

Introduction to Java Programming

Lecture 4 of 7
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How to Write to File

Goal: Get practice with file-writing objects in Java

Will work with `FileWriter` object to start, and let you explore

First, need to include appropriate packages

```
12 |  
13 | import java.io.*;  
14 |
```

Here, "io" stands for input/output

How to Write to File

Here is how you create a FileWriter object

Declare a filename, this includes the directory to where you will write your data:

```
22 | File file = new File("/Users/young/NetBeansProjects/IfElse/src/ifelse/myFile");
```

How to Write to File

Writing to file can encounter problems, and Java will let you know via "throwing exceptions"

You need to put your code in "try" and "catch" statements

```
24      try{
25          FileWriter fw = new FileWriter(file);
26          fw.write("Hello, World");
27          fw.flush();
28      }
29      catch(IOException e){
30          System.out.println("Exception thrown.");
31      }
32  }
```

How to Write to File

Can you BufferedWriter, which provides additional functionality

```
24      try{
25          FileWriter fw = new FileWriter(file);
26          BufferedWriter bw = new BufferedWriter(fw);
27          bw.write("Hello, wosdkjfhaskrld!");
28          bw.flush();
29          bw.close();
30      }
31      catch(IOException e){
32          System.out.println("Exception thrown.");
33      }
```

Reading From File

Can use BufferedReader:

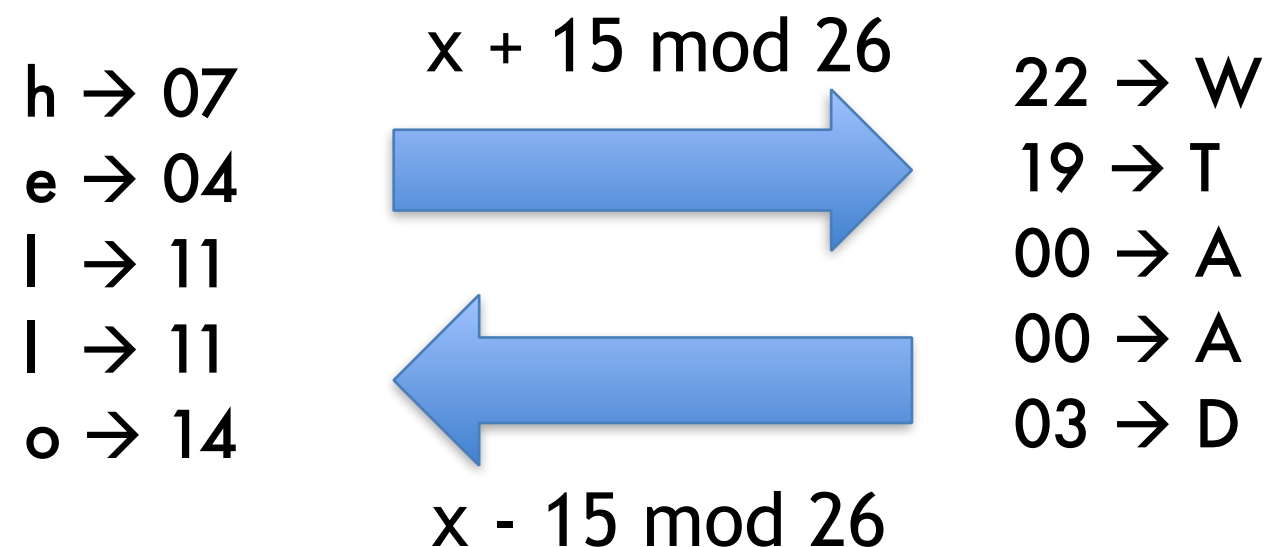
```
26     try{
27         FileReader fr = new FileReader("/Users/young/NetBeansProjects/IfElse/src/ifelse/myFile");
28         BufferedReader br = new BufferedReader(fr);
29         String stuff = br.readLine();
30         System.out.println(stuff);
31     }
32     catch(IOException e){
33         //System.out.println("Exception thrown.");
34     }
```

Caesar Cipher

Caesar cipher: an old example

- character \rightarrow number + offset modulo 26

Example from text: offset = 15 and cipher is



1-to-1 mapping of plaintext characters to ciphertext characters

Lab Assignment

Write a program that allows you to encrypt a file. This program should take as input:

(1) File name **plainText.txt**

and then should provide the capability to:

(2) Use a hardcoded Caesar cipher to encrypt **plainText.txt** to produce the encrypted text in a new file **cipherText.txt**

(3) Read in cipherText.txt and decrypt it, writing to a new file **decrypted.txt**

You may specify your Caesar cipher any way that you like, so long as it works.