Gebze Institute of Technology
Department of Computer Engineering
CSE 241/505
Object Oriented Programming
Fall 2013
Homework # 1
Your First C++ Program
Due date Oct 6th 2013

We talked about simple Unix command line utilities such as **wc**, which is for word and line counting. In this homework, you will implement a Unix command line utility which is very similar to **grep**. We use **grep** to find stings in other strings or files. Please read the manual page for **grep** using the command

man grep

Your **grep** command will be simplified and it is called **sgrep**. It will only match strings from standard input. Some example **sgrep** executions that should work are as follows

```
sgrep abc
abc def
abc adef
def acd
```

should output

```
abc def
abc adef
```

Your grep should also work with the wild card character **?**
For example
```
sgrep a?c
abc def
adc adef
def acd
```

should output
```
abc def
adc adef
```

Implement the grep options **-i** and **-n**
Your simplified sgrep should also work with standard input and output redirections(<,>), and Unix (|) pipe such as

cat file_name | sgrep abc > res.txt

Notes:
- Do not use any functions from the standard C library (like `printf`)
- Your program should have only functions and no classes.
- Do not forget to indent your code and provide comments
- **Test your programs very carefully at least with 5 different problems and submit the test results too.**
- You should email your homework to the Teaching Assistant (TA).