#01

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

int main() {
    string name, course, country, email;
    int age;
    float gpa;

    cout << "=== Welcome to Abroad Studies Application Portal ===\n\n";

    cout << "Enter your full name: ";
    getline(cin, name);

    cout << "Enter your age: ";
    cin >> age;
    cin.ignore();

    cout << "Enter your email address: ";
    getline(cin, email);

    cout << "Enter your desired course (e.g., MS in CS): ";
    getline(cin, course);

    cout << "Enter your preferred country for studies: ";
    getline(cin, country);

    cout << "Enter your current GPA (out of 10): ";
    cin >> gpa;

    cout << "\n=== Application Summary ===\n";
    cout << "Name: " << name << endl;
    cout << "Age: " << age << endl;
    cout << "Email: " << email << endl;
    cout << "Course Chosen: " << course << endl;
    cout << "Country of Interest: " << country << endl;
    cout << "GPA: " << gpa << endl;

    if (gpa >= 7.5) {
        cout << "\nStatus: You are eligible to apply for abroad studies programs.\n";
    } else {
        cout << "\nStatus: You may need to improve your GPA to qualify for top universities.\n";
```

```
    }

    cout << "\nThank you for using the Abroad Studies Portal!\n";

    return 0;
}
```

#02

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

class Student {
public:
    void displayDetails(string name, string country = "USA", string course = "MS in CS") {
        cout << "Student Name: " << name << endl;
        cout << "Preferred Country: " << country << endl;
        cout << "Applied Course: " << course << endl;
        cout << "-------------------------" << endl;
    }
};

int main() {
    Student s;
    s.displayDetails("Ananya", "Canada", "MBA");
    s.displayDetails("Rahul", "Germany");
    s.displayDetails("Priya");

    return 0;
}
```

#03

```
#include<iostream>
using namespace std;
class student{
        private:
                int marks;
                friend void display (student);
};
void display(student s)
{
        cout<<"marks: "<<s.marks<<endl;
```

```
                }
int main() {
  student s;
  display(s);
return 0;
}
```

#4

```
#include<iostream>
using namespace std;
class abroadstudies{
        public:int age;
                        string name;
                        string location;
                        abroadstudies(string n, int a, string l)
                        {
                                name=n;
                                age=a;
                                location=l;
                        }
                        void getdata()
                        {
                                cout<<"name:"<<name<<endl;
                                cout<<"age:"<<age<<endl;
                                cout<<"location:"<<location<<endl;
                        }
};
int main(){
abroadstudies a("Anagha",18,"India");
a.getdata();
return 0;
}

#include<iostream>
using namespace std;
class abroadstudies{
        public:int age;
                        string name;
                        string location;
                        abroadstudies()
                        {
                                name="default";
                                age=0;
                                location="unknown";
```

```
                        }
                        void getdata()
                        {
                                cout<<"name:"<<name<<endl;
                                cout<<"age:"<<age<<endl;
                                cout<<"location:"<<location<<endl;
                        }
};
int main(){
abroadstudies a;
a.getdata();
return 0;
}
```

#06

```
#include<iostream>
using namespace std;
class abroadstudies{
        private:
                string name;
                string country;
                string university;
                int age;
        public:
                void display(string name){
                        cout<<"Name:"<<name<<endl;
                }
                void display(string name, string university){
                        cout<<"Name:"<<name<<endl;
                        cout<<"University:"<<university<<endl;
                }

                        void display(string name, string university, string country){
                        cout<<"Name:"<<name<<endl;
                        cout<<"University:"<<university<<endl;
                        cout<<"Country:"<<country<<endl;
                        }
                        void display(string name, string university, string country, int age){
                        cout<<"Name:"<<name<<endl;
                        cout<<"University:"<<university<<endl;
                        cout<<"Country:"<<country<<endl;
                        cout<<"Age:"<<age<<endl;
                }
```

```
                void getdata()
                        {
                                cout<<"enter the name:";
                                cin>>name;
                                cout<<"enter the university:";
                                cin>>university;
                                cout<<"enter the country:";
                                cin>>country;
                                cout<<"enter the age:";
                                cin>>age;
                        }
};
int main()
{
        abroadstudies s;
   s.getdata();
   s.display("Anagha");
   s.display("Alton", "Harvard University");
   s.display("Akshara", "Oxford", "UK");
   s.display("John", "MIT", "USA", 22);

   return 0;
}
```

#7

```
#include<iostream>
using namespace std;
class abroadstudies
{
        private:
                string name, university, country;
                int age;
                float ieltsscr;
        public:
                abroadstudies(string n,string u, string c, int a, float i)
                {
                        name=n;
                        university=u;
                        country=c;
                        age=a;
                        ieltsscr=i;
```

```
	}
	void display()
	{
		cout<<"Name:"<<name<<endl;
		cout<<"University:"<<university<<endl;
		cout<<"Country:"<<country<<endl;
		cout<<"Age:"<<age<<endl;
		cout<<"Ielts score:"<<ieltsscr<<endl;
	}
	abroadstudies operator++()
	{
		++ieltsscr;
		return *this;
	}
	abroadstudies operator--()
	{
		--ieltsscr;
		return *this;
	}
	bool operator!()
	{
	if( ieltsscr>=6.7)
		return false;
	else
		return true;
		}
};
void eligibility(abroadstudies &s)
{
	if(!s)
		cout<<"Student is not eligible"<<endl;
	else
		cout<<"Student is eligible"<<endl;
	++s;
	cout<<"After incrementing\n";
	s.display();
	cout<<"--------------------\n";

	--s;
	cout<<"After decrementing\n";
	s.display();
	cout<<"----------------------------------------------------------------\n";
}
int main()
```

```
	{
		abroadstudies a1("anagha","oxford","USA",17,6.5);
		abroadstudies a2("akshaya","cambridge","canada",18,7.6);

		eligibility(a1);
		eligibility(a2);

		return 0;
	}
```

#8

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

class Application {
private:
   int university;

public:
   Application(int u = 0) {
      university = u;
   }
   Application operator+(Application &a) {
      Application temp;
      temp.university = university + a.university;
      return temp;
   }
   void getdata() {
      cout << "Total universities applied: " << university << endl;
   }
};

int main() {
   Application a1(5);
   Application a2(6);

   Application combined = a1 + a2;

   cout << "Applicant 1||  ";
   a1.getdata();

   cout << "Applicant 2|| ";
   a2.getdata();
```

```
    cout << "combined applications for|| ";
    combined.getdata();

    return 0;
}
```

#5

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

class AbroadStudies {
private:
    static int totalStudents;

public:
    AbroadStudies() {
        totalStudents++;
    }
    static void showTotalStudents() {
        cout << "Total students applied abroad: " << totalStudents << endl;
    }
    static string checkVisaEligibility(double ieltsScore) {
        if (ieltsScore >= 6.5)
            return "Eligible for Visa";
        else
            return "Not Eligible for Visa";
    }
    static void displayUniversities() {
        cout << "\nPopular Universities for Abroad Studies:\n";
        cout << "1. Harvard University (USA)\n";
        cout << "2. University of Toronto (Canada)\n";
    }
};


int AbroadStudies::totalStudents = 0;

int main() {
    int choice;
    double ieltsScore;

    do {
        cout << "\n Abroad Studies Management Menu \n";
        cout << "1. Add a new student\n";
```

```
        cout << "2. Show total students\n";
        cout << "3. Check visa eligibility\n";
        cout << "4. Display universities\n";
        cout << "5. Exit\n";
        cout << "Enter your choice: ";
        cin >> choice;

        switch (choice) {
            case 1: {

                AbroadStudies newStudent;
                cout << "New student added successfully!\n";
                break;
            }
            case 2:
                AbroadStudies::showTotalStudents();
                break;
            case 3:
                cout << "Enter IELTS Score: ";
                cin >> ieltsScore;
                cout << "Visa Status: "
                     << AbroadStudies::checkVisaEligibility(ieltsScore) << endl;
                break;
            case 4:
                AbroadStudies::displayUniversities();
                break;
            case 5:
                cout << "Exiting program\n";
                break;
            default:
                cout << "Invalid choice! Please try again.\n";
        }
    } while (choice != 5);

    return 0;
}
```

#9

```
#include <iostream>
#include <string>
using namespace std;
class Student {
protected:
```

```
    string name;
    int age;
    string countryPreference;

public:
    void getStudentDetails() {
        cout << "Enter Student Name: ";
        cin >> name;
        cout << "Enter Age: ";
        cin >> age;
        cout << "Enter Preferred Country: ";
        cin >> countryPreference;
    }

    void displayStudentDetails() {
        cout << "\n--- Student Details ---\n";
        cout << "Name: " << name << endl;
        cout << "Age: " << age << endl;
        cout << "Preferred Country: " << countryPreference << endl;
    }
};

class Application : public Student {
protected:
    string course;
    string university;

public:
    void getApplicationDetails() {
        cout << "Enter Course Applied: ";
        cin >> course;
        cout << "Enter University: ";
        cin >> university;
    }

    void displayApplicationDetails() {
        cout << "\n--- Application Details ---\n";
        cout << "Course: " << course << endl;
        cout << "University: " << university << endl;
    }
};

class Visa : public Application {
private:
```

```
    string visaStatus;

public:
    void getVisaDetails() {
        cout << "Enter Visa Status (Approved/Rejected): ";
        cin >> visaStatus;
    }

    void displayVisaDetails() {
        cout << "\n--- Visa Details ---\n";
        cout << "Visa Status: " << visaStatus << endl;
    }
};

int main() {
    Visa v;
    int choice;
    int studentCount = 0;

    do {
        cout << "\n====== Abroad Studies Management System ======\n";
        cout << "1. Enter Student Details\n";
        cout << "2. Enter Application Details\n";
        cout << "3. Enter Visa Details\n";
        cout << "4. Display All Details\n";
        cout << "6. Exit\n";
        cout << "Enter your choice: ";
        cin >> choice;

        switch (choice) {
            case 1:
                v.getStudentDetails();
                studentCount++;
                break;
            case 2:
                v.getApplicationDetails();
                break;
            case 3:
                v.getVisaDetails();
                break;
            case 4:
                v.displayStudentDetails();
                v.displayApplicationDetails();
                v.displayVisaDetails();
```

```
            break;
        case 5:
            cout << "Exiting program...\n";
            break;
        default:
            cout << "Invalid choice! Try again.\n";
      }
   } while (choice != 5);

   return 0;
}
```

#10

```
#include <iostream>
using namespace std;
class Student {
protected:
   string name;
   int age;
public:
   void getStudentDetails() {
      cout << "Enter Student Name: ";
      cin >> name;
      do {
         cout << "Enter Age: ";
         cin >> age;
         if (age < 18) {
            clog << "an error occured\n";
         }
      } while (age < 18);
   }

   void displayStudentDetails() {
      cout << "\n--- Student Details ---\n";
      cout << "Name: " << name << endl;
      cout << "Age: " << age << endl;
   }
};
class Course {
protected:
   string courseName;
   string university;
public:
```

```
    void getCourseDetails() {
        cout << "Enter Course Name: ";
        cin >> courseName;
        cout << "Enter University: ";
        cin >> university;
    }

    void displayCourseDetails() {
        cout << "\n--- Course Details ---\n";
        cout << "Course: " << courseName << endl;
        cout << "University: " << university << endl;
    }
};
class AbroadApplication : public Student, public Course {
private:
    string countryPreference;
public:
    void getApplicationDetails() {
        cout << "Enter Preferred Country: ";
        cin >> countryPreference;
    }

    void displayApplicationDetails() {
        cout << "\n===== Abroad Application Summary =====\n";
        displayStudentDetails();
        displayCourseDetails();
        cout << "Preferred Country: " << countryPreference << endl;
    }
};
int main() {
    AbroadApplication app;
    int choice;
    bool studentEntered = false, courseEntered = false, countryEntered = false;

    do {
        cout << "\n====== Abroad Studies Management Menu ======\n";
        cout << "1. Enter Student Details\n";
        cout << "2. Enter Course Details\n";
        cout << "3. Enter Application (Country Preference)\n";
        cout << "4. Display Full Application\n";
        cout << "5. Exit\n";
        cout << "Enter your choice: ";
        cin >> choice;
```

```
        switch (choice) {
            case 1:
                app.getStudentDetails();
                studentEntered = true;
                break;

            case 2:
                app.getCourseDetails();
                courseEntered = true;
                break;

            case 3:
                if (!studentEntered) {
                    cout << "Please enter Student Details first\n";
                } else {
                    app.getApplicationDetails();
                    countryEntered = true;
                }
                break;

            case 4:
                if (studentEntered && courseEntered && countryEntered) {
                    app.displayApplicationDetails();
                } else {
                    cout << " Please complete all details before displaying\n";
                }
                break;

            case 5:
                cout << "Exiting program...\n";
                break;

            default:
                clog<<"An error occured";
        }

    } while (choice != 5);

    return 0;
}
```