**BLG 252E HOMEWORK 1 REPORT**

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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

1. **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 accidently. 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 CivilRegistery Class. This operator compares the year first, then month, day, app slot and then entry clock. It returns true or false according to this.

1. **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.

1. **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”