



Codex Banana

Version 2.0.5

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1. Description
 - 1.1 GUI description
2. Internal organization
3. Domain operations
 - 3.1 Create domain
 - 3.2 Read domain
 - 3.3 Update domain
 - 3.4 Delete domain
 - 3.5 Switch domain
4. Category operations
 - 4.1 Create category
 - 4.2 Read category
 - 4.3 Update category
 - 4.4 Delete category
 - 4.5 Switch category
 - 4.6 Move category
 - 4.7 Save category
5. Article operations
 - 5.1 Create article
 - 5.2 Read article
 - 5.3 Update article
 - 5.4 Delete article
 - 5.5 Move article
 - 5.6 Edit the content
6. Bank operations
 - 6.1 Import / Export
7. Search operations
 - 7.1 Search one article
 - 7.2 Search one category
 - 7.3 Search one domain
 - 7.4 Emergency search
8. Tools
 - 8.1 Settings
 - 8.2 Password
 - 8.2.1 Create encryption password
 - 8.2.2 Enter password
 - 8.2.3 Change password
9. Online mode
 - 9.1 Searching the cloud and downloading
 - 9.2 Sharing articles, categories, domains
 - 9.3 Pushing local shared articles
10. Web Search

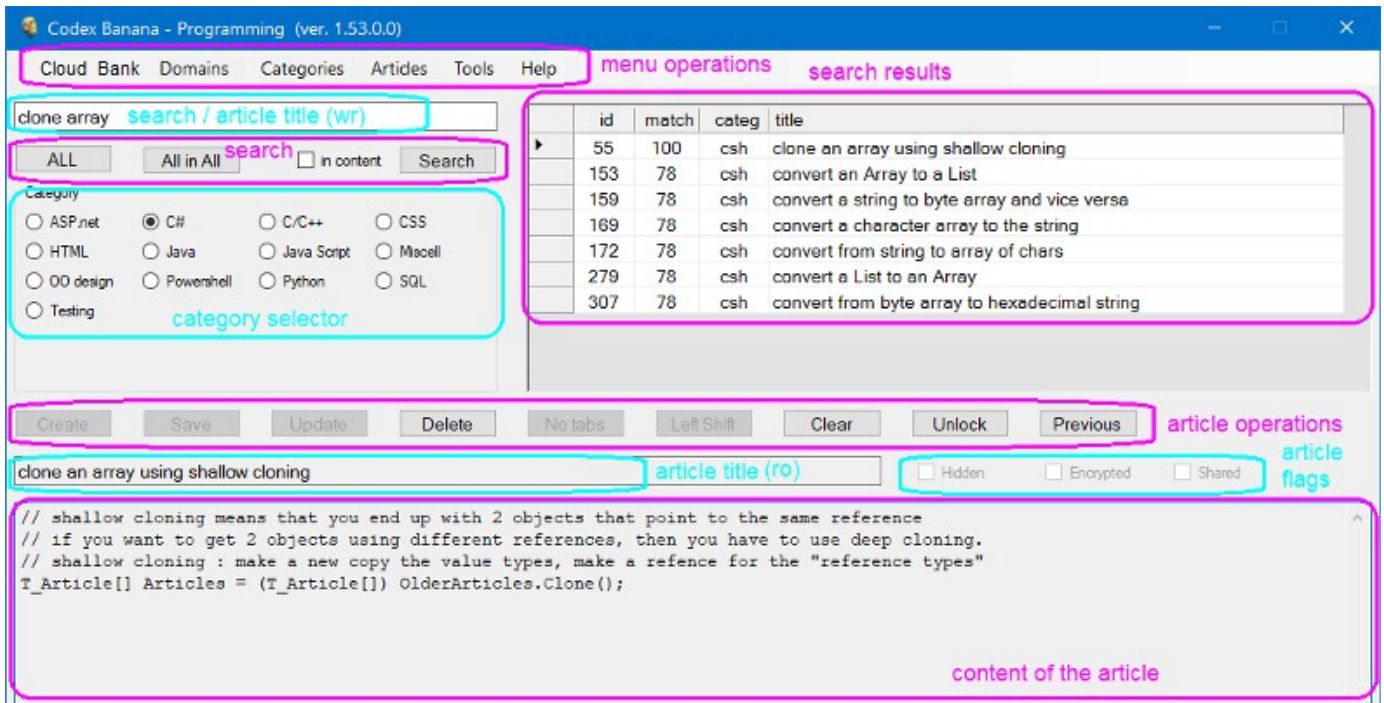
Chapter 1: Description

Codex Banana is a application that is useful for people who need to use repeatable sentences or snippets of text. It was written by a developer for developers, but it can be used by anybody. While working with code, I found myself in the situation when I know I used a certain syntax in a previous application, but I do not remember when or where. Looking thru all your code is time consuming, especially when you do not remember a keyword that will make the search easier. Also, you might already have snippets of code, but there are spread over many directories. With Codex Banana everything is in one place and easy to find. Codex Banana is not intended to store pictures, chars or diagrams. It only stores text.

What Codex Banana is not:

- is not a forum where you can ask questions and expect answers from other users
- is not a comprehensive knowledge base. It only stores what users create.
- is not intended to be integrated with an IDE for writing code

1.1 GUI description



Menu operations area

- used for operations upon bank, domains, categories and articles
- used for settings and encryption password

Search input / article title (write)

- depending on the context, it can be used for search operations or for editing the title of a new or existing article

Search area

- initiate a search operation
- allows the use of wildcards
- allows to search the title, or title + content of the article

Category selector

- used to choose the category you want to use in your search

Search results table

- displays the results of the search

Article operations

- used to perform actions on an article
- some of these actions can also be found under the "Articles" menu

Article's title (read only)

- once an article has been selected from the search results area, then it's title will be displayed here (it cannot be modified from this text box)

Article's flags

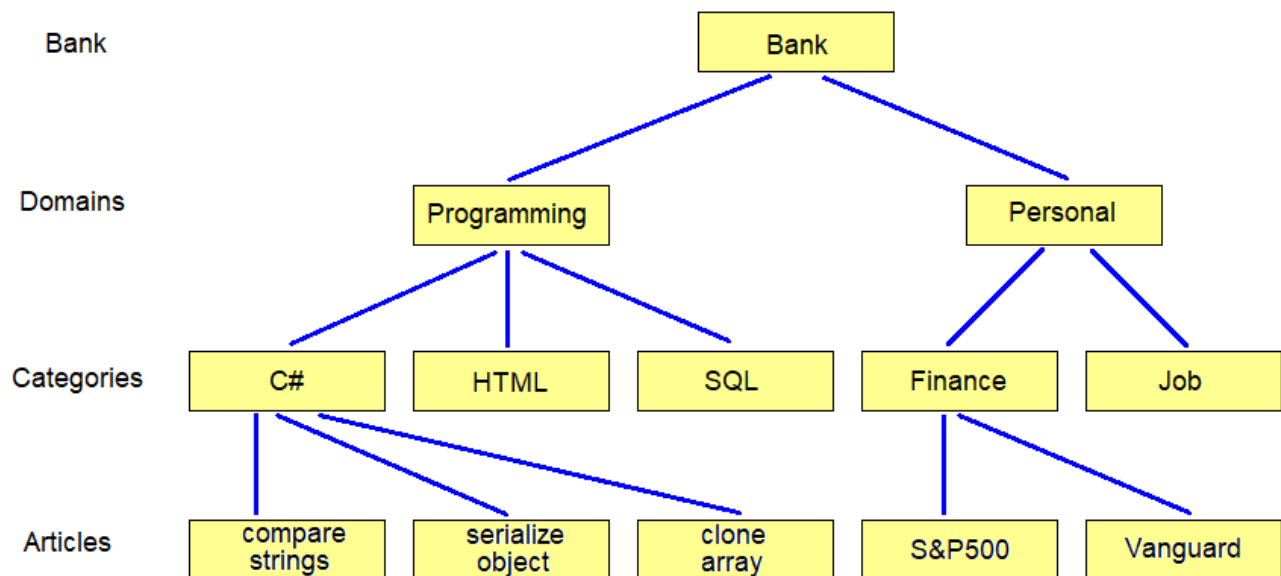
- flags associated with the current article

Article's content

- actual code/text that you want, when you run a search

Chapter 2: Internal Organization

Information is store in a "bank". There is only one bank. The program does not come with a default bank, you will have to build it. The bank can have an unlimited number or domains (doms). Inside each domain you can have categories (cats), and each category stores articles (arts) that are related to that subject. Example: I can have 2 domains, named "Programming" and "Personal". Inside the "Programming" domain I can create 3 categories named: C#, HTML, SQL. Inside the "Personal" domain I can create 2 categories named: "Finance" and "Jobs". Now I am ready to add an article about serialization inside my Programming domain for C# category.



Throughout this documentation, you will see that a domain or a category has these 3 features:

- long name = used to provide details about that domain/category
- code = used for searches
- display name = used for interaction with the user

The long name should give you a clue about what that container represents.

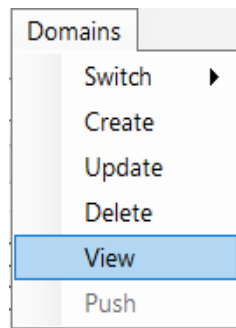
Long Name	<input type="text"/>
Code	<input type="text"/>
Display Name	<input type="text"/>

The code should be something short and unique. The online search is done by this code, which means that you will need to use the code that everybody uses, as shown in the Doms/Cats page. If you decide to use "CS" as code for C# and another person uses "CSH" for C#, then those 2 users will not be able to share articles due to conflicting codes.

The display name needs to be short enough to fit in certain areas of the screen, while giving you details about that collection.

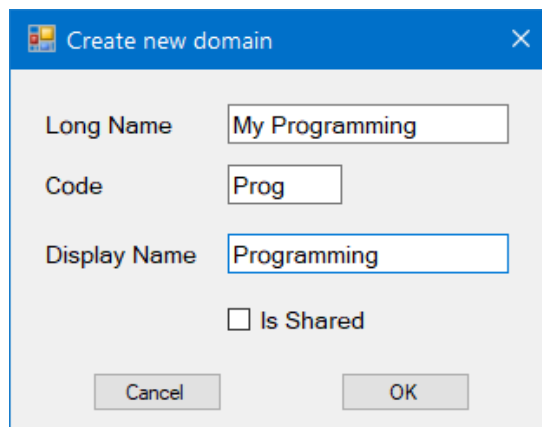
Chapter 3: Domain operations

In order to organize the information Codex Banana uses domains. A domain is a collection of categories.



3.1 Create a domain

Domains > Create > fill all fields > OK.



If the code is not unique, then you will get a warning. Otherwise a new domain will be created.

3.2 View/read a domain

Domains > View > the current domains will be displayed > OK.

3.3 Update a domain

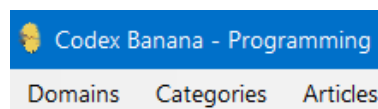
Domains > Update > modify to indicate the new values for the fields > OK. If the code is not unique, then you will get a warning

3.4 Delete a domain

Domains > Delete > the current domains will be displayed > OK. When a domain is deleted, then the link between that domain and all its categories will be remove. However, the files holding these categories will not be deleted from the disk, just in case you change your mind and you want them back.

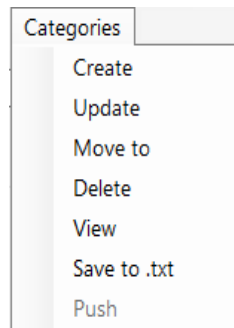
3.5 Switch domains (brings another domain into focus)

Domains > Switch > select the new domain. When the new domain has been selected, then its name will be displayed on the top of the window.



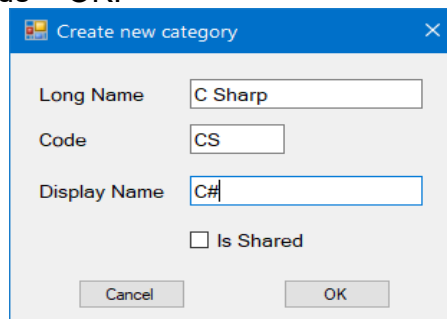
Chapter 4: Category operations

Categories hold related articles in a single group. A category is a collection of articles.



4.1 Create a category

Categories > Create > fill all fields > OK.



If the code is not unique, then you will get a warning. Otherwise a new category will be created. At this time you can create at most 24 categories under each domain. This limitation is necessary to allow a nice display of categories in the category selector area of the GUI. If you need more than 24 categories, then it is recommended to create new domains and move the categories there.

4.2 View/read a category

Categories > View > the current category will be displayed > OK.

4.3 Update a category

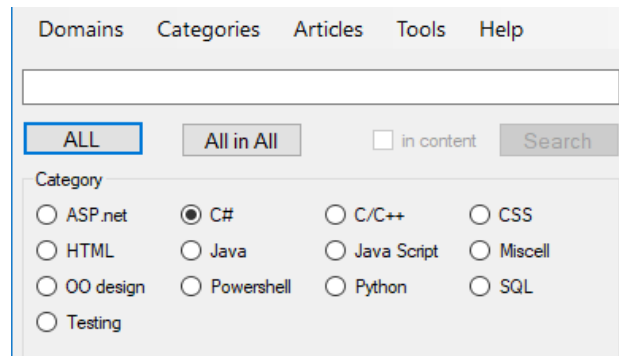
Categories > Update > modify to indicate the new values for the fields > OK. If the code is not unique, then you will get a warning

4.4 Delete a category

Categories > Delete > the current category will be displayed > OK. When a category is deleted, then the link between that parent domain and the categories will be remove. However, the file holding that category will not be deleted from the disk, just in case you change your mind and you want them back.

4.5 Switch categories (brings another category into focus)

Use the category selector area and press the radio button that corresponds to the category you want to work with.



4.6 Move a category

This feature can be used when you realized that it makes more sense for a certain category to be part of another domain.

Category > Move to > select the new parent domain for the current category > Yes

4.7 Save to file

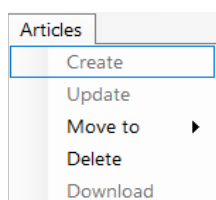
This feature can be used when you want to export all articles from a category to a text file

Category > Save to .txt

You will see a confirmation message about the location where the file was saved. This location is relative to the Bank directory. The name of the file is the code for that category.

Chapter 5: Article operations

Articles are the backbone of Codex Banana. An article has a title and a content. Usually when you search for some keywords you expect to find in the title, and once the article has been located you look at its content. For articles, some operations can be executed in two ways: from menu, or from buttons.



5.1 Create an article

Start by clicking the **Clear** button to make sure that none of the previous settings will prevent you from creating a new article. Start typing the title of the article in article title field. As you type you will notice that the **Search** button becomes active, while the **Create** button and the content area are inactive. When you are done with the title, start typing the content of the article, and by now that area should be active and accept your input. After you typed a few characters here, you will notice that **Search** button becomes inactive and **Create** button is active. Now the content have switched from the "Search mode" to "Create article mode". There is a minimum number of letters you need to type in the title and in the content for the **Create** button to become active. That is because a real title and a real content should have more than a few characters. If indeed the content of your article is too short, then just type spaces to meet the minimum length. When all the typing is done, then press **Create** button (or Articles > Create) and the article will be created.

5.2 View/read an article

The only way to view an article is to search for it, or to retrieve it from the previously visited articles.

Searching for an article: Go to the desired domain and category, unless you are already there. Start by pressing **Clear** button to delete previous settings. In the search box type the keyword(s) that you think will point to the articles, then press **Search** button. If you want to search in the content of the articles, then put a check mark for "in content". Assuming that articles have been found, they will be displayed in the search results table. The match percentage evaluates how close the results are compared with the words you entered and the order of them. 100 means there is an 100% match, meaning that all input keywords were found and they are in the correct order. If there is only one article with a match of 100%, then it will be automatically be selected. If there is more then one article with a perfect match, then you will have to decide with one you want to select. Now that articles has been found, just click on the row for one of them, and the title of that article will be displayed in the title box while the content will be shown in the content box.

If you have viewed several articles, you can go back and review the previous articles by clicking **Previous** button. The articles stored in history are for all categories of that domain. Switching domains will clear the history of the articles visited.

5.3 Update an article

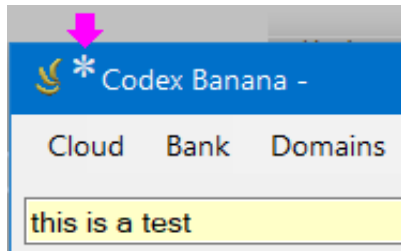
Select the article you want to modify, then press **Unlock** button to enter the edit mode. If the article is encrypted, then you will have to decrypt it before you can modify it.

There are 2 ways to update an article:

- Save (and continue) by using **Save** button
- Update (and quit) by using **Update** button (or Article > Update)

The **Save** button allows you to update the article and then continue making modifications to the article. When the article is being saved, you will see that the article's content area will flash for a few seconds. The Save feature is useful when you plan on adding more content to an article, and you need to keep saving so you do not lose your work. Saving an article writes to disk the file for its category.

The **Update** button is used when you know that you are done making modifications to that article. When the article was modified but it was not yet saved to disk, it is said to be dirty, and it is marked by a small asterisk as show in the image below, and also the color of the title will change.



An article has 3 flags:

- hidden - the article is hidden from normal view
- encrypted - the article is encrypted to prevent unauthorized view
- shared - the article can be shared with other users

5.4 Delete an article

Select the article you want to delete, then click **Delete** button (or Article > Delete > OK)

5.5 Move an article to another category under the same domain

This feature can be used when you realized that it make more sense for a certain article to be part of another category.

Articles > Move to > select the new parent category from the current domain > Yes

If you want to move an article to another category in another domain, you will need to follow these steps, because it is not a straight forward operation.

- create a temporary category (call it temp) under the same domain as the current article
- move the article to the temp category
- move the temp category to the target domain
- move the article from temp category to the target category under the other domain

5.6 Edit the content

Replace tabs with spaces

While the article is unlocked, press **No tabs** button and all tabs from the content of the article will be replaced by 4 spaces.

Move the content to the left

If the content of the article has too many spaces and you want to move it to the left, then press **Left shift** button and the lines that have leading spaces will be trimmed by 2 spaces.

Clear all settings

If you want to clear all fields and start over, then just press **Clear** button.

Chapter 6: Bank operations (for offline mode)

6.1 Import /Export bank

These operations allow you to backup (export) or restore (import) the database. Default location for bank directory is C:\Users\\Documents\CodexBanana\Bank. It is wrong to import a database which has articles that are encrypted with a password or initialization vector different than yours. If a file already exists, it will be overwritten during the export or import operation. After the import operation has ended, all domains will be refreshed and you can start using the articles. If you are told that articles have duplicated IDs after you import a bank, you will be given the option to reassign the ID's. It is recommended to export your bank to a safe location, to prevent losing your work.

Chapter 7: Search Operations

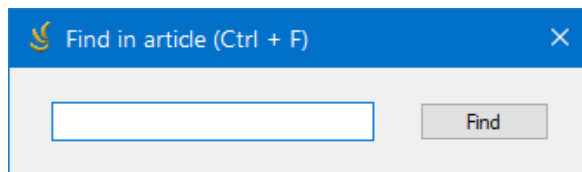
There are 4 type of searches:

- search inside one article
- search one category
- search one domain (list all articles)
- emergency search

All searches ignore the case of the letters.

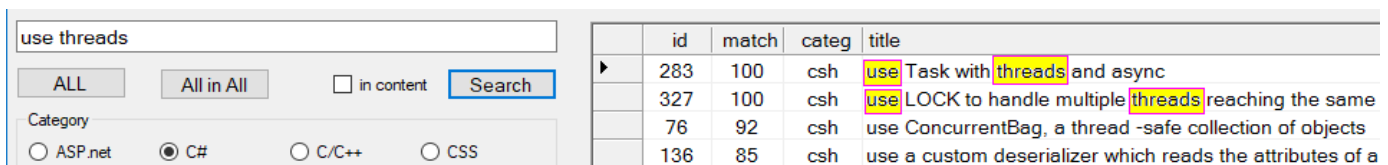
7.1 Search the content of one article

Open an article, click the content area, then press **Ctrl + F**. A new window will open and you can type the word you want to find in the content of that article. If the exact string is found in the article, then it will be highlighted.



7.2 Search a category

- Press **Clear** button (optional)
- Select a domain and a category (say Programming > C#)
- Type one of more keywords in the search area (say "create timer")
- Press **Search** button (or Enter key from keyboard)
- Assuming that such articles exist and they have been found, they will be displayed in the search results table. An article will exists only if you created it. The match percentage evaluates how close the results are compared with the words you entered and the order of these words. 100 means there is an 100% match, meaning that all input keywords were found and they were in the same order as entered in the search box. If there is only one article with a match of 100%, then it will be automatically be selected. If there is more than one article with a perfect match, then you will have to decide with one you want to view. Now that articles has been found, just click on the row for one of them, and the title of that article will be displayed in the title box while the content will be shown in the content box. If the matches are less than 66% then they will not be displayed. If you search for the word "diff" and there is an article containing the word "difference", then the article will not be selected. Since the search is trying to determine how close your words match the words in the article, then the result will be below the accepted threshold and the article will not be selected. In this case you should type something as close as possible to the word "difference" and then articles will be selected if they are found. Below is an example of the research results when 2 words are used.



	id	match	categ	title
▶	283	100	csh	use Task with threads and async
	327	100	csh	use LOCK to handle multiple threads reaching the same
	76	92	csh	use ConcurrentBag, a thread -safe collection of objects
	136	85	csh	use a custom deserializer which reads the attributes of a

- If you press **ALL** button (or you type the *-symbol) and you run a search, then the results will list all articles that belong to the selected category.

7.3 Search one domain (list all articles from that domain)

- Press **All in All** button (all articles in all categories) then press **Search** button and the result will list all articles that belong to that domain.

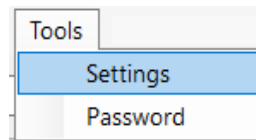
7.4 Emergency search

Use this type of search when you have a hard time locating an article, but you know that the article exists somewhere in some domain.

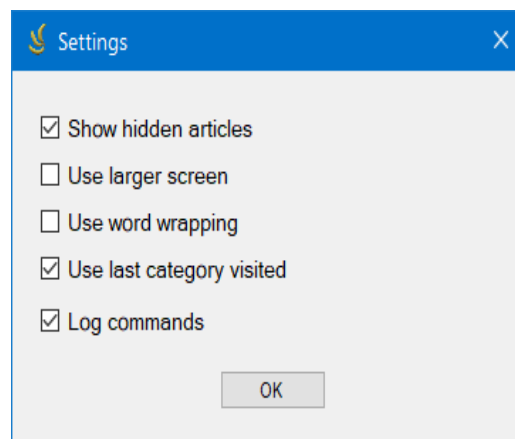
Bank > Emergency Search > type one of more words > Search

The search will go over all articles from all categories and from all domains, searching for an exact match for all words you entered. If the keyword is "diff", then all articles containing this combination of letters will be displayed. Words like "difference" or "diffusion" are a match for "diff". The results will be displayed, indicating the domain, category and title of the article. The results will also include articles that are marked as hidden. You can keep this window open, while you navigate to the article you want.

Chapter 8: Tools



8.1 Settings



Show hidden articles = when checked, it displays the article that are marked as hidden. Otherwise these articles will be hidden and they will not be part of a search result.

Use larger screen = when checked, the main window for Codex Banana will become longer, allowing you to view more rows.

Use word wrapping = when checked, the rows will be displayed such that you do not need to use the horizontal scroll

Use last visited category = when checked, it will remember last categories you visited during the previous session. When unchecked, the first category from the first domain will be selected at start. Regardless of this setting, switching from one domain to another will automatically select the last category you visited in the target domain.

Log commands = when checked, it logs the command you execute and the input parameters, in case you want to debug or trace your steps. Exceptions and errors are logged all the time.

8.2 Password

The password is used to encrypt articles you want to protect against curious eyes. The encryption process uses an initialization vector and a password.

The initialization vector can be set up only once, while the application is not running. The initialization vector is common to all users of that computer. Before setting the initialization vector, make sure no another user of that computer encrypted any articles. If you change the initialization vector after articles have been encrypted, then you will not be able to decrypt them. If you do not set the initialization vector, then it will use the default value. If you want to use your own initialization vector, then you will have to edit the file named CodexBanana.dll.config and set the value to whatever you want. Most likely the file is located at

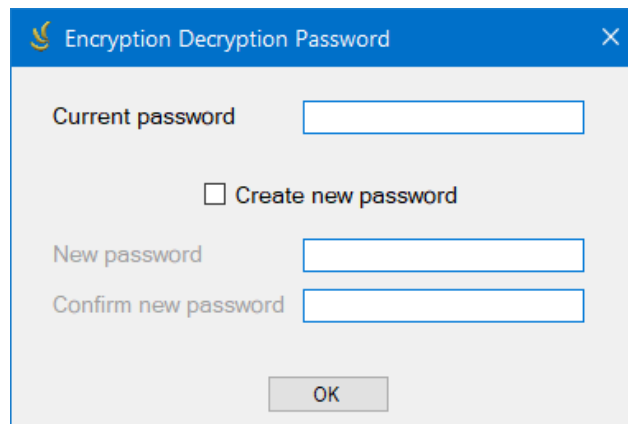
C:\Program Files (x86)\CodexBanana

and you will need to use administrator rights to modify it. It is recommended for the initialization vector to be 16 characters long, but if you enter less, then the program will fill the rest. The rules for initialization vector are the same as the rules for the password. The rules for initialization vector are verified only when the application starts. Here is a possible initialization vector.

```
8 <appSettings>
9   <!-- initialization vector used for encryption. S
10   <add key="initVector" value="G$7J8!be*425Zy17"/>
11 </appSettings>
```

In order to encrypt an article, it needs to have the encrypt flag set. If you set the encrypt flag but you did not enter yet a password, then there will be a warning, and it up to you to set it up later. If you close the application and open it again, then you will have to enter the decryption password again. The recommendation is to set the password before you start encrypting articles.

Create a password for the first time



The screenshot shows a dialog box titled "Encryption Decryption Password". It has a blue header bar with a yellow logo on the left and a close button on the right. The main area is light gray and contains the following elements from top to bottom: a text label "Current password" followed by a white text input field; a checkbox labeled "Create new password"; a text label "New password" followed by a white text input field; a text label "Confirm new password" followed by a white text input field; and finally, an "OK" button at the bottom center.

Tools > Password > check mark for Create new password > enter the password twice > OK.

Requirements for password:

- length between 8... 16 characters
- at least one lowercase letter
- at least one uppercase letter
- at least one number
- at least one special character

If the password is accepted then you will see a confirmation.

Enter the password (to decrypt articles)

Tools > Password > type the password (you will only see the letter X instead of characters) > OK
If the password is accepted then you will see a confirmation. After the password has been accepted, then you will see a shorter string when you go back to the same screen. This is because you do not have to re-enter the password. Just press Cancel and exit.

Change the password

Tools > Password > type the current password > check mark for Create new password > enter the password twice > OK.

If the password is accepted then you will see a confirmation.

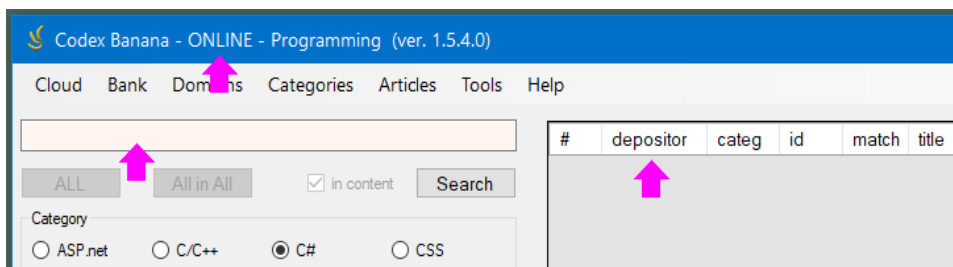
How to encrypt an article:

- (optional) set up the initialization vector while the application is not running
- create a new password or enter the current password (unless already entered)
- create/edit an article and put a check mark for "Encrypted" box
- save the article (the encryption takes place only when the article is saved)
- to see that article has been encrypted you will have close the application, restart it but do not enter the password. List all articles under that category, and look for an article that has a gibberish title. Write down its ID. Next, enter the decryption password, search for all articles, and look for the ID you wrote down. Now the title and the content of the articles will be shown in clear text.

Chapter 9: Online mode

9.1 Searching the cloud and downloading

Starting with version 2.0 you are able to access search for articles created by other users. Simply go to the online mode, type the keywords and then look for articles. To go online just click Cloud > Go online. There are 3 clues that will tell you are connected to the cloud:



- the word ONLINE will be displayed next to the name of the application
- the color of the search title will change to light red
- the search result table will contain an additional fields named "depositor"

The "depositor" is the username of the person who deposited the article to the cloud. The same identical article could be available from multiple users, if a user decided to download the article and then shared it in the cloud.

After you have selected the domain and the category, you can enter a few keywords, put a check mark whether you want to search the content (or just the title) and then click **Search** button. Once you have results, you can select the article you want to view. You will also see the username of the person who deposited the article. Here is an example:

#	depositor	categ	id	match	title
1	alex	cs	274	100	create and use a Timer
2	brian	cs	274	100	create and work with a Timer
3	alex	cs	1083	90	Anonymous type
4	alex	cs	1457	90	create a DateTime that is delayed by TimeSpan
5	alex	cs	1479	90	create a protocol buffer (proto, protobuf) file
6	alex	cs	1357	90	create xUnit test with Moq mock
7	alex	cs	1355	90	Entity Framework EF - create, delete, and reverse migra
8	alex	cs	1481	90	format/structure of a protobuf/proto file
9	alex	cs	124	90	how YIELD command works
10	alex	cs	1336	90	record keyword

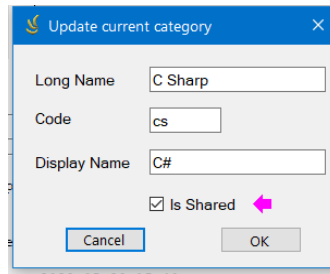
If you consider that you want to have a copy of the article, you can just click the Download button. If the article does not exist on your local bank, then it will be downloaded. If the article is somehow similar to an article you have on your local bank, then you might see a message like this:

Now you have the option to update your local article using the online content, or just create a copy. The window from above is self explanatory.

9.2 Sharing articles, categories, domains

In order to search for articles online, the users will have to push them to the cloud. First you have to set the articles that you want to share. Just open a local article, unlock it, put a check mark for the Shared box, then click Update (or Save) button. Now the article is marked for sharing, but it is not yet shared with the online community. An article cannot be shared if it is marked as encrypted or hidden. An article that is marked as shared, will have that flag cleared if the encrypted or hidden flags are set.

If you want, you can share an entire category. This operation will mark as shared all articles from that category, excepts those that are marked as encrypted or hidden. To accomplish this action, first you will have to switch to offline mode. Go to Cloud > Go offline. Now select the category you want to share, then click Categories menu > Update > put a check mark for Is shared > Ok.



To view all shared articles, categories and domains, just go to Bank > List shared articles. If you want to unshare all articles from a category, then click Categories menu > Update > remove the check mark for Is shared > Ok. Now there will be no shared articles for that category.

If you want, you can share an entire domain. This operation will mark as shared all articles from all categories from that domain, excepts those that are marked as encrypted or hidden. To accomplish this action, first you will have to switch to offline mode. Go to Cloud > Go offline. Now select the domain you want to share, then click Domains menu > Update > put a check mark for Is shared > Ok. You can view all shared articles, categories and domains, just go to Bank > List shared articles. If you want to unshare all articles from a domain, then click Domains menu > Update > remove the check mark for Is shared > Ok.

9.3 Pushing local articles to cloud

At this point you know how to share articles, categories and domains. Even if you have set as shared a lot of articles, they do not reach the cloud until you push them. Before you can push your articles to the cloud, you will need to create a username and password. These credentials allow you to tell the community that articles were pushed by you, so the next time you want to update your online articles, then you will use the same username.

You will have to edit the file named CodexBanana.dll.config and enter your own depositor username and password. Initially, the nodes might look like this:

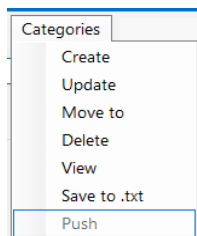
```
<add key="cloudDepositor" value="username_goes_here" />  
<add key="cloudPassword" value="password_goes_here" />
```

The cloudDepositor needs to be between 4 and 10 lowercase letters (or numbers), and the password between 8 and 16 characters. The cloudPassword has the same rules as the password used for encryption. You can set the username and password only once, and you cannot modify them later. If you modify them after you have pushed articles to the cloud, then the server will treat these credentials as belonging to a new user. If you have chosen a username that is already taken then you will have to chose another one. Since the config file is under "Program Files" directory, then you might have to use administrator rights to edit and save the file. Here are the steps to set and test the credentials:

- stop the application from running
- copy the config file from "Program Files" directory to Desktop
- edit the config file mentioned and enter whatever username and password you want
- save the config file
- copy the file from Desktop, back to "Program Files" directory
- launch the application
- shared at least one articles, then try to push that category

If no other user has taken that username, then your credentials will be stored on the server and you can use them in the future. If other user has selected the same username, then you will have to pick another one.

To push a category go to Categories > Push (while you are already in the online mode).



You will get a confirmation if operation is successful. Similarly, you can also push a domain, or the entire bank. To verify that indeed articles were pushed, you can run a search for an article that you know should be on the cloud. It is recommended to start by pushing one category first, then make sure that articles made it to the cloud. Then you can try pushing a domain.

Chapter 10: Web search

You can perform a search using your browser, the same way you do it from the application. Just go to <https://codexbanana.com/search.html> > select a domain > select a category for that domain > enter the keywords > check/uncheck in content > click Search button. To see the content of the article you might have to select that article, if more articles are available.

Home Search Download Forum Doms & Cats Contact us

Help Clear Programming C# create timer in content Search

#	depositor	id	match	category	title
1	alex	274	100	cs	create and use a Timer
2	brian	274	100	cs	create and work with a Timer
3	minime	10	100	cs	create and use a Timer
4	alex	1083	90	cs	Anonymous type
5	alex	1457	90	cs	create a DateTime that is delayed by TimeSpan
6	alex	1479	90	cs	create a protocol buffer (proto, protobuf) file
7	alex	1357	90	cs	create xUnit test with Moq mock
8	alex	1355	90	cs	Entity Framework EF - create, delete, and reverse migration
9	alex	1481	90	cs	format /structure of a protobuf /proto file
10	alex	124	90	cs	how YIELD command works

```
private System.Timers.Timer timer;

protected void OnStart() // call this function only once, to start the timer
{
    OnTimedEvent( null, null ); // call the function ONCE (to do work at t=0 sec)
```

