OOP 02.12.2024

Number 2

Name:

Group Number:

Grade: ____ /10p

1. ((1 p) Implement encapsulation for the class ***Company*** with the next attributes:

Attribute name	Type	Constraints
Id	Number	Unique, constant
Name	Characters	length>=3
CAEN	Characters	XXXX (e.g.5510-hotel,6810-real estate, 6202-IT consultant)
Revenue	Number	Not Null
TotalEmployees	Number	Minimum 3

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

```
Company c0;
Company c1 (”Microsoft”, ”6205” ,1500000,1800);
```

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

```
Company c2 (”Oracle”, ”620” ,1000500 ,700);
```

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

```
Company c1 (”Microsoft”, ”6205” ,1500000,1800);
Company c3(”Hilton”, ”5510” ,750050, 520);
c1.getName(); //deep copy
c3.setTotalEmployees (2); //throw exception
```

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

```
Company c4(”Ibis”, ”5510” ,350000 ,300);
Company c5=c4;
c4=c1;
```

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

```
c2=++c1; //overload ++op to increase the TotalEmployees
cout<<c3;// overload << op to print the company.
cout<<c4[0]; //overload [] op to return the first character of name.
c4+=20000;//overload += op to increase the revenue with the
received number
```

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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.