Enter password: admin123

--- Admin Dashboard ---
1. Set Minimum Eligibility Criteria
2. View Application Statuses
Enter your choice: 1

--- Set Minimum Eligibility Criteria ---
Program 1: BSCS
Enter minimum eligibility percentage for BSCS: 85
Program 2: IT
Enter minimum eligibility percentage for IT: 75
Eligibility criteria set successfully!
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 2

--- Student Application Form ---
Enter your name: ismail
Enter your email: ismail@gmail.com
Enter your phone number: 0000000000
Enter your CTC: 0300000000
Enter your marks obtained: 1056
Enter total marks: 1100
Select your preferred program:
```

Figure 7: complete screenshot of c++ code

Full screenshot of terminal:

```
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> g++ .\universitymanagementsystem.cpp -o .\universitymanagementsystem.exe
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 1

--- Admin Login ---
Enter username: admin
Enter password: admin123

--- Admin Dashboard ---
1. Set Minimum Eligibility Criteria
2. View Application Statuses
Enter your choice: 1

--- Set Minimum Eligibility Criteria ---
Program 1: BSCS
Enter minimum eligibility percentage for BSCS: 85
Program 2: IT
Enter minimum eligibility percentage for IT: 75
Eligibility criteria set successfully!
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 2

--- Student Application Form ---
Enter your name: ismail
Enter your email: ismail@gmail.com
Enter your phone number: 0000000000
Enter your CTC: 0300000000
Enter your marks obtained: 1056
Enter total marks: 1100
Select your preferred program:
```

Figure8: terminal part 1

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS powershell + - [ ] [ ] ... - +
--- Student Application Form ---
Enter your name: ismail
Enter your email: ismail@gmail.com
Enter your phone number: 00000000000
Enter your CNIC: 0000000000
Enter your marks obtained: 1056
Enter total marks: 1100
Select your preferred program:
1. BSCS
2. IT
1
BSCS
Accepted
--- Admission Status ---
Name: ismail
Program: BSCS
Status: Accepted
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> .\universitymanagementsystem.exe

--- University Admission Management System ---
1. Login as Admin
2. Apply as Student
3. Exit
Enter your choice: 3
Exiting... Thank you!
PS C:\Users\LENOVO\OneDrive\Desktop\cpp> |
```

Figure 9: terminal part 2