

Name:

Group Number:

Grade:  /10p

1. (1 p) Implement encapsulation for the class **University** with the following attributes:

Attribute name	Type	Constraints
<b>Id</b>	Number	Unique, constant
<b>Name</b>	Characters	length>=2
<b>Specialization</b>	Characters	Length between [3, 40]
<b>Revenue</b>	Number	Not Null
<b>TotalStudents</b>	Number	Minimum 50

2. (0.5 p) Implement in class **University** the code that allows to execute in main() the following line:

```
University u0;
University u1("Faculty of Business","Economics", 1050000, 300);
```

3. (0.5 p) Implement in class **University** the code for try-catch mechanism that allows to execute in main() the following line:

```
University u2("Faculty of Engineering","IT", 15082020,16);
```

4. (1 p) Implement in class **University** the code that allows to execute in main() the following line:

```
University u1("Faculty of Business","Economics", 1050000, 300);
University u3("Faculty of marketing","MKT",17500,55);
u1.getName(); //deep copy
u3.setSpecialization ("Mk"); //throw exception
```

5. (2 p) Implement in class **University** the code that allows to execute in main() the following line:

```
University u4("Faculty of Medicine","Med" ,26500,76);
University u5=u4;
u4=u1;
```

6. (4 p) Implement in class **University** the code that allows to execute in main() the following lines:

```
u2=++u1; //overload ++ op to increase the TotalStudents
cout<<u3; // overload << op to print university.
cout<<u4[0]; //overload [] op to return the first character of name
u3+=7500; //overload += op to increase the revenue with the received
```

number

**OOP** 02.12.2024

**OBS:**

- You get 1 p by default cause you're taking the test.
- Your grade will be 1p/10p if you have errors (any type of error)
- If you have memory leaks, your grade will be decreased with 1p.