-7]Q1

```cpp
#include <iostream>
using namespace std;
class Numbers {
private:
int num1, num2;
public:
Numbers() {
num1 = 0;
num2 = 0;
}
Numbers(int n1, int n2 = 0) {
num1 = n1;
num2 = n2;
}
void displayMax() {
cout << "Maximum of " << num1 << " and " << num2 << " is: " << (num1 >
num2 ? num1 : num2) << endl;
}
};
int main() {
Numbers obj1;
Numbers obj2(5);
Numbers obj3(10, 7);
obj1.displayMax();
obj2.displayMax();
obj3.displayMax();
return 0;
}
```

7]Q2 create a class college containing data members as college id

```cpp
#include <iostream>     #include <string>
using namespace std;
class College
{private:
string collegeId;
string collegeName;
int establishmentYear;
string universityName;
public:
College() {}
College(string id, string name, int year, string univ)
{   collegeId = id;
collegeName = name;
establishmentYear = year;
universityName = univ;   }
void setDetails(string id, string name, int year, string univ)   {
collegeId = id;
collegeName = name;
establishmentYear = year;
universityName = univ;     }
void displayDetails()     {
cout << "College ID: " << collegeId << endl;
cout << "College Name: " << collegeName << endl;
cout << "Establishment Year: " << establishmentYear << endl;
cout << "University Name: " << universityName << endl;     }
void displayByUniversity(string univ)     {
if (universityName == univ)     {
displayDetails();   }  }
void displayByYear(int year)  {
if (establishmentYear == year)    {
```

```cpp
        displayDetails();   } }   };
int main()     {
const int n = 3; // Number of colleges
College colleges[n];
cout << "Enter college details for " << n << " colleges:\n";
for (int i = 0; i < n; ++i)    {
string id, name, uni;
int year;
cout << "College " << i + 1 << ":\n";
cout << "Enter College ID: ";
cin >> id;
cout << "Enter College Name: ";
cin >> name;
cout << "Enter Establishment Year: ";
cin >> year;
cout << "Enter University Name: ";
cin >> uni;
colleges[i].setDetails(id, name, year, uni);     }
string searchUni;
cout << "\nEnter the University Name to search for colleges: ";
cin >> searchUni;
cout << "Colleges under University " << searchUni << ":\n";
for (int i = 0; i < n; ++i)      {
colleges[i].displayByUniversity(searchUni);     }
int searchYear;
cout << "\nEnter the Establishment Year to search for colleges: ";
cin >> searchYear;
cout << "Colleges established in year " << searchYear << ":\n";
for (int i = 0; i < n; ++i)    {
colleges[i].displayByYear(searchYear);   }  return 0; }
```