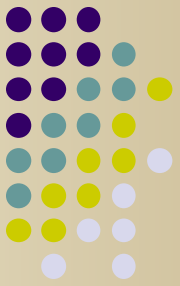


ENGR/CS 101 CS Session

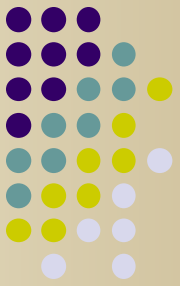
Lecture 9b

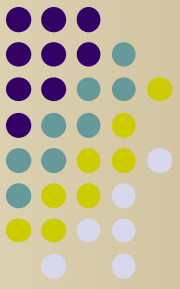


- Log into Windows/ACENET (reboot if in Linux)
- Start Python, open program from last time.

Outline

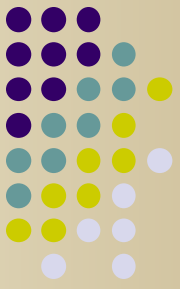
- Finish/fix using files
- Error checking
- Homework 2





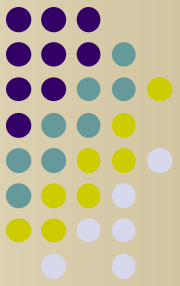
In-class Exercise, Part 2

- Modify the main program so that it asks the user for the names of an input file and an output file, then opens them for reading and writing, respectively. This should go inside the loop, but ***before*** the if-statement.



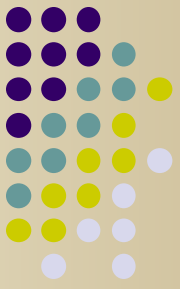
In-class Exercise, Part 2

- For each choice in the if-statement, modify the code so that a for-loop reads the lines from the input file. For each line make the appropriate function call, then write the result to the output file (instead of printing it to the screen).



In-class Exercise, Part 2

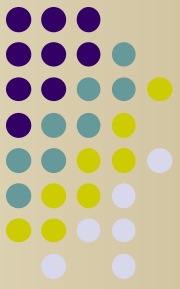
- **Finally, close the input and output files just before getting the user's next choice of action.**
- Run the program and test that both encrypting and decrypting work. See sample run on next slide. The new files can be opened with IDLE or any text editor like Notepad.



Sample Run (input in bold)

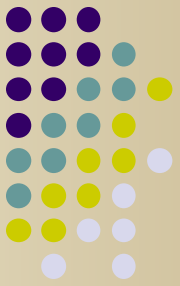
```
Enter a shift key in
uppercase: I
Choose an option:
  1. Encrypt a message
  2. Decrypt a message
  3. Quit
Enter your choice: 1
Enter the name of the input
file: message.txt
Enter the name of the output
file: secret.txt
Choose an option:
  1. Encrypt a message
  2. Decrypt a message
  3. Quit
Enter your choice: 2
```

```
Enter the name of the input
file: secret.txt
Enter the name of the output
file: message2.txt
Choose an option:
  1. Encrypt a message
  2. Decrypt a message
  3. Quit
Enter your choice: 3
All done
```



Error handling

- When a user provides an illegal input, a program should try to handle such an error so that the user is informed that the input is illegal and so that the program doesn't provide erroneous results or crash.
- E.g., what happens if the user inputs a non-uppercase alphabetic character for the shift key? What happens when user enters 4 for the menu choice?



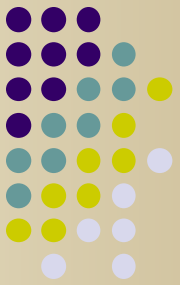
In-class Exercise, Part 3

- Add code to the main program so that if the user does not enter an uppercase letter for the shift key, the program displays an error message and quits

```
Enter a shift key in uppercase: i
```

```
The shift key must be in uppercase!
```

```
All done
```

In-class Exercise, Part 3

- Add an else section to the if-statement in the main program loop that displays an error message if the user does not enter 1, 2, or 3

```
Choose an option:
```

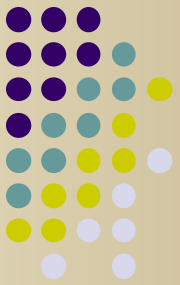
1. Encrypt a message
2. Decrypt a message
3. Quit

```
Enter your choice: 4
```

```
Bad choice, try again
```

```
Choose an option:
```

1. Encrypt a message
- ...



Homework 2

- Also posted to class webpage. Due next Wednesday. Submission system will not be available until Monday.
- KC-267 is open Tuesday, Thursday, and Friday afternoons. Cypherlock code is: