**Projects for Chapter 10**

## 

## Project 10-1: HTML Converter

Create a program that reads an HTML file and converts it to plain text.

## Console

HTML Converter

Grocery List

\* Eggs

\* Milk

\* Butter

## Specifications

* Store the following data in a file named groceries.html:

<h1>Grocery List</h1>

<ul>

<li>Eggs</li>

<li>Milk</li>

<li>Butter</li>

</ul>

* When the program starts, it should read the contents of the file, remove the HTML tags, remove any spaces to the left of the tags, add asterisks (\*) before the list items, and display the content and the HTML tags on the console as shown above.

# Project 10-2: Email Creator

Create a program that reads a file and creates a series of emails.

## Console

Email Creator

================================================================

To: jbutt@gmail.com

From: noreply@deals.com

Subject: Deals!

Hi James,

We've got some great deals for you. Check our website!

================================================================

To: josephine\_darakjy@darakjy.org

From: noreply@deals.com

Subject: Deals!

Hi Josephine,

We've got some great deals for you. Check our website!

================================================================

To: art@venere.org

From: noreply@deals.com

Subject: Deals!

Hi Art,

We've got some great deals for you. Check our website!

## Specifications

* Store a list of email addresses in a file using this format:

james,butt,jbutt@gmail.comjosephine,darakjy,josephine\_darakjy@darakjy.orgart,venere,art@venere.org

* Store a template for a mass email in a file like this:

To: {email}  
From: noreply@deals.com  
Subject: Deals!  
  
Hi {first\_name},  
  
We've got some great deals for you. Check our website!

* When the program starts, it should read the email addresses and first names from the file, merge them into the mass email template, and display the results on the console.
* All email addresses should be converted to lowercase.
* All first names should be converted to title case.
* If you add names to the list of email addresses, the program should create more emails.
* If you modify the template, the program should change the content of the email that’s created.

# Project 10-3: Interest Calculator

Create a program that calculates the interest on a loan. This program should make it easy for the user to enter numbers.

## Console

Interest Calculator

Enter loan amount: $100,000

Enter interest rate: %2.275

Loan amount: $100,000.00

Interest rate: 2.275%

Interest amount: $2,275.00

Continue? (y/n): y

Enter loan amount: 100K

Enter interest rate: 2.275

Loan amount: $100,000.00

Interest rate: 2.275%

Interest amount: $2,275.00

Continue? (y/n): n

Bye!

## Specifications

* Use the Decimal class to make sure that all calculations are accurate. It should round the interest that’s calculated to two decimal places, rounding up if the third decimal place is five or greater.
* The interest rate that’s displayed can have up to 3 decimal places.
* Assume that the user will enter valid decimal values for the loan amount and interest rate with these exceptions:
* If the user enters a dollar sign ($) at the beginning of the loan amount, remove it from the string before converting the string to a number.
* If the user enters a comma in the loan amount, remove it from the string before converting the string.
* If the user enters a K at the end of the loan amount, remove the K from the end of the string, and multiply the loan amount by 1000. For example, a loan amount of 50K should be converted to a value of 50,000.
* If the user enters a percent sign (%) before or after the interest rate, remove it from the string before converting the string to a number.