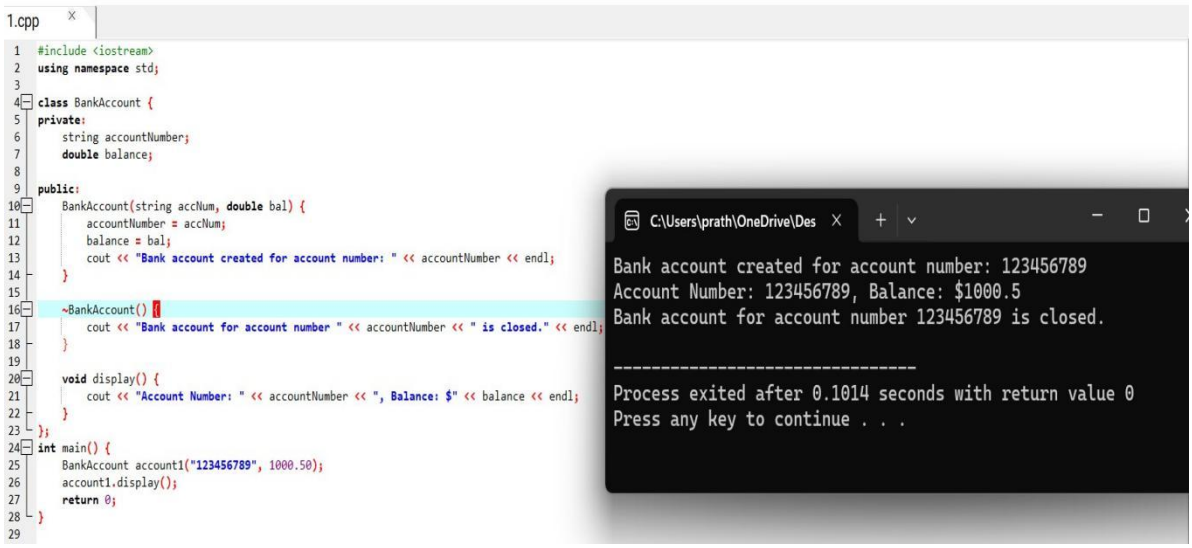
Constructor and destructor:

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



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

class BankAccount {
private:
    string accountNumber;
    double balance;

public:
    BankAccount(string accNum, double bal) {
        accountNumber = accNum;
        balance = bal;
        cout << "Bank account created for account number: " << accountNumber << endl;
    }

    ~BankAccount() {
        cout << "Bank account for account number " << accountNumber << " is closed." << endl;
    }

    void display() {
        cout << "Account Number: " << accountNumber << ", Balance: $" << balance << endl;
    }
};
int main() {
    BankAccount account1("123456789", 1000.50);
    account1.display();
    return 0;
}
```

```
C:\Users\prath\OneDrive\Des
Bank account created for account number: 123456789
Account Number: 123456789, Balance: $1000.5
Bank account for account number 123456789 is closed.

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Process exited after 0.1014 seconds with return value 0
Press any key to continue . . .
```
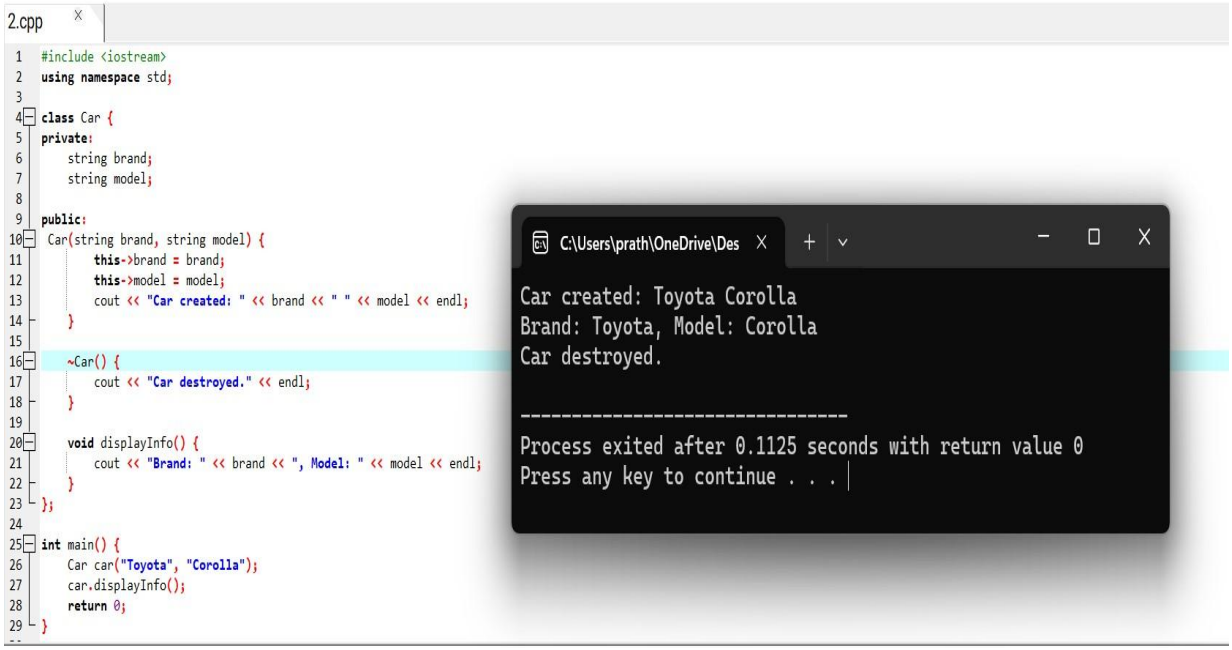

2. Write a c++ program to create a class for a car with a constructor and a destructor



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

class Car {
private:
    string brand;
    string model;

public:
    Car(string brand, string model) {
        this->brand = brand;
        this->model = model;
        cout << "Car created: " << brand << " " << model << endl;
    }

    ~Car() {
        cout << "Car destroyed." << endl;
    }

    void displayInfo() {
        cout << "Brand: " << brand << ", Model: " << model << endl;
    }
};

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

```
C:\Users\prath\OneDrive\Des
Car created: Toyota Corolla
Brand: Toyota, Model: Corolla
Car destroyed.

--------------------------------
Process exited after 0.1125 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

3.cpp

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

class Rectangle {
private:
    double width;
    double height;
public:
    Rectangle(double width, double height) {
        this->width = width;
        this->height = height;
        cout << "Rectangle created with dimensions: " << width << "x" << height << endl;
    }

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

    double area() {
        return width * height;
    }
};

int main() {
    Rectangle rect(5.0, 3.0);
    cout << "Area: " << rect.area() << endl;
    return 0;
}
```

```
C:\Users\prath\OneDri
Rectangle created with dimensions: 5x3
Area: 15
Rectangle destroyed.

--------------------------------
Process exited after 0.0962 seconds with retu
rn value 0
Press any key to continue . . .
```

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

4.cpp

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

class Book {
private:
    string title;
    string author;

public:
    Book(string title, string author) {
        this->title = title;
        this->author = author;
        cout << "Book created: " << title << " by " << author << endl;
    }

    ~Book() {
        cout << "Book destroyed." << endl;
    }
void displayInfo() {
        cout << "Title: " << title << ", Author: " << author << endl;
    }
};

int main() {
    Book book("To Kill a Mockingbird", "Harper Lee");
    book.displayInfo();
    return 0;
}
```

```
C:\Users\prath\OneDrive\Des
Book created: To Kill a Mockingbird by Harper Lee
Title: To Kill a Mockingbird, Author: Harper Lee
Book destroyed.

--------------------------------
Process exited after 0.08221 seconds with return value 0
Press any key to continue . . .
```

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

5.cpp

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

class Student {
private:
    string name;
    int age;

public:
    Student(string name, int age) {
        this->name = name;
        this->age = age;
        cout << "Student created: " << name << ", Age: " << age << endl;
    }

    ~Student() {
        cout << "Student destroyed." << endl;
    }

    void displayInfo() {
        cout << "Name: " << name << ", Age: " << age << endl;
    }
};

int main() {
    Student student("John Doe", 20);
    student.displayInfo();
    return 0;
}
```

```
C:\Users\prath\OneDri
Student created: John Doe, Age: 20
Name: John Doe, Age: 20
Student destroyed.

--------------------------------
Process exited after 0.1104 seconds with retu
rn value 0
Press any key to continue . . .
```