

# Special Member Functions Exercises

# Special Member Functions

- Briefly describe the purpose of the special member functions:
- Constructor
- Copy constructor

# Special Member Functions

- Assignment operator
- Destructor

# Test class

- Write down simple definitions of the special member functions for the following class

```
class Test {  
    int i;  
    string str;  
public:  
    ...  
};
```

# Constructor

```
// Initialize object from arguments  
Test(int i, const string& str) : i(i), str(str) {  
    // Allocate memory, connect to database, etc  
}
```

# Copy constructor

```
// Initialize object from another Test object  
Test(const Test& other) : i(other.i), str(other.str) {  
    // Configure object (if needed)  
}
```

# Assignment Operator

```
// Assign object from another Test object
Test& operator =(const Test& other) {
    i = other.i;
    str = other.str;
    return *this;           // Return assigned-to object
}
```

# Destructor

```
// Prepare object to be released  
~Test() {  
    // Release allocated memory, close the connection to the database, etc  
}
```