

2CPP – C++ Language TP

Document content

Subject
Delivery

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1 CONTEXT

SupStegano tool is a tool to hidden text into jpg picture.

SupStegano is a company that needs your help to develop its tool because it needs to be powerful you naturally choose to use the C++ language.

2 SPECIFICATIONS

You must ask the user for a picture location.

For this, you can pass an argument at your SupStegano tool.

If no argument detected, you must ask the user. By default SupStegano take "picture.jpg"

This application should allow you to add text in picture without affecting the opening of the picture. This picture is a JPG.

This application should allow to read an image to display the hidden text.

It's necessary to create a specific line to make the difference between the binary of the picture, and hidden text.

A picture for example is attached to this subject. This picture contains a hidden text. You can open it, using a text editor like "TextEdit", "Notepad" or with cat command line on linux or mac Os X.

```

e?:?^??J?h?u R??r})?0^?SÃ0?!&?????0?!?-?? ???N7dd?P
??8??Pc?9?y?p>????s??H???p(4?<n?      ä?A?)g2?C?zM? ?q?>??Ç+??t??V?????????)?Z&1??
@???[\#1????????~4???4L????Y?????_ly?~6A$??$?????^??>??i?a?#B5.D?s??b>pH?"????
?Y7??i?d?sV?~?:N?-???*? ?)???_??V_?A?eXs0?vI?????L?hp7~??_5?[]??

##### specific line #####
Mon texte caché se situe en dessous de cette ligne identifiable
My hidden text is below this line
steves-MacBook-Pro:Documents binarymachine$

```

To add text:

- Add three blank lines before adding a specific line.
- Add text to hide.

To read the hidden text:

- Open the picture
- Read each line to check the specific line.
- Display all lines after the specific line.

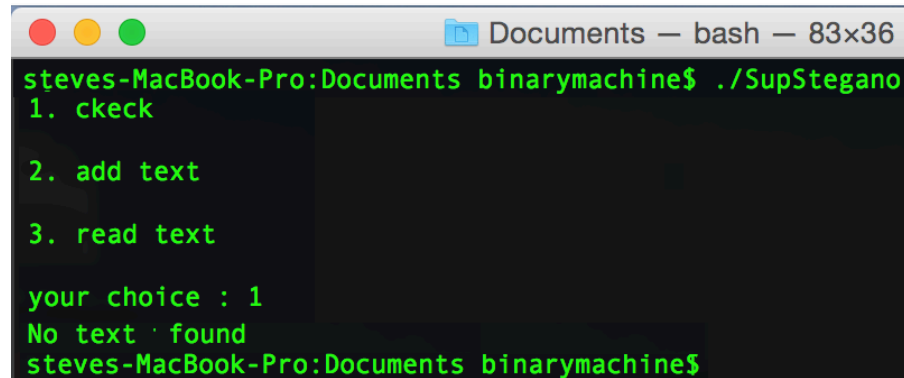
Your tool must also be able to check if a picture contains hidden text.

2.1 EXAMPLE OF USE

Without argument:

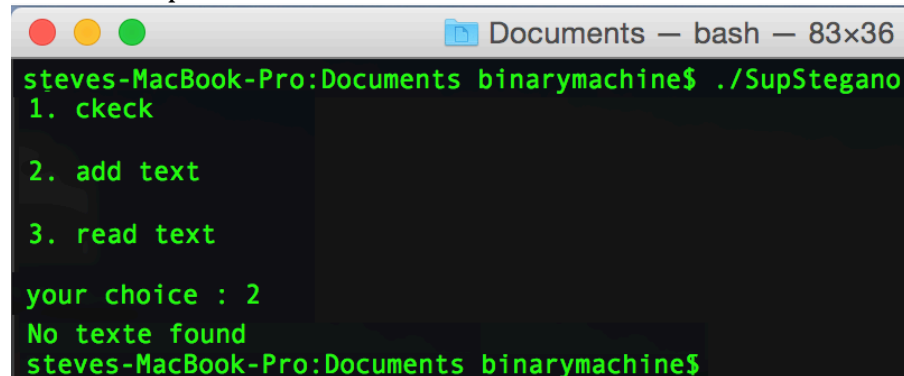
Ask user to get action.

Check hidden text:



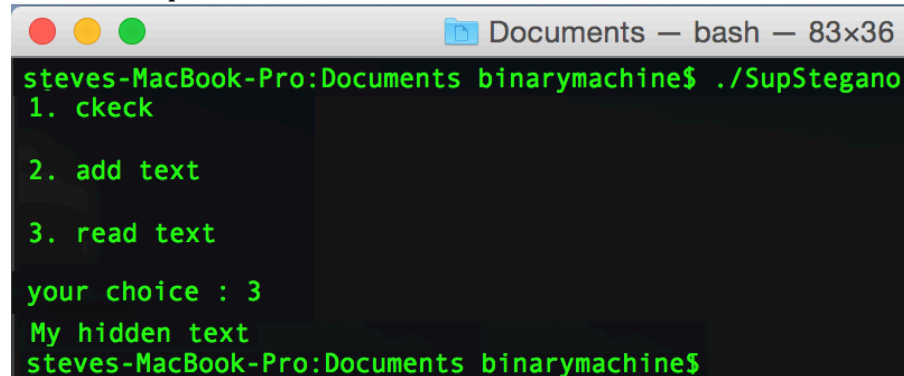
```
Documents — bash — 83x36
steves-MacBook-Pro:Documents binarymachine$ ./SupStegano
1. ckeck
2. add text
3. read text
your choice : 1
No text found
steves-MacBook-Pro:Documents binarymachine$
```

Add text in picture:



```
Documents — bash — 83x36
steves-MacBook-Pro:Documents binarymachine$ ./SupStegano
1. ckeck
2. add text
3. read text
your choice : 2
No texte found
steves-MacBook-Pro:Documents binarymachine$
```

Add text in picture:

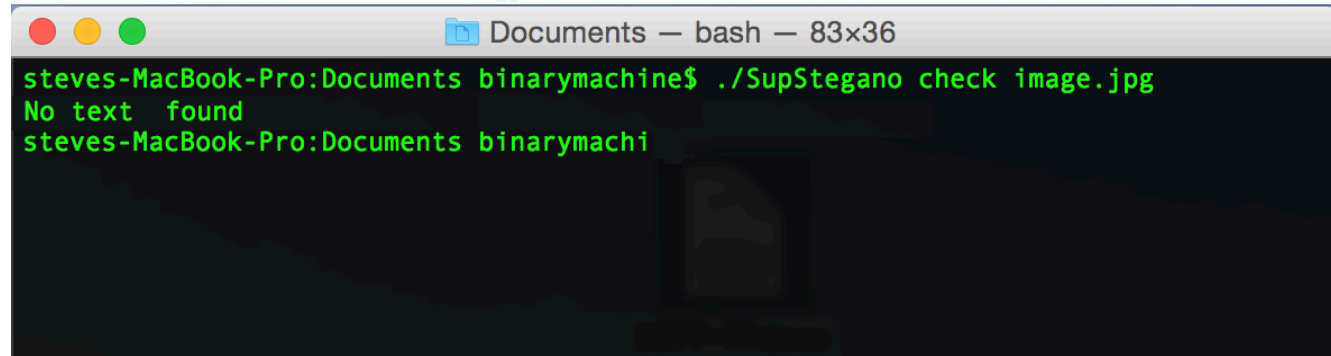


```
Documents — bash — 83x36
steves-MacBook-Pro:Documents binarymachine$ ./SupStegano
1. ckeck
2. add text
3. read text
your choice : 3
My hidden text
steves-MacBook-Pro:Documents binarymachine$
```

With argument:

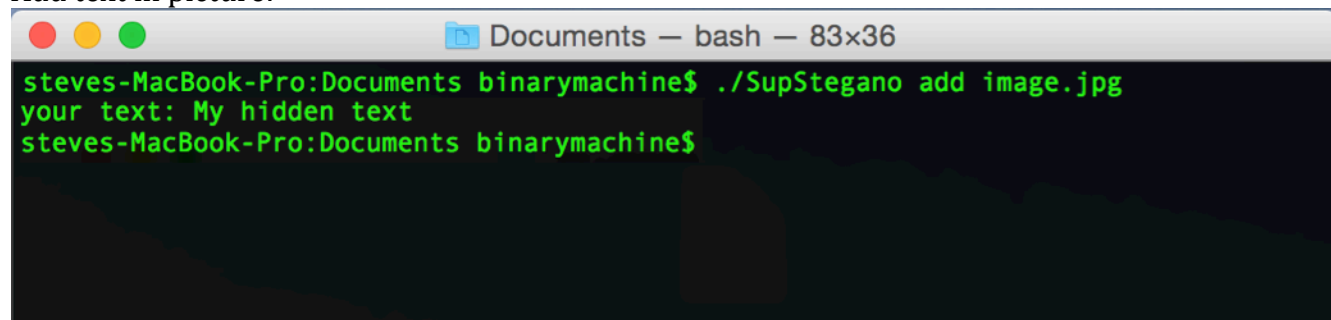
Don't ask user, use arguments.

Check hidden text:



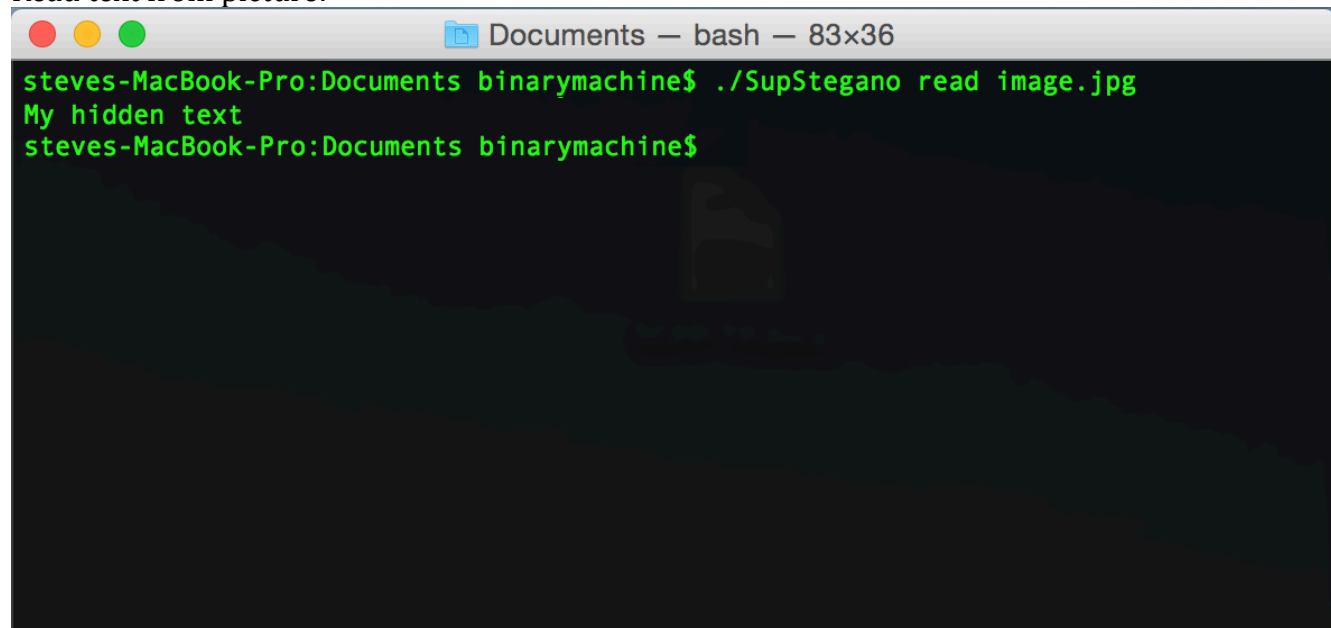
```
Documents — bash — 83x36
steves-MacBook-Pro:Documents binarymachine$ ./SupStegano check image.jpg
No text found
steves-MacBook-Pro:Documents binarymachi
```

Add text in picture:



```
Documents — bash — 83x36
steves-MacBook-Pro:Documents binarymachine$ ./SupStegano add image.jpg
your text: My hidden text
steves-MacBook-Pro:Documents binarymachine$
```

Read text from picture:



```
Documents — bash — 83x36
steves-MacBook-Pro:Documents binarymachine$ ./SupStegano read image.jpg
My hidden text
steves-MacBook-Pro:Documents binarymachine$
```

3 INSTRUCTIONS

- Plagiarism is forbidden.
- Make accessible his code on a public sharing platform (as GitHub) before the end of the evaluation is forbidden.
- Internet are allowed.
- Courses are allowed.
- This exercise must be done individually.

Don't abiding by these rules will result in suspension of your assessment and will be considered cheating.

4 NOTATION

Functionalities	Points
Allows to check if a text is hidden	3
Allow to ide text in the picture	3
Can open the picture containing hidden text	2
Run with arguments	2
Run without argument	2
Display the hidden text	5
Code Quality & Conventions	3
TOTAL	20/20

5 RETURN

Return your graded exercise as a ZIP archive named as follows:

2CPP_SupStegano_Campus_IdBooster.zip.

For example: 2CPP_SupStegano_Troyes_10000.zip

Not following this convention will result in point loss.

You will send the archive **to your Teacher SUPINFO email address and a copy to 2CPP@supinfo.com** to secure your project. Send it **before the end of the evaluation**. After this delay, your graded exercise **will not be corrected and the mark 0 will be assigned to you.**