

Блиц тест № 3 - ООП практикум
03.04.2024

Зад 1. Какво ще се случи, ако деструкторът е `private`?

```
class A{
private:
~A();
};
class X{
A a;
int var;
};
```

Зад 2. Има ли Memory Leak? Ако да, защо? Ако не, защо

```
constexpr int MAX_SIZE = 1024;

char* readLineFromConsole()
{
    char buff[MAX_SIZE];
    std::cin.getline(buff, MAX_SIZE, '\n');

    return buff;
}

int main()
{
    char* line = readLineFromConsole();
    std::cout << line;
}
```

Зад.3 Каква е грешката в следния код:

```
#include <iostream>
//Validations are not needed in this task

namespace CONSTANTS {
    constexpr int MODEL_MAX_SIZE = 32;
    constexpr int MAX_CARS_NUMBER = 20;
    constexpr int MAX_NAME_SIZE = 20;
}

struct Car {
    char model[CONSTANTS::MODEL_MAX_SIZE];

    Car(const char* model) {
        strcpy(this->model, model);
    }
};

class CarCompany {
    Car cars[CONSTANTS::MAX_CARS_NUMBER];
};
```



```

class Person {
    char name[CONSTANTS::MAX_NAME_SIZE];
    const Car* toRent;
public:
    Person(const char* name, const Car* toRent) {
        strcpy(this->name, name);
        this->toRent = toRent;
    }
    ~Person() {
        free();
    }
private:
    void free() {
        delete toRent;
    }
};

```

Зад.4 Какъв е проблема в следния код?

```

class Student {
    char* name = nullptr;
    int age;
public:
    Student(const char* name, int age): age(age) {
        if (name != nullptr) {
            strcpy(this->name, name);
        }
    }
    Student(const Student& other) : age(other.age) {
        if (other.name != nullptr) {
            strcpy(name, other.name);
        }
    }
};

```

Зад.5 Какъв е проблема в следния код?

```

class Student {
    char* name = nullptr;
    int age;
public:
    Student(const char* name, int age): age(age) {
        if (name != nullptr) {
            strcpy(this->name, name);
        }
    }
    Student(const Student& other) : age(other.age) {
        if (other.name != nullptr) {
            strcpy(name, other.name);
        }
    }
    Student& operator=(const Student& other) {
        if (this != other) {
            strcpy(name, other.name);
            age = other.age;
        }
    }
};

```



