Hidden In Plain Sight
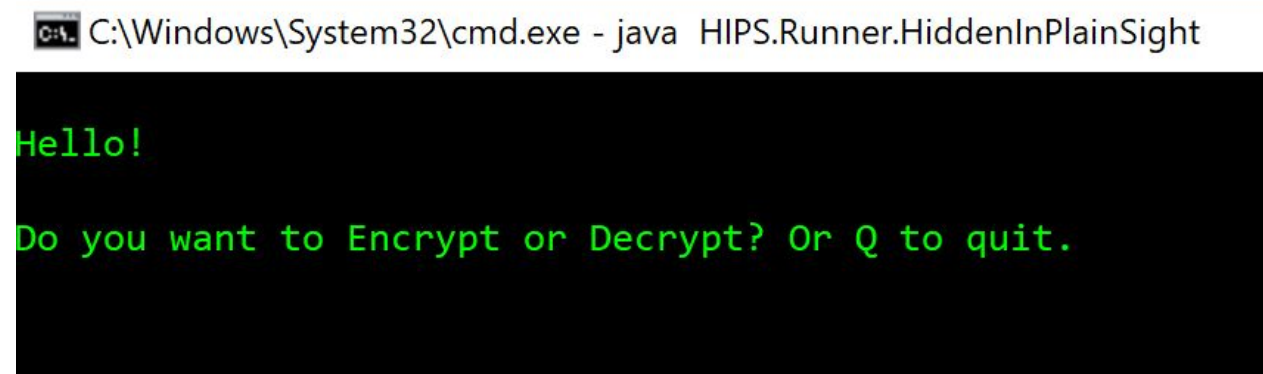
Text-Based Testing Document

Textbase Interface:

1. Open command prompt or terminal and then navigate to your source folder containing the important file.
2. Then input these commands in this order:
   a. javac HIPS\backend*.java
   b. javac HIPS\Runner*.java
   c. java HIPS.Runner.HiddenInPlainSight
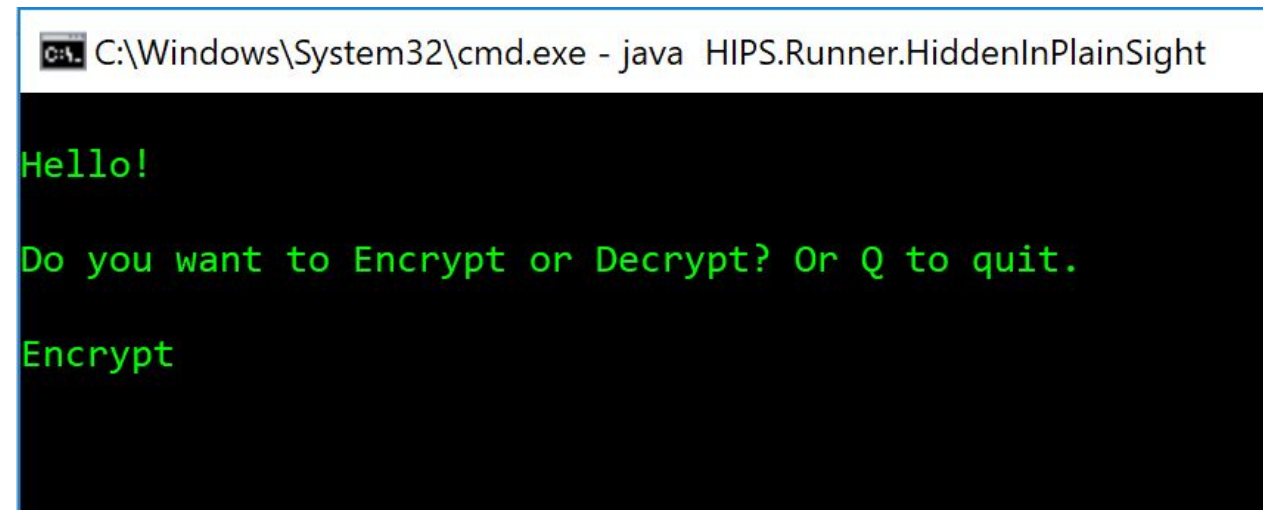3. The textbase interface should show up on the command prompt like in the image below.

Encrypting an image

4. Enter in "Encrypt" just like the image below.

The following should pop up

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

What sentence do you want to hide?

Hello World!
```

5. Enter in a sentence you want to encrypt.
6. Once you enter a sentence that you want to encrypt, you can input a file path to the image that you want the sentence to be encrypted (refer to image below). Note: If you do not enter an image path to be encrypted, the program by default will encrypt the sentence into a default image.

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

If you would like to encrypt onto a specific image Enter the path now. If not hit enter.
Note: if on a windows machine use \\ instead of \ for the path.

C:\\FakePath\\
```

7. Next you can save your image to a specific path by entering the path into the command prompt (refer to image below). If not it will by default save the image in the source folder. The image will be saved as hidden.png. After saving the image it will bring you back to the main menu screen. **Note: When using a windows operating system use "\\" instead of "\".**

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

Encrypting: Hello World!
Images/2.png
If you would like to save your image to a specific directory enter that directory now. If not hit enter.
C:\\FakePath\\
```

<u>Decrypting an image</u>
8. To decrypt an image type in Decrypt.
9. Copy the file path that you want to decrypt and input it in the command prompt (refer to image below).

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

What's the path to the image?
Note: if on a windows machine use \\ instead of \ for the path.
C:\\FakePath\\hidden.png
```

10. Your done! Your message should be printed out in the command prompt.

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

Your decrypted message is:
Hello World!

Do you want to Encrypt or Decrypt? Or Q to quit.
```

Test 1 (Testing for invalid length):

1. Do the normal startup (like in the instruction above) and when you get to the part when your entering your desired message. Copy and enter the following message: TestTestTestTestTestTestTestTestTestTestTestTestTestTestTestTestTestTestTestTest TestTestTestTestTestTestTestTestTestTest
2. Then copy and enter the image path of 2.png from the image folder from the source folder into the command prompt. (Refer to image below)

3. A message say the message is to long for the image should be printed in the command prompt (look at image below).

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight
Message Length and Image are not compatible. Choose a different image to encrypt to.
Do you want to Encrypt or Decrypt? Or Q to quit.
```

Test 2 (Testing for invalid character):

1. Do the normal startup and when you get to the part when your entering your desired message. Enter this text Ä¿ê. And continue to choose an image to encrypt.
2. The following message should be printed out saying that the message entered is invalid (refer to image below).


```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

What sentence do you want to hide?

Ä¿ê

If you would like to encrypt onto a specific image Enter the path now. If not hit enter.
Note: if on a windows machine use \\ instead of \ for the path.


Encrypting: ???
Images/2.png
Invalid Character. Please input basic Ascii text.
Do you want to Encrypt or Decrypt? Or Q to quit.
```

Test 3 (Testing .png file):

1. Do your normal start up and enter the message "This should work" when you get to the entering you message part. And then continue to the next phase.


```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

Hello!

Do you want to Encrypt or Decrypt? Or Q to quit.

Encrypt

What sentence do you want to hide?

This should work
```

2. When you get to the part where you choose an image to encrypt, enter the path for the image: 2.png. (Refer below)

If you would like to encrypt onto a specific image Enter the path now. If not hit enter.
Note: if on a windows machine use \\ instead of \ for the path.

C:\\FakePath\\2.png

3. After you encrypted the image and save the image. Then you start decrypting by choosing the file path which should output "This should work". (Look at the image below)

Your decrypted message is:
This should work

Do you want to Encrypt or Decrypt? Or Q to quit.

Test 4 (Testing .jpg file):

1. Do your normal start up and enter the message "This should work" when you get to the entering you message part. And then continue to the next phase.

Hello!

Do you want to Encrypt or Decrypt? Or Q to quit.

Encrypt

What sentence do you want to hide?

This should work

2. When you get to the part where you choose an image to encrypt, enter the path for the image: testing.jpg. (Refer below)

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight
If you would like to encrypt onto a specific image Enter the path now. If not hit enter.
Note: if on a windows machine use \\ instead of \ for the path.

C:\\FakePath\\testing.jpg
```

3. After you encrypted the image and save the image. Then you start decrypting by choosing the file path which should output "This should work". (Look at the image below)


```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight
Your decrypted message is:
This should work

Do you want to Encrypt or Decrypt? Or Q to quit.
```
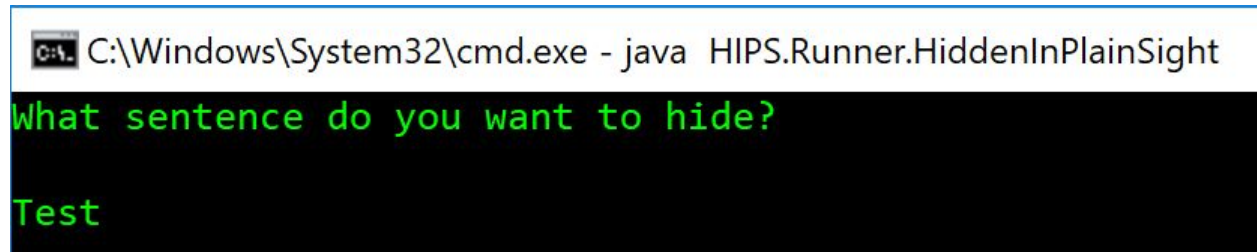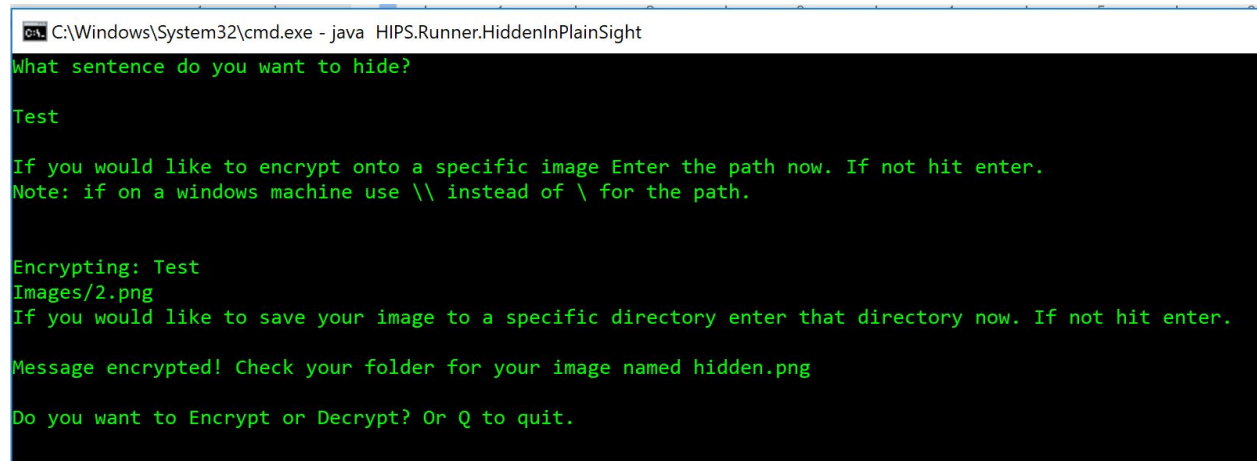
Test 5 (Testing for no customization):

1. Start up the program
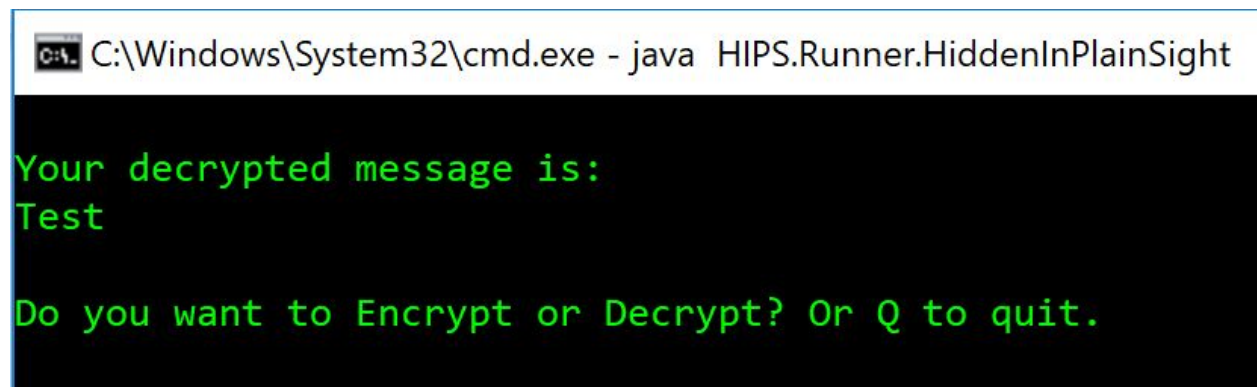2. Type in "Test" when choosing a message.


```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

What sentence do you want to hide?


Test
```

3. Now hit the Enter key without typing anything in.
4. Hit the Enter key again. And you should end up to a screen like this.


```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

What sentence do you want to hide?

Test

If you would like to encrypt onto a specific image Enter the path now. If not hit enter.
Note: if on a windows machine use \\ instead of \ for the path.


Encrypting: Test
Images/2.png
If you would like to save your image to a specific directory enter that directory now. If not hit enter.

Message encrypted! Check your folder for your image named hidden.png

Do you want to Encrypt or Decrypt? Or Q to quit.
```

5. Enter: Decrypt
6. Enter: hidden.png and the image should be like the image below.


```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

Your decrypted message is:
Test

Do you want to Encrypt or Decrypt? Or Q to quit.
```

Test 6 (Testing the saving file function and decrypting function):

1. Start up the program.
2. Enter: Encrypt
3. Enter: "Test" as the message
4. Hit Enter to move to the next phase.
5. Now save hidden image to a path you want. When encrypting enter the directory you want to save to in this format: (include the ending slashes)

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight
Encrypting: Test
Images/2.png
If you would like to save your image to a specific directory enter that directory now. If not hit enter.
C:\\FakePath\\
```

6. Then go to the Decrypting part and enter the same path that you entered to encrypt but now add "\\hidden.png. When decrypting enter the path to the image to decrypt like so:

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

What's the path to the image?
Note: if on a windows machine use \\ instead of \ for the path.
C:\\FakePath\\hidden.png
```

7. After you enter the file path it should output like the following image below:

```
C:\Windows\System32\cmd.exe - java  HIPS.Runner.HiddenInPlainSight

Your decrypted message is:
Test

Do you want to Encrypt or Decrypt? Or Q to quit.
```

Notes For Unix Based Terminals:

When encrypting to a specific image include the image name and extension as seen below:

```
Do you want to Encrypt or Decrypt? Or Q to quit.

encrypt

What sentence do you want to hide?

This is my hidden sentence!

If you would like to encrypt onto a specific image Enter the path now. If not hit enter.
Note: if on a windows machine use \\ instead of \ for the path.

/Users/fakepath/myImage.png
```

When saving to a directory include an ending forward slash

```
If you would like to save your image to a specific directory enter that directory now. If not hit enter.
/Users/fakepath/
```