Comp 348 Assignment 4 – Research

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Researching how to use the JavaMail API within a program

Before looking into how to use the JavaMail API I needed to learn how to include the library in my code to be able to use it. I was able to find officially packaged jars of the API on Oracles website here (http://www.oracle.com/technetwork/java/index-138643.html). I used my knowledge from the third assignment when including the JAR for the RMI server and client when compiling the code to use the JavaMail jar. The downloaded JavaMail jar was included in a libs directory in the project and referenced in the class path when compiling and running the code. This can be seen in the Makefile submitted with this project.

Tutorial 1 – Sending an Email in Java

Since the first parts of this project involve sending emails naturally I looked for a tutorial related to sending first. This was the first tutorial I came across: https://www.javatpoint.com/example-of-sending-email-using-java-mail-api. This tutorial provided information on how to do the basics such as spin up a default mail session and how to construct an outgoing email message using the MimeMessage class but it was lacking a few things. It didn't show how to define a custom mail server and how to authenticate a user (which are both requirements for this project). Even though this tutorial was a bit lacking it was a good starting point and I went through the whole thing.

Tutorial 2 – JavaMail API – Sending email via Gmail SMTP example

For the purposes of this assignment we need to be able to send emails through a specific mail server using a set of user credentials. I came across this tutorial which goes over authenticating to a specific mail server: https://www.mkyong.com/java/javamail-api-sending-email-via-gmail-smtp-example/. This tutorial also showed how to construct an outgoing message and more or less followed the style shown in the first tutorial. This tutorial shows how to modify the session properties to specify the correct mail server and port. It also shows how to launch the mail session using SSL (+1 for security). This tutorial also shows how to implement a custom authenticator. This was useful to figure out how to authenticate with the mail server. Overall this tutorial answered all the questions I had leftover from the first tutorial and gave me enough information to finish implementing parts 1 & 2 of this project.

Tutorial 3 – JavaMail API - Checking Emails

For the last part of the assignment we need to be able to retrieve a user's emails and display them. I started this part using the pop3 mail protocol and followed this tutorial https://www.tutorialspoint.com/javamail_api/javamail_api_checking_emails.htm. This tutorial

worked well and provided me with the information I needed to get emails but for some reason even though I was requested to only be shown emails that have NOT been seen (as per the assignment spec) when using the pop3 protocol I would always get all emails. I messed around with using IMAP by reading posts on stackoverflow and after switching to IMAP JavaMail was returning only emails that followed my FlagTerm (an object used to filter incoming emails) of only unseen emails. The tutorial was a good start for me as it gave me the information required to be able to display emails to the user. I just had to work a bit extra to get only the unread emails rendering.