Practical Sheet

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Title: Java Mail API

Introduction:

Java Mail API

   Java Mail API is a set of abstract APIs that model the principles of email messaging. It provides a platform independent and protocol independent framework to build mail and messaging applications. The Java Mail API allows developers to send, receive and manipulate email messages using the Java Programming language.

Two JAR Files used:

i) activation.jar: It is used to dynamically determine the type of data contained in a message or attachment.

ii) javax.mail.jar: It provides the necessary classes and interfaces to create, send and receive emails.

Steps in sending mail

→ Configure the mail server properties, such as authentication, TLS, host and port.

→ Create a mail session using the configured properties and an 'Authenticator' for providing the email and password.

→ Create a MimeMessage object and set its properties such as sender, recipient, subject and content.

→ Use transport.send() to send message.

Steps in receiving mail
-> Configure the properties for the POP3 mail server, including the host, port, and SSL /TLS settings.
-> Create a session object.
-> Connect to the mail store ~~using~~
-> Open the inbox folder with in the mail store.
-> Retrieve the array of message.
-> Iterate through each message.
-> Close the folder and disconnect.

Code JavaMailUtil.java:

```java
import java.util.Properties;
public class JavaMailUtil {
    public static void sendMail(String recepient) throws Exception {
        System.out.println("Preparing to send Mail");
        Properties properties = new Properties();
        properties.put("mail.smtp.auth", "true");
        properties.put("mail.smtp.starttls.enable", "true");
        properties.put("mail.smtp.host", "smtp.gmail.com");
        properties.put("mail.smtp.port", "587");

        final String myAccountEmail = "utsavacharyasharma@gmail.com";
        final String password = "xxxx";

        Session session = Session.getInstance(properties, new Authenticator() {
            @Override
            protected PasswordAuthentication getPasswordAuthentication() {
                return new PasswordAuthentication(myAccountEmail, password);
            }
        });
        Message message = prepareMessage(session, myAccountEmail, recepient);
        Transport.send(message);
        System.out.println("Message Sent Successfully");
    }

    private static Message prepareMessage(Session session, String myAccountEmail,
                String recepient)
        throws MessagingException {
        try {
            Message message = new MimeMessage(session);
            message.setFrom(new InternetAddress(myAccountEmail));
            message.setRecipient(Message.RecipientType.TO, new
                        InternetAddress(recepient));
            message.setSubject("Java Lab 8");
            MimeBodyPart messageBodyPart = new MimeBodyPart();
            messageBodyPart.setContent("<h1> Hello </h1> <p> Utsav
                        Acharya Sharma </p>", "text/html");
```

```java
MimeBodyPart attachPart = new MimeBodyPart();
DataSource source = new FileDataSource("D:\\Utsov\\Java\\Mail\\SendMail\\Utsov.txt");
attachPart.setDataHandler(new DataHandler(source));
attachPart.setFileName("Utsov.txt");

Multipart multipart = new MimeMultipart();
multipart.addBodyPart(messageBodyPart);
multipart.addBodyPart(attachPart);
message.setContent(multipart);

return message;
} catch(Exception ex){
    Logger.getLogger(JavaMailUtil.class.getName()).log
                    (Level.SEVERE, null, ex);
}
    return null;
    }
}
```

Java Mail.java :

```java
public class JavaMail{
    public static void main(String[] args) throws Exception{
        JavaMailUtil.sendMail("utsavachorya shrsma@gmail.com");
    }
}
```

```
Preparing to send Mail
Message Sent Successfully
```

Java Lab 8 Inbox ×

utsavacharyasharma@gmail.com

to me

Hello

Utsav Acharya Sharma

One attachment • Scanned by Gmail

📄 Utsav.txt

↩ Reply   ↪ Forward

```java
Code:
import java.util.*;

public class MailReceiver
    public static void receiveEmail (String pop3Host, String storeType,
                                                String user, String password
                                                int number of Emails) {
            Properties props = new Properties();
            props.put ("mail.pop3.host", pop3Host);
            props.put (" mail.pop3.port", "995");
            props.put ("mail.pop3.starttls.enable", "true");
            props.put ("mail.store.protocol", "pop3");

            Session session = Session.getInstance (props);
            try {
                Store mailStore = session.getStore(storeType);
                mailStore.connect (pop3Host, user, password);

                Folder folder = mailStore.getFolder("INBOX");
                folder.open (Folder.READ_ONLY);
                int totalMessages = folder.getMessageCount();
                int startIndex = Math.max(1, totalMessages - numberOf
                                                Emails +1);
                Message [] emailMessages = folder.getMessages (startIndex,
                                                totalMessages);
                System.out.println("Total Messages - " + emailMessages.
                                                length);
                for (int i=0; i<emailMessages.length; i++){
                    Message message = emailMessages [i];
                    System.out.println ("Email "+ (i+1)+"-");
                    System.out.println("Subject - "+ message.getSubject());
                    System.out.println(" From - " + Arrays.toString(message.
                                                getFrom() ));
                }
                folder.close(false);
                mailStore.close();
            } catch (Exception e) {
                e.printStackTrace();
                System.err.println ("Error in receiving email.")
                            3
        3
```

```java
public static void main (String [] args){
    String pop3Host = "pop.gmail.com";
    String mailStoreType = "pop3s";
    final String userName = "utsavacharyasharma@gmail.com";
    final String password = " xxxx';
    recieveEmail (pop3Host, mailStoreType, userName, password, 5);
  }
}
```

```
Total Messages - 5
Email 1-
Subject - You have 5 notifications about Samir and others
From - [Facebook <reminders@facebookmail.com>]
Email 2-
Subject - "How is this even legal"
From - [Reddit <noreply@redditmail.com>]
Email 3-
Subject - You have 5 notifications about Sita and others
From - [Facebook <reminders@facebookmail.com>]
Email 4-
Subject - You have 5 notifications about Sarita and others
From - [Facebook <reminders@facebookmail.com>]
Email 5-
Subject - "Padhna sakiyena"
From - [Reddit <noreply@redditmail.com>]
```