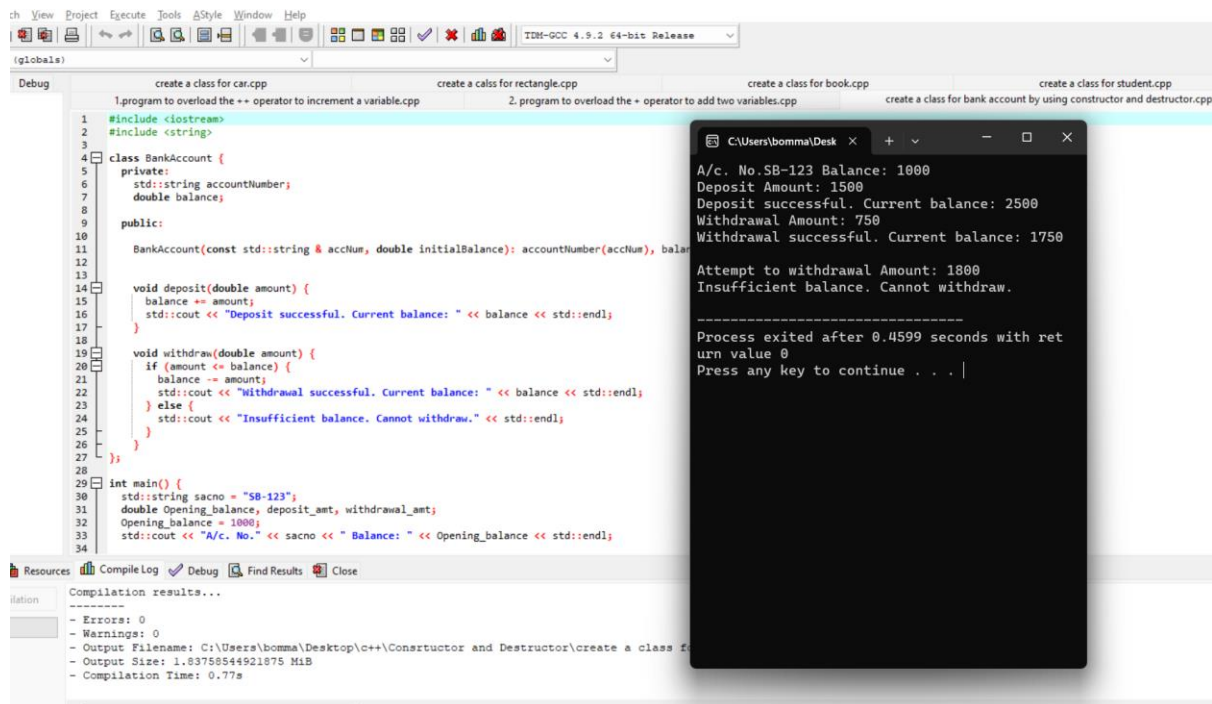


1. Write a c++ program to create a class for a bank account with a constructor and a destructor



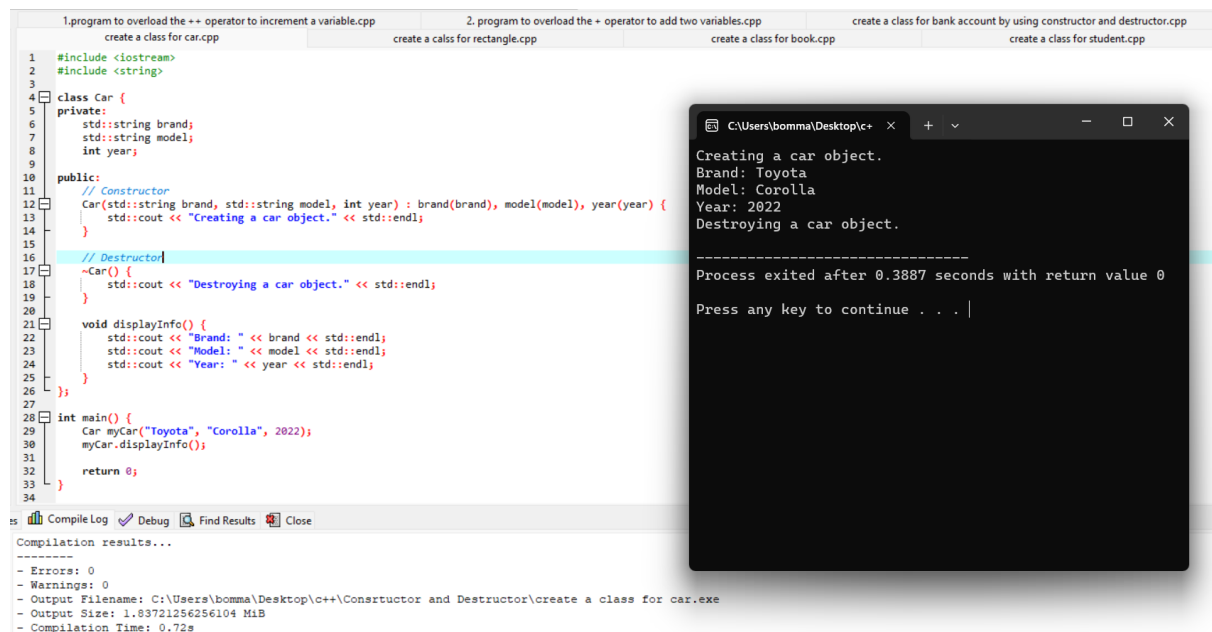
The screenshot shows a C++ IDE with a project named "create a class for car.cpp". The code defines a `BankAccount` class with a constructor, a `deposit` method, and a `withdraw` method. The `main` function creates a `BankAccount` object, deposits 1500, and withdraws 750. The output window shows the execution results:

```
A/c. No.SB-123 Balance: 1000
Deposit Amount: 1500
Deposit successful. Current balance: 2500
Withdrawal Amount: 750
Withdrawal successful. Current balance: 1750

Attempt to withdrawal Amount: 1800
Insufficient balance. Cannot withdraw.

-----
Process exited after 0.4599 seconds with return value 0
Press any key to continue . . .
```

2. Write a c++ program to create a class for a car with a constructor and a destructor



The screenshot shows a C++ IDE with a project named "create a class for car.cpp". The code defines a `Car` class with a constructor, a destructor, and a `displayInfo` method. The `main` function creates a `Car` object and calls `displayInfo`. The output window shows the execution results:

```
Creating a car object.
Brand: Toyota
Model: Corolla
Year: 2022
Destroying a car object.

-----
Process exited after 0.3887 seconds with return value 0
Press any key to continue . . .
```

3. Write a c++ program to create a class for a rectangle with a constructor and a destructor

The screenshot shows a C++ IDE with a project titled "create a class for rectangle.cpp". The code defines a `Rectangle` class with a constructor, a destructor, and methods to calculate area and perimeter. The `main` function creates a `Rectangle` object and prints its area and perimeter.

```
1. program to overload the ++ operator to increment a variable.cpp
2. program to overload the + operator to add two variables.cpp
create a class for bank account by using constructor and destructor.cpp
create a class for book.cpp
create a class for student.cpp

2
3 class Rectangle {
4 private:
5     double length;
6     double width;
7
8 public:
9     // Constructor
10    Rectangle(double len, double wid) : length(len), width(wid) {
11        std::cout << "Creating a rectangle object." << std::endl;
12    }
13
14    // Destructor
15    ~Rectangle() {
16        std::cout << "Destroying a rectangle object." << std::endl;
17    }
18
19    double calculateArea() {
20        return length * width;
21    }
22
23    double calculatePerimeter() {
24        return 2 * (length + width);
25    }
26
27 };
28
29 int main() {
30
31     Rectangle myRectangle(5.0, 3.0);
32
33     std::cout << "Area: " << myRectangle.calculateArea() << std::endl;
34
35 }
```

Output:

```
Creating a rectangle object.
Area: 15
Perimeter: 16
Destroying a rectangle object.

-----
Process exited after 0.4781 seconds with return value 0
Press any key to continue . . . |
```

Compilation results...

```
-----
Errors: 0
Warnings: 0
Output Filename: C:\Users\bomma\Desktop\c++\Constructor and Destructor\create a class for rectangle.exe
Output Size: 1.834087620345458 MiB
```

4. Write a c++ program to create a class for a book with a constructor and a destructor

The screenshot shows a C++ IDE with a project titled "create a class for book.cpp". The code defines a `Book` class with a constructor, a destructor, and a method to display book information. The `main` function creates a `Book` object and displays its information.

```
1. program to overload the ++ operator to increment a variable.cpp
2. program to overload the + operator to add two variables.cpp
create a class for bank account by using constructor and destructor.cpp
create a class for book.cpp
create a class for student.cpp

#include <iostream>
#include <string>

class Book {
private:
    std::string title;
    std::string author;
    int publicationYear;
public:
    // Constructor
    Book(std::string t, std::string a, int year) : title(t), author(a), publicationYear(year) {
        std::cout << "Creating a book object." << std::endl;
    }
    // Destructor
    ~Book() {
        std::cout << "Destroying a book object." << std::endl;
    }
    void displayInfo() {
        std::cout << "Title: " << title << std::endl;
        std::cout << "Author: " << author << std::endl;
        std::cout << "Publication Year: " << publicationYear << std::endl;
    }
};

int main() {
    Book myBook("The Great Gatsby", "F. Scott Fitzgerald", 1925);
    myBook.displayInfo();
}
```

Output:

```
Creating a book object.
Title: The Great Gatsby
Author: F. Scott Fitzgerald
Publication Year: 1925
Destroying a book object.

-----
Process exited after 0.4188 seconds with return value 0
Press any key to continue . . . |
```

Compilation results...

```
-----
Errors: 0
Warnings: 0
Output Filename: C:\Users\bomma\Desktop\c++\Constructor and Destructor\create a class for book.exe
Output Size: 1.83722496032715 MiB
Compilation Time: 0.67s
```

5. Write a c++ program to create a class for student with a constructor and a destructor

