Practical File

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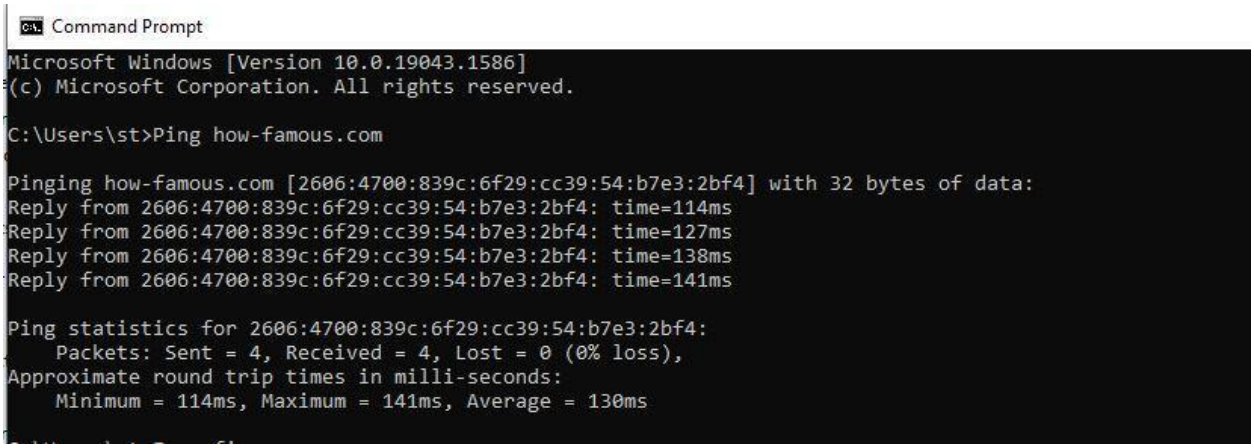
Exam Roll No. 20058590060

Practical 1.

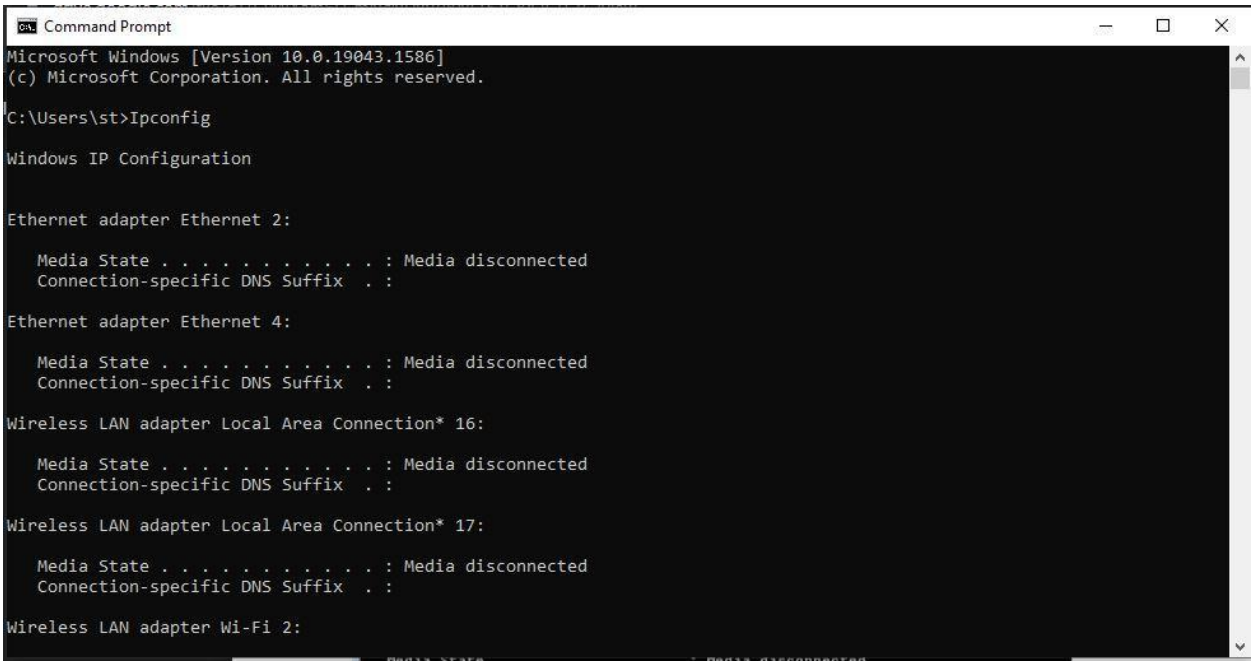
Demonstrate the use of Network tools: ping, ipconfig, tracert, arp, netstat, whois

Answer

Ping



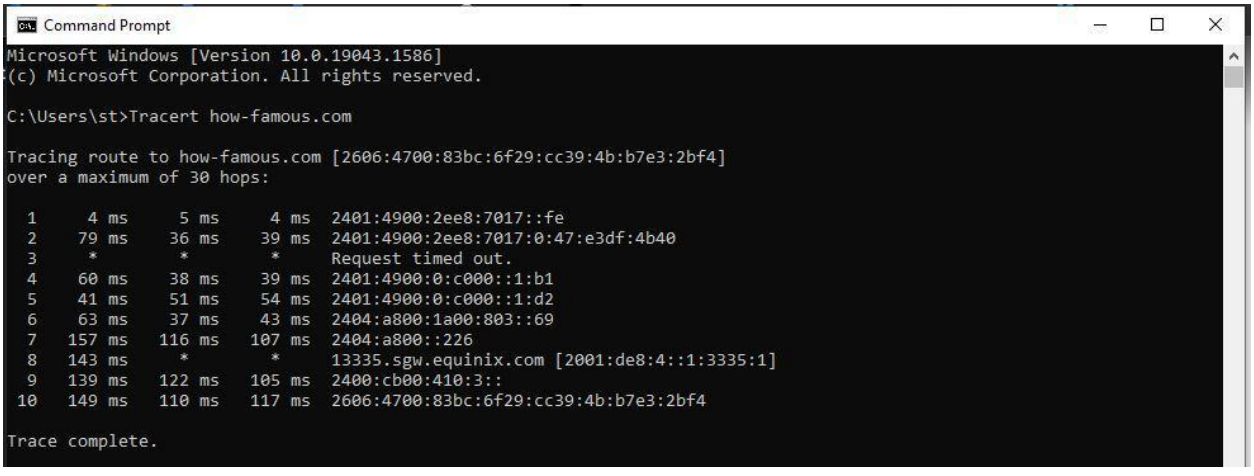
Ipconfig



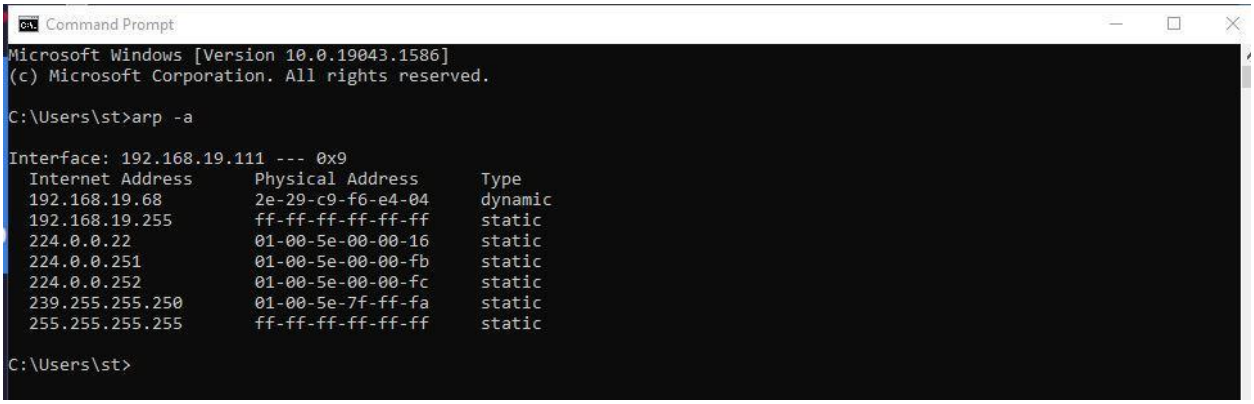
Ifconfig

Common uses for ifconfig include setting the IP address and netmask of a network interface and disabling or enabling an interface.

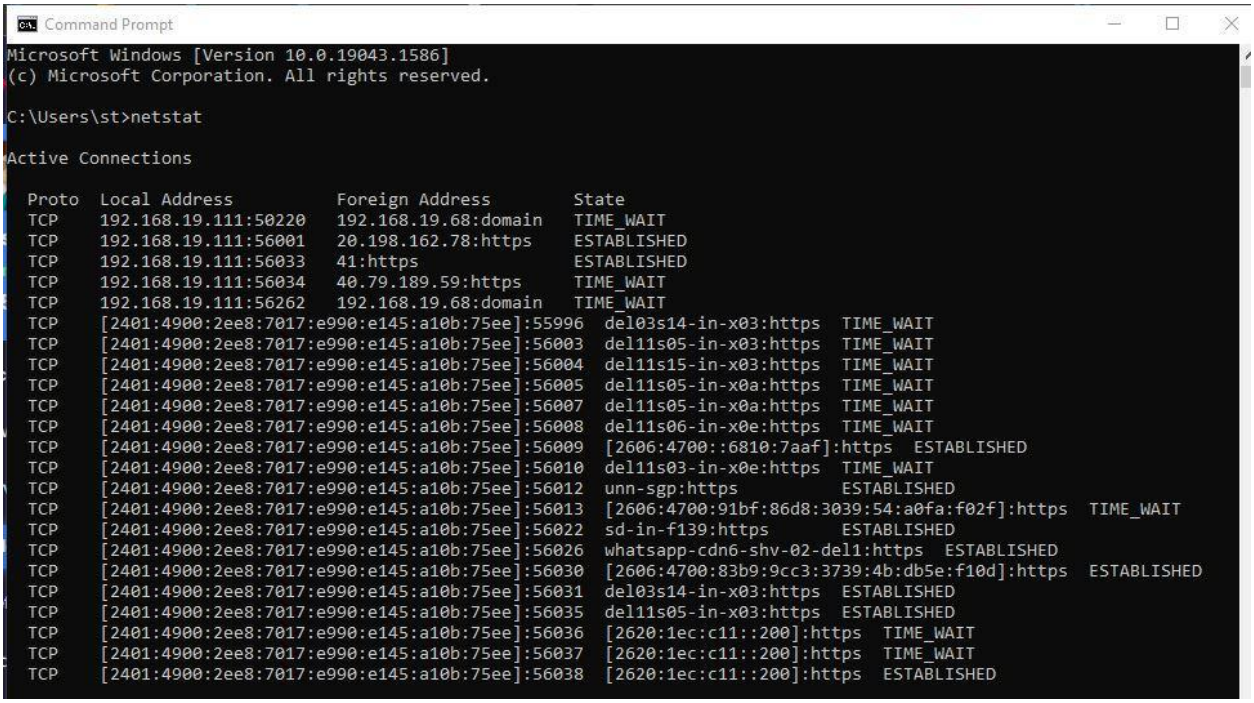
Tracert



ARP



Netstat

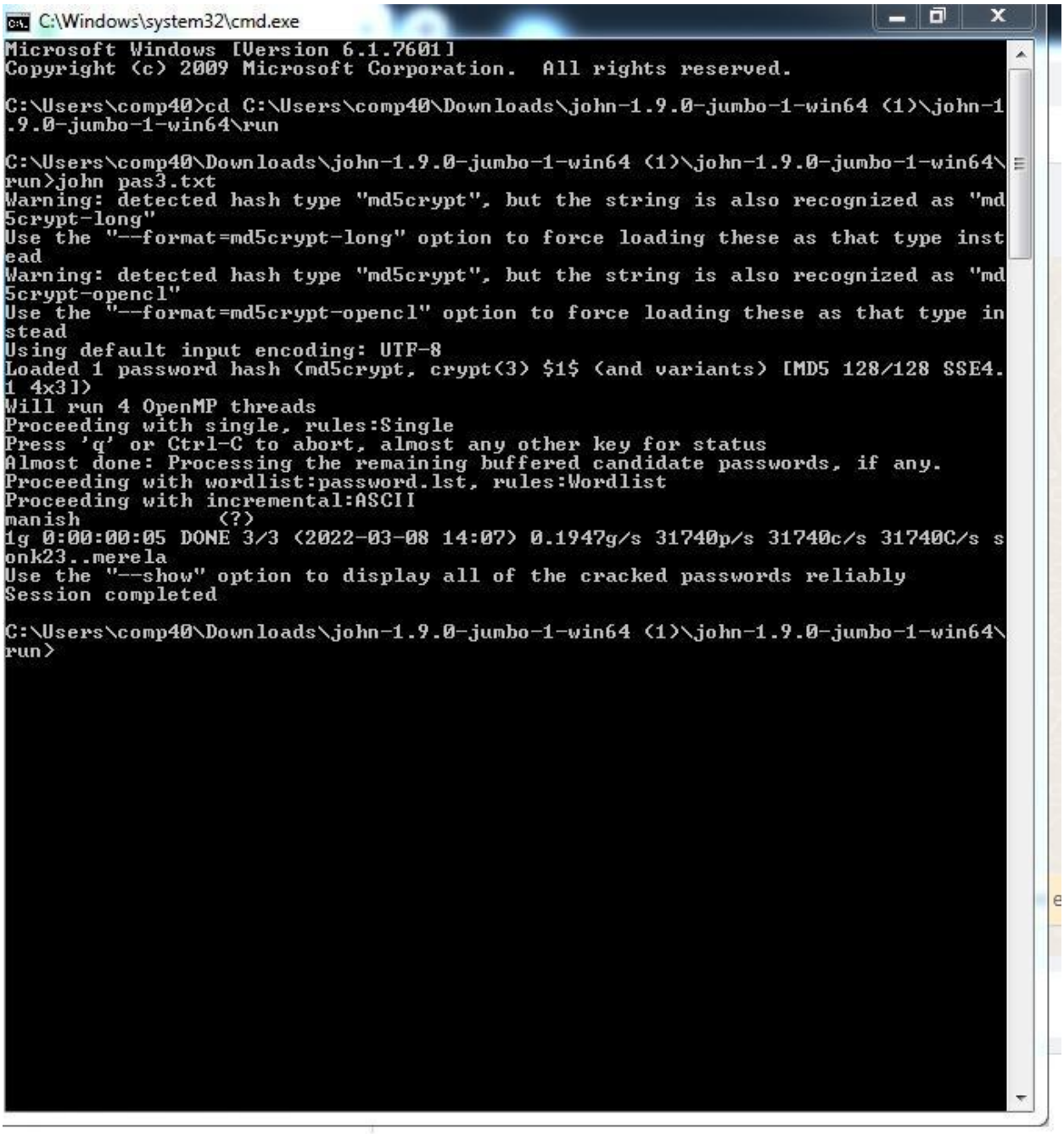


Practical 2.

Use of Password cracking tools: John the Ripper, Ophcrack, Verify the Strength of passwords using these tools.

Answer

John the Ripper



Practical 3.

Perform encryption and decryption of Caesar cipher. Write a script for performing these operations.

Answer

Algorithm of Caesar Cipher

The algorithm of Caesar cipher holds the following features −

- Caesar Cipher Technique is the simple and easy method of encryption technique.
- It is simple type of substitution cipher.
- Each letter of plain text is replaced by a letter with some fixed number of positions down with alphabet.

```
def encrypt(text,s):
result = ""
   # transverse the plain text
   for i in range(len(text)):
      char = text[i]
      # Encrypt uppercase characters in plain text

      if (char.isupper()):
         result += chr((ord(char) + s-65) % 26 + 65)
      # Encrypt lowercase characters in plain text
      else:
         result += chr((ord(char) + s - 97) % 26 + 97)
      return result
#check the above function
text = "CEASER CIPHER DEMO"
s = 4

print "Plain Text : " + text
print "Shift pattern : " + str(s)
print "Cipher: " + encrypt(text,s)
```

Practical 4.

Perform encryption and decryption of a Rail fence cipher. Write a script for performing these operations.

Answer

```
def cipher(s, key, graph=False) :
    down=True
    raw_out=[]
    out=''
    i=0
    for x in range(key) :
        raw_out.append({})
    for pos in range(len(s)) :
        raw_out[i][pos]=s[pos]
        if i==key-1 :
            down=False
        if i==0 :
            down=True
        if down :
            i=i+1
        else :
            i=i-1
    for p in raw_out :
        for q in p :
            out+=p[q]
    if graph :
        return raw_out
    return out

def decipher(s, key) :
    map_list=cipher(s, key, True) #CREATING JUST FOR MAPPING - WHICHth CHARACTER
OF THE STRING - IS WHICHth CHARACTER OF THE CIPHER
    new={}
    out=''
    s_counter=0
    for x in map_list :
        for y in x :
            new[y]=s[s_counter]
            s_counter+=1
    for p in new :
        out+=new[p]
    return map_list
```

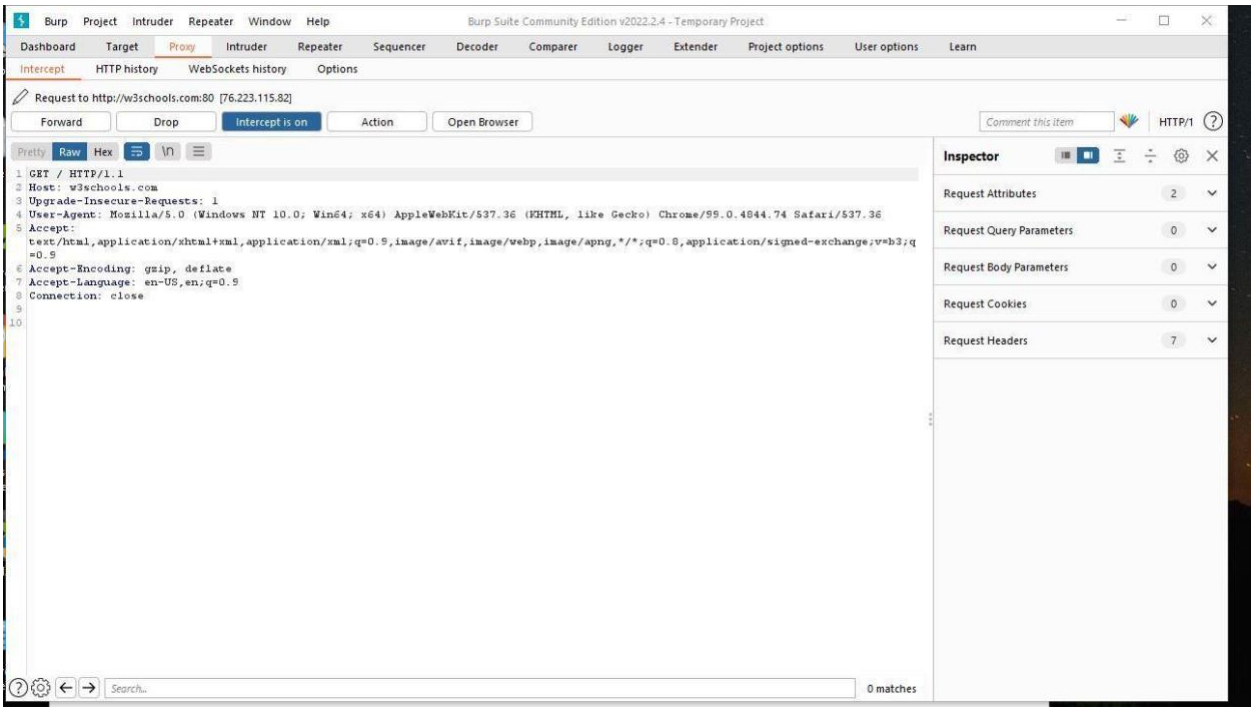
Practical 6.

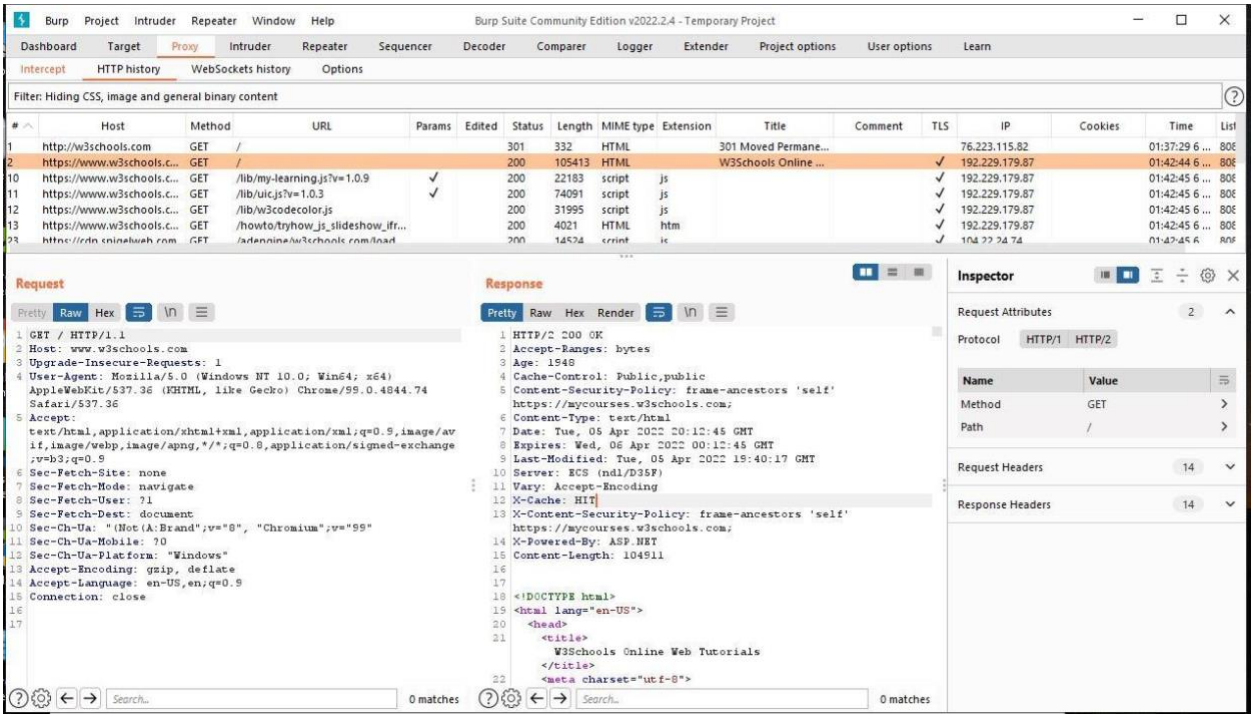
Use the Burp proxy to capture and modify the message.

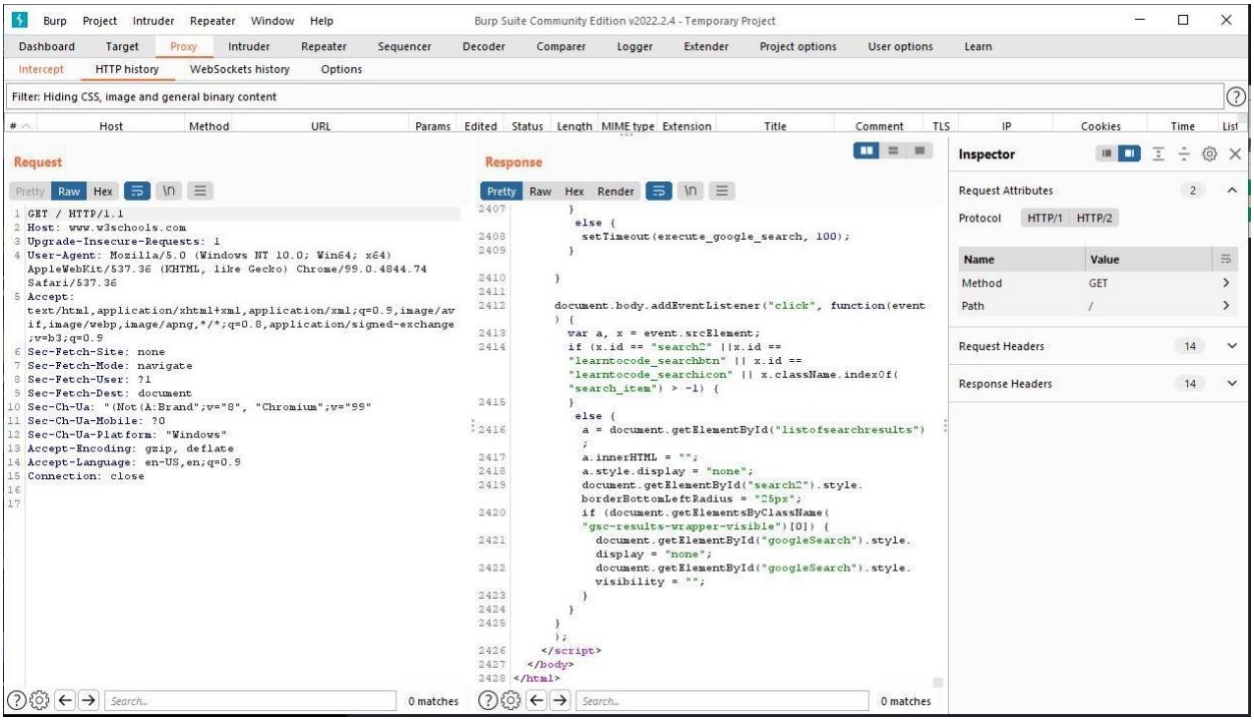
Answer

1. Open Burp Proxy Suite
2. Create a temp project with default settings
3. Go to proxy
4. Turn on intercept
5. Open Browser
6. Enter any URL etc...
7. Forward 8. Check your HTTP history

Burp Proxy Snashots


Burp Project Intruder Repeater Window Help
Burp Suite Community Edition v2022.2.4 - Temporary Project
Dashboard Target Proxy Intruder Repeater Sequencer Decoder Comparer Logger Extender Project options User options Learn
Intercept HTTP history WebSockets history Options
Request to http://w3schools.com:80 [76.223.115.82]
Forward Drop Intercept is on Action Open Browser
Comment this item
HTTP/1
Pretty Raw Hex \n
1 GET / HTTP/1.1
2 Host: w3schools.com
3 Upgrade-Insecure-Requests: 1
4 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/99.0.4844.74 Safari/537.36
5 Accept:
text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q
=0.9
6 Accept-Encoding: gzip, deflate
7 Accept-Language: en-US,en;q=0.9
8 Connection: close
9
10
Inspector
Request Attributes 2
Request Query Parameters 0
Request Body Parameters 0
Request Cookies 0
Request Headers 7
Search...
0 matches





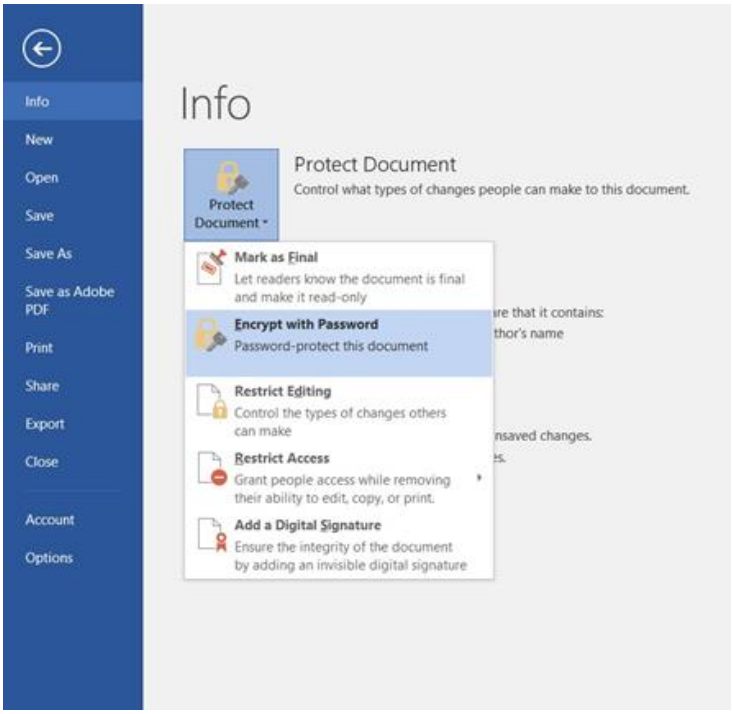
Total Number of Response lines is 2428

Practical 7.

Demonstrate sending of a protected word document.

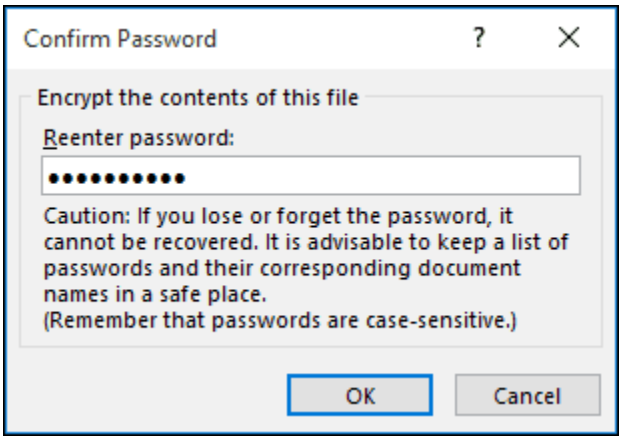
Answer

First, open the Office document you would like to protect. Click the File menu, select the Info tab, and then select the Protect Document button. Click Encrypt with Password.

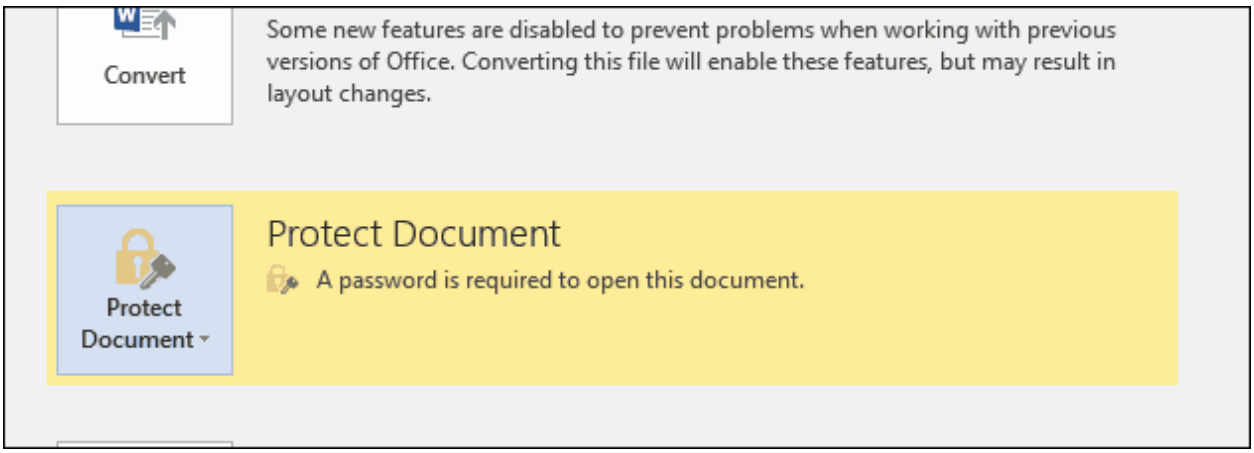


Enter your password then click OK

Enter the password again to confirm it and click OK.



Microsoft Word will now indicate the document is protected. Each time you open the document, you will be prompted to enter your password to access its contents.



Practical 8.

Demonstrate sending of a digitally signed document.

Answer

1. In the document or worksheet, place your pointer where you want to create a signature line.
2. On the **Insert** tab, in the **Text** group, click the **Signature Line** list, and then click **Microsoft Office Signature Line**.
3. In the **Signature Setup** dialog box, type information that will appear beneath the signature line:

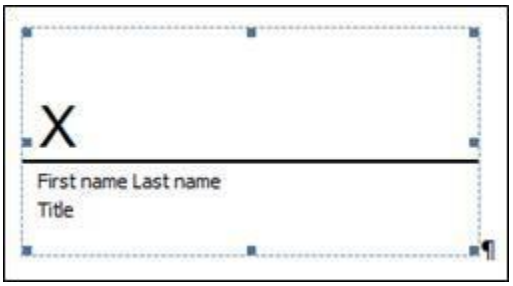
- **Suggested signer** The signer's full name.
- **Suggested signer's title** The signer's title, if any.
- **Suggested signer's e-mail address** The signer's e-mail address, if needed.
- **Instructions to the signer** Add instructions for the signer, such as "Before signing the document, verify that the content is correct."

4. Select one or both of the following check boxes:

    - **Allow the signer to add comments in the Sign dialog box** Allow the signer to type a purpose for signing.
    - **Show sign date in signature line** The date the document was signed will appear with the signature.

Sign the signature line in Word or Excel

When you sign a signature line, you add a visible representation of your signature and a digital signature.



1. In the file, right-click the signature line.
2. From the menu, select **Sign**.
    - To add a printed version of your signature, type your name in the box next to the **X**.

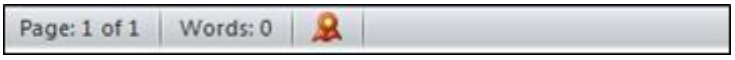
- To select an image of your written signature, click **Select Image**. In the **Select Signature Image** dialog box, find the location of your signature image file, select the file that you want, and then click **Select**.

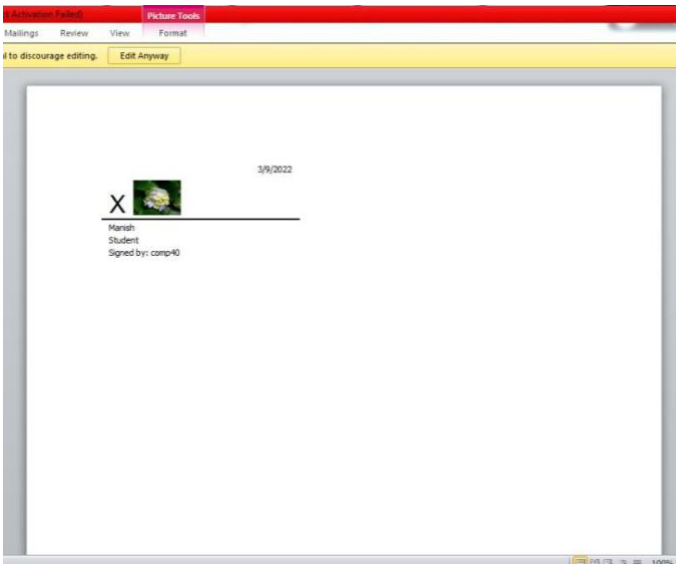
3. To add a handwritten signature (Tablet PC users only), sign your name in the box next to the **X** by using the inking feature.

   Click **Sign**.

   The **Signatures** button appears at the bottom of the document or worksheet.

   The following image shows the **Signatures** button.





Practical 9.

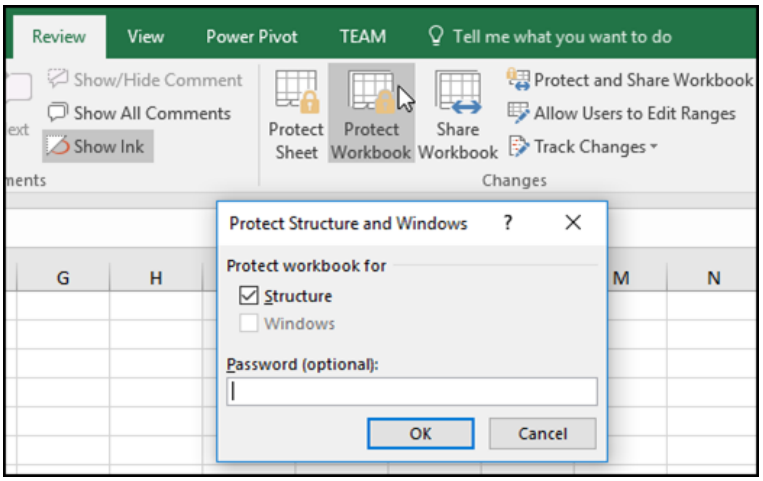
Demonstrate sending of a protected worksheet.

Answer

Protect the workbook structure

To protect the structure of your workbook, follow these steps:

1. Click **Review** > **Protect Workbook**.



2. Enter a password in the **Password** box.
3. Select **OK**, re-enter the password to confirm it, and then select **OK** again

Practical 10.

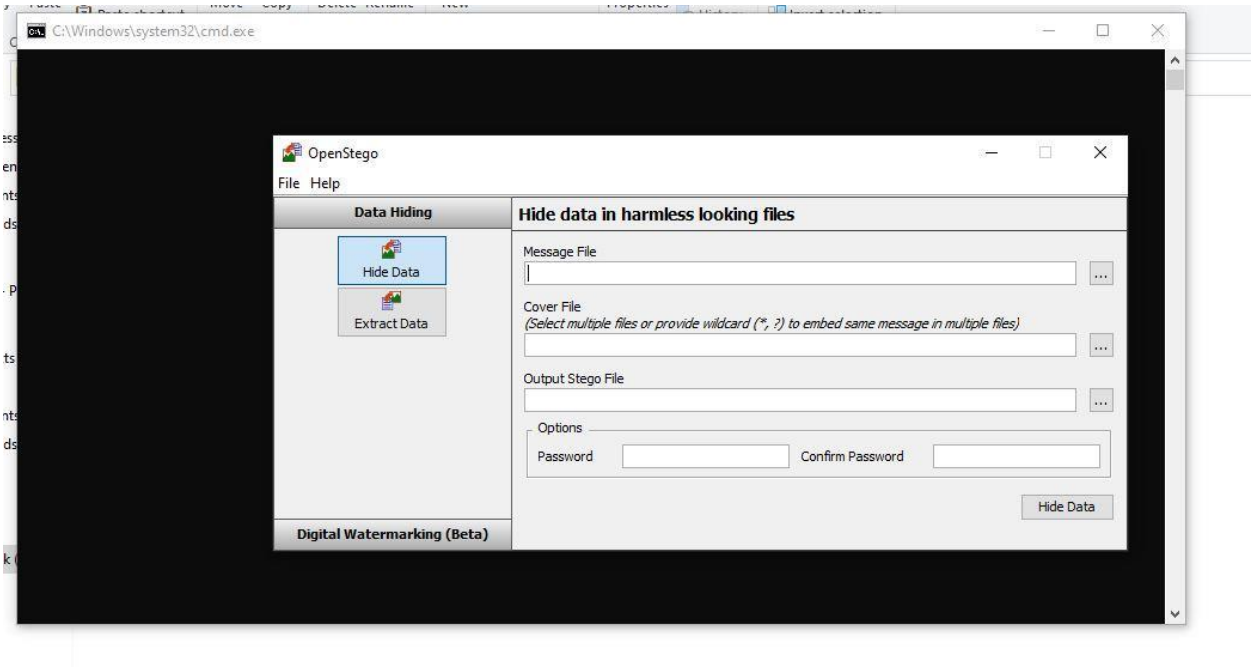
Demonstrate the use of steganography tools.

Answer

Steganography Tools:

A steganography software tools allows a user to attach hidden data in a carrier file, such as an image or video, and sometimes it could be an audio , and later take off that data. It is not necessary to hide the message in the original file at all.

First Run **Openstego** Bet File



Then

Select Message File

Select Cover File

Select Output Stego File

Enter Password, Then Confirm Password once again

Click on Hide Data, **Done**