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```
//Question 1
```

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
string identifyTemperature(int Fahrenheit);
```

```
int conversionFahrenheit(int Celcius);
```

```
int main(){
```

```
    int Celcius;
```

```
    cout<<"Enter temperature or -999 to stop: ";
```

```
    cin>>Celcius;
```

```
    while(Celcius!=-999){
```

```
        int Fahrenheit=conversionFahrenheit(Celcius);
```

```
        string temperature=identifyTemperature(Fahrenheit);
```

```
        cout<<"Temperature in Fahrenheit: "<<Fahrenheit<<endl;
```

```
        cout<<"Catogery: "<<temperature<<endl;
```

```
        cout<<"Enter temperature or -999 to stop: ";
```

```
        cin>>Celcius;
```

```
    }
```

```
    cout<<"Program terminated.";
```

```
    return 0;
```

```
}
```

```
string identifyTemperature(int Fahrenheit){
```

```
    string temperature;
```

```
    if(Fahrenheit<50)
```

```
        temperature= "Cold";
```

```
    else if(Fahrenheit>77)
```

```
        temperature="Hot";
```

```
    else
```

```
        temperature="Moderate";
```

```
return temperature;
}
```

```
int conversionFahrenheit(int Celcius){
    int Fahrenheit;
    Fahrenheit=Celcius*9/5+32;
    return Fahrenheit;
}
```

//Question 2

```
#include <iostream>
```

```
#include <string>
```

```
using namespace std;
```

```
void displayBooksBorrowedByStudent(string books[][3], int studentID, int numBooks[], int
numStudents) {
```

```
    if (studentID < 1 || studentID > numStudents) {
        cout << "Invalid student ID." << endl;
        return;
    }
```

```
    int count = studentID - 1;
```

```
    cout << "Books borrowed by Student " << studentID << ":" << endl;
```

```
    if (numBooks[count] == 0) {
        cout << "No books borrowed." << endl;
    } else {
        for (int i = 0; i < numBooks[count]; i++) {
            cout << "- " << books[count][i] << endl;
        }
    }
}
```

```
void calculateBorrowingStats(int numBooks[], int numStudents, int &totalBooks, int
&mostBooksStudent) {
```

```
    totalBooks = 0;
```

```
    int maxBooks = 0;
```

```
    for (int i = 0; i<numStudents; i++) {
```

```
        totalBooks += numBooks[i];
```

```
        if (numBooks[i] > maxBooks) {
```

```
            maxBooks = numBooks[i];
```

```
            mostBooksStudent = i + 1;
```

```
        }
```

```
    }
```

```
}
```

```
int main() {
```

```
    int numStudents;
```

```
    const int maxStudents = 10;
```

```
    const int maxBooks = 3;
```

```
    int totalBooks = 0, mostBooksStudent = 0, studentID;
```

```
    cout << "Enter the number of students (max " << maxStudents << "): ";
```

```
    cin >> numStudents;
```

```
    while (numStudents < 1 || numStudents>maxStudents) {
```

```
        cout << "Invalid number of students. Please enter a value between 1 and " << maxStudents
<< " ";
```

```
        cin >> numStudents;
```

```
    }
```

```
    string books[maxStudents][maxBooks];
```

```
    int numBooks[maxStudents] = {0};
```

```

for (int i = 0; i < numStudents; i++) {
    cout << "Enter the number of books borrowed by Student " << i + 1 << " (max " << maxBooks
<< "): ";
    cin >> numBooks[i];

    while (numBooks[i] < 0 || numBooks[i] > maxBooks) {
        cout << "Invalid number of books. Please re-enter (0 to " << maxBooks << "): ";
        cin >> numBooks[i];
    }

    for (int i = 0; i < numBooks[i]; i++) {
        cout << "Enter the title of book " << i + 1 << ": ";
        getline(cin, books[i][i]);
    }
}

cout << "\nBorrowing Records:" << endl;
cout << "Student\tBooks" << endl;
for (int i = 0; i < numStudents; i++) {
    cout << i + 1 << "\t";
    for (int i = 0; i < numBooks[i]; i++) {
        if (i > 0) cout << ", ";
        cout << books[i][i];
    }
}

cout << "\n\nEnter a student ID to view their borrowed books: ";
cin >> studentID;

displayBooksBorrowedByStudent(books, studentID, numBooks, numStudents);

```

```
calculateBorrowingStats(numBooks, numStudents, totalBooks, mostBooksStudent);

cout << "\nTotal books borrowed by all students: " << totalBooks << endl;
cout << "Student who borrowed the most books: Student " << mostBooksStudent << endl;

return 0;
}
```