

## 1. C++ Program to Create a Class for a Bank Account

```
#include <iostream>

using namespace std;

class BankAccount {
private:
    string accountNumber;
    double balance;
public:
    // Constructor
    BankAccount(string accNumber, double initialBalance) {
        accountNumber = accNumber;
        balance = initialBalance;
        cout << "Bank account created for account number: " << accountNumber << endl;
    }
    // Destructor
    ~BankAccount() {
        cout << "Bank account closed for account number: " << accountNumber << endl;
    }
    void display() {
        cout << "Account Number: " << accountNumber << ", Balance: $" << balance << endl;
    }
};

int main() {
    BankAccount acc("12345678", 500.0);
    acc.display();
    return 0;
}
```

## Output

```
Bank account created for account number: 12345678
Account Number: 12345678, Balance: $500
Bank account closed for account number: 12345678

-----
Process exited after 6.919 seconds with return value 0
Press any key to continue . . . |
```

## 2. C++ Program to Create a Class for a Car

```
#include <iostream>

using namespace std;

class Car {
private:
    string model;
    string brand;
public:
    // Constructor
    Car(string carBrand, string carModel) {
        brand = carBrand;
        model = carModel;
        cout << "Car created: " << brand << " " << model << endl;
    }
    // Destructor
    ~Car() {
        cout << "Car destroyed: " << brand << " " << model << endl;
    }
    void display() {
        cout << "Car Brand: " << brand << ", Model: " << model << endl;
    }
}
```

```
};  
  
int main() {  
    Car car("Toyota", "Camry");  
    car.display();  
    return 0;  
}
```

### Output

```
Car created: Toyota Camry  
Car Brand: Toyota, Model: Camry  
Car destroyed: Toyota Camry  
  
-----  
Process exited after 3.47 seconds with return value 0  
Press any key to continue . . . |
```

### 3. C++ Program to Create a Class for a Rectangle

```
#include <iostream>  
  
using namespace std;  
  
class Rectangle {  
private:  
    double length;  
    double width;  
public:  
    // Constructor  
    Rectangle(double l, double w) {  
        length = l;  
        width = w;  
        cout << "Rectangle created with length " << length << " and width " << width << endl;  
    }  
};
```

```

}

// Destructor
~Rectangle() {
    cout << "Rectangle destroyed" << endl;
}

double area() {
    return length * width;
}

void display() {
    cout << "Length: " << length << ", Width: " << width << ", Area: " << area() << endl;
}
};

int main() {
    Rectangle rect(10.0, 5.0);
    rect.display();
    return 0;
}

```

### Output

```

Rectangle created with length 10 and width 5
Length: 10, Width: 5, Area: 50
Rectangle destroyed

-----
Process exited after 4.244 seconds with return value 0
Press any key to continue . . . |

```

#### 4. C++ Program to Create a Class for a Book

```
#include <iostream>

using namespace std;

class Book {
private:
    string title;
    string author;
public:
    // Constructor
    Book(string bookTitle, string bookAuthor) {
        title = bookTitle;
        author = bookAuthor;
        cout << "Book created: " << title << " by " << author << endl;
    }
    // Destructor
    ~Book() {
        cout << "Book destroyed: " << title << " by " << author << endl;
    }
    void display() {
        cout << "Title: " << title << ", Author: " << author << endl;
    }
};

int main() {
    Book book("1984", "George Orwell");
    book.display();
    return 0;
}
```

## Output

```
Book created: 1984 by George Orwell
Title: 1984, Author: George Orwell
Book destroyed: 1984 by George Orwell

-----
Process exited after 10.31 seconds with return value 0
Press any key to continue . . . |
```

## 5. C++ Program to Create a Class for a Student

```
#include <iostream>

using namespace std;

class Student {
private:
    string name;
    int rollNumber;
public:
    // Constructor
    Student(string studentName, int studentRollNumber) {
        name = studentName;
        rollNumber = studentRollNumber;
        cout << "Student created: " << name << " with roll number " << rollNumber << endl;
    }
    // Destructor
    ~Student() {
        cout << "Student destroyed: " << name << " with roll number " << rollNumber << endl;
    }
    void display() {
        cout << "Name: " << name << ", Roll Number: " << rollNumber << endl;
    }
};
```

```
int main() {  
    Student student("John Doe", 123);  
    student.display();  
    return 0;  
}
```

### Output

```
Student created: John Doe with roll number 123  
Name: John Doe, Roll Number: 123  
Student destroyed: John Doe with roll number 123  
  
-----  
Process exited after 10.91 seconds with return value 0  
Press any key to continue . . . |
```