

BLG 252E HOMEWORK 1 REPORT

Yavuz Koca 150150043

1. How to Compile?

You can compile with this command: `g++ *.cpp -std=c++14`

Then simply run this command to run the program: `./a.out`

2. Citizen Class

In this class, besides the given attributes and methods, I have declared some set functions such as `setIdNo`, `setName` etc. These functions take an argument as `const char*`. I used `const` here to prevent data changes accidentally. These functions takes this pointer and takes some memory with `new` keyword. In the constructor, I called these functions with of course again `const` keyword to prevent data changes.

There are some get functions also, to get the private data such as `getName` or `getHasApp` etc. These functions basically returns the appropriate data of citizen class.

In destructor method, I freed the data which has been taken in the constructor method.

I have declared a `<` operator in Citizen class also to sort lists in CivilRegistry Class. This operator compares the year first, then month, day, app slot and then entry clock. It returns true or false according to this.

3. CivilRegistry Class

In this class, we have two lists named `wApp` and `wOutApp`. In constructor, I read the `input.txt` file and write those citizens to related list. After read process ends, I sort them according to the `<` operator in Citizen class.

`InsertCitizen` function basically checks if it has `appSlot`, then insert it to `wApp` list, otherwise the other one.

`getAllCitizens` function prints all citizens and sends them to `removeCitizen` function. To print all, I used iterator.

`RemoveCitizen` function pops the citizens one by one.

4. Time Class

Time class holds the information of the citizen's entry time to appointment.

In constructor, it directly assigns the values of appropriate attribute.

There are three operator overloading functions. These functions compares the attributes and returns true or false according to this.

Besides above, I have created a function called explode. This function almost same as Python's split or PHP's explode function. Takes a string and a delimiter and returns a vector with exploded string. For example,

```
string s = "Hello,world,i,am,yavuz";  
vector<string> v = explode(s, ',');
```

This v vector will become,

"Hello", "world", "i", "am", "yavuz"