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Egor's blog

CHelper manual

By **Egor**, 2 years ago, translation, 🇬🇧, ✎

1. Installation

You need to download plug-in and configuration. Plug-in should go to %home_dir%\.IntelliJIdea10\config\plugins (if directory plugins is absent you need to create it), also you should include chelper.jar to class path of your project (Project Structure -> Dependencies -> Add Single Entry Module Library...). After that you need to edit configuration (see next section) and put it in project root. That's it — you are all set. For TopCoder you would need moj plugin for Arena, manual and download link is here
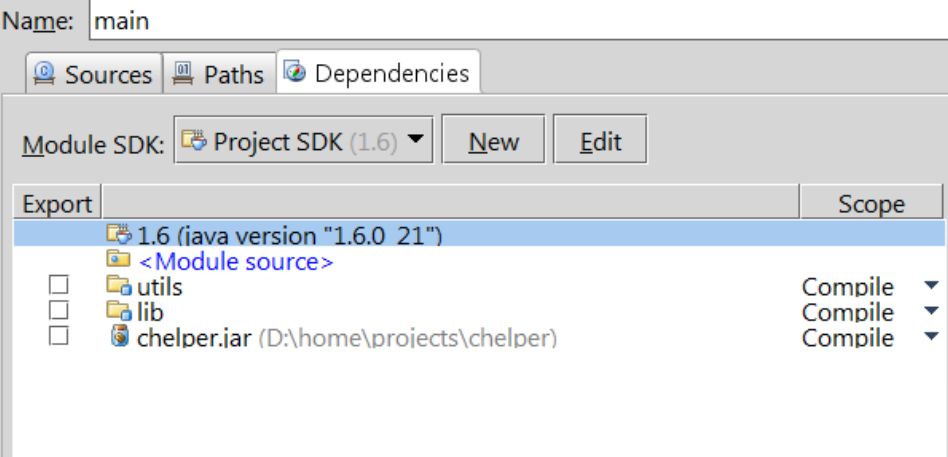
2. Configuration

As a general note, if some property in configuration represents a folder you must enter relative path from project root (using / instead of)

inputClass - full qualified name of class used for input (like java.util.Scanner). This class should implement method next that returns String — next token from input — and it should have constructor that takes InputStream as only argument

outputClass - full qualified name of class used for output (like java.io.PrintWriter). Ouput class shoud has constructor, that take OuputStream and one that take Writer as parameter and also method close.

excludePackages – comma separated list of package prefixes. Classes from such packages would not be inlined but rather imported. In most cases you should leave it as is

outputDirectory - directory where full source code would be stored. Should be under source and in default package (for example, if you create standart idea project, "src" spould be ok)

author - content of @author tag in. If empty no author tag would be created

archiveDirectory - directory where tasks would be archived. Should not be under source

defaultDirectory - direcory where tasks would be created by default. Should be under source in **non-default** package (for example src/my/package)

topcoderDirectory - directory where moj puts its TopCoder stubs. Should be under source in default package (e.g. src)

enableUnitTests – should be true if you want unit tests to be created and false otherwise

testDirectory - directory where tests would be stored. Shoud be under source

After configuration change you need to reload project for changes to take effect

Before contest
Codeforces Round #241 (Div. 2)
28:25:00

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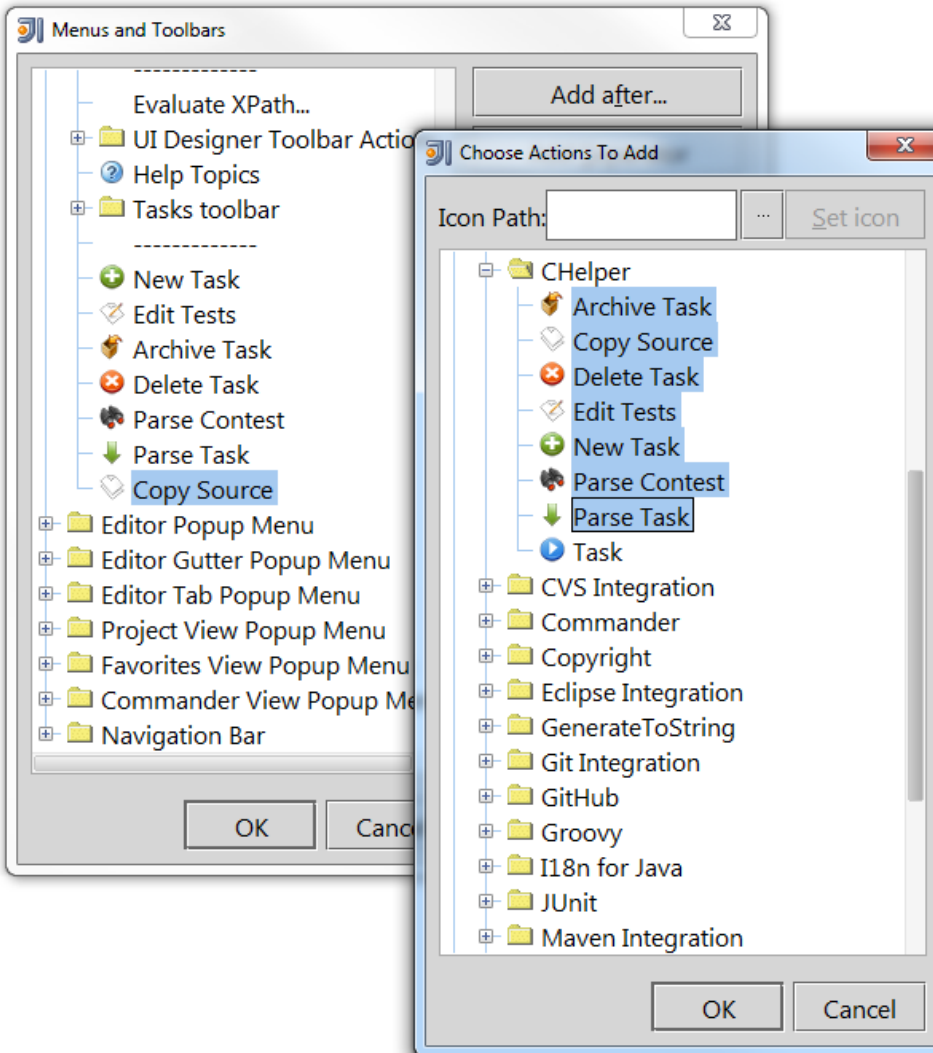→ **Find user**

Handle: [   ]

[Find]

→ **Recent actions**

3. Actions

I would recommend to add following actions on main toolbar (Customize Menus and Toolbars... from context menu of toolbar, actions are in Plug-ins->CHelper): New Task, Edit Tests, Archive Task, Delete Task, Create Codeforces Tasks.

New Task (Alt+F2) — creates new task in defaultDirectory
Edit Tests (Alt+F5) — opens test editor

indy256 → CodeJam templates

izban → Codeforces Round #239 Editorial

MDovzhenko → Coder-Strike 2014: High School Championship in Moscow and Moscow Region

JuanMata → TopCoder SRM 616

lukasP → KTH Challenge 2014 online contest

dario-dsa → COCI Contest #7 (Croatian Olympiad in Informatics)

mentalist → Dynamic Programming – Convex Hull Optimisation

JuanMata → Google Code Jam 2014 — Qualification Round

Egor → CHelper manual

undef → Codeforces Round #115

kingofnumbers → APIO 2014

matrix → Codeforces Round #240

balsi → How Red coder become Red?Can someone do good without any mentor means self study?

MikeMirzayanov → Severe bug in g++ optimizator (-O2)

pllk → QBASIC in programming contests
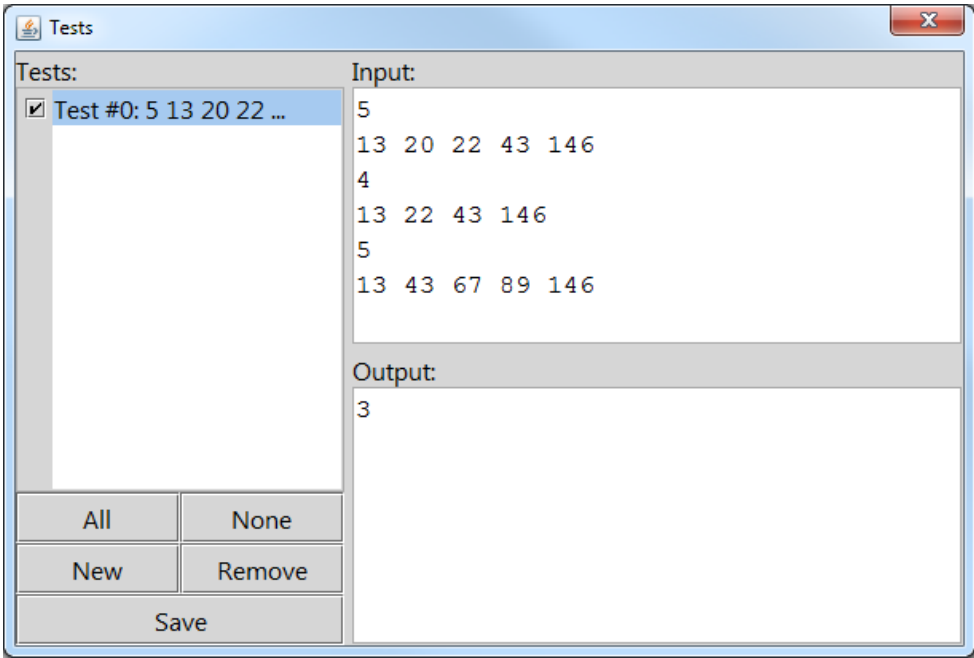
Archive Task (Alt+F6) — archives task (deletes all it files and stores them in archive, also creates unit tests if configured to do so)

Delete Task - deletes task and all associated files

Parse Contest – creates all tasks for particular contest (currently Codeforces, CodeChef, E-Olimp and Timus are supported).
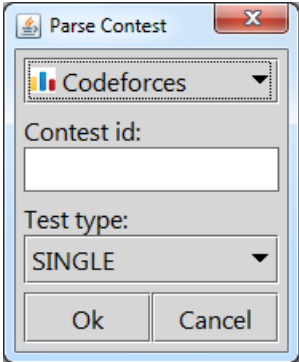
Parse Task - creates single task.
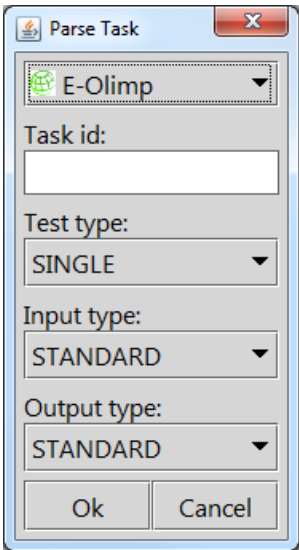
Site	Contest ID	Problemset task ID	Contest task ID

Codeforces	contest_id (131)	contest_id letter (131 A)	contest_id letter (131 A)
CodeChef	contest_code (NOV11)	problem_code (GCD2)	contest_code problem_code (NOV11 DOMNOCUT)
Timus	contest_id (101)	problem_id (1000)	contest_id problem_number (101 1)

Copy Source (Alt+F8) — copies content of Main.java to clipboard. This is useful for judges that do not support submission of file

4. New Task dialog

Name - task class name
Test type - type of tests — either single test per file, number of tests and then tests themselves or just some tests until some condition is met. You need to throw UnknownError in last case to indicate that there would be no more tests
Input type/Output type - input/output type. Standard — stdin/stdout, Task_id — file input/output with file names %Name%.toLowerCase() + ".in"/".out", Custom — just file input/output, names provided in separate text fields
Heap memory - memory limit
Stack memory - stack size limit (defaults are same as codeforces)

5. Task files
For each task 2 files is creates. In main task class there is one method:
void solve(int testNumber, %input% in, %output% out)
testNumber — 1-based index of test in file
In checker class there are 3 methods:
String check(%input% input, %input% expected, %input% actual)
should return null if answer is correct, non empty string if answer is wrong and empty string to run default checker
double getCertainty()
returns certainty for double comparision in default checker
Collection<? extends Test> generateTests()
additional generated tests

For TopCoder tasks the only class would contain method from problem statement. Task would be created automatically when you opens problem in TopCoder client (if moj properly

| configured)

<> **chelper, idea, java**

▲ **+29** ▼   👤 Egor   📅 2 years ago   💬 86

💬 **Comments (86)**

---

2 years ago, # | ▲ **0** ▼
Can I use IntelliJIdea to code in C++ ? Are there some plug-in to do that ?
→ Reply

wil93

2 years ago, # ^ | ▲ **0** ▼
Unfortunately, no

There is Objective-C IDE form JetBrains which in beta test yet AFAIR
→ Reply

Egor

2 years ago, # ^ | ▲ **0** ▼
http://plugins.intellij.net/plugin/?id=1373
→ Reply

madkite

2 years ago, # | ▲ **0** ▼
I have a problem,when go add actions , not show me plugin chelper :(,
→ Reply

Ziklon

2 years ago, # ^ | ▲ **+1** ▼
You either had not copied it to correct folder or had not restarted

Idea since
→ Reply

Egor

2 years ago, # ^ | ▲ **0** ▼
thanks :=) is cool !
→ Reply

Ziklon

3 months ago, # ^ | ▲ **0** ▼

I installed CHelper from Browse Repository and
Restarted the IDE after that I Added All CHelper Icons
after Main Toolbar From Menus and Toolbars and I
opened Edit Project Settings And When I parse Contest
And Press OK NullPointerException And Message null is
generated I am not be able install It Correctly plz help
me...sorry for my English
→ Reply

jakesahir

→ Reply

3 months ago, # ^ | 0

Do you have any project open when you click
on "Edit Project Settings"?
→ Reply

Egor

3 months ago, # ^ | 0

Yes i have one project open which i
created ...
→ Reply

jakesahir

2 years ago, # | 0

So, Egor, you are using IntelliJ IDEA as your main IDE for contests ?
Thx :D
→ Reply

Nova

2 years ago, # | ← Rev. 2   0

I have some problems with your CHelper - plugin :-?
I've tried it with both IntelliJ IDEA 11 and 10, and I can't get it working
I did it in order :
1. Install IntelliJ IDEA 10
2. Copy chelper2.33.jar to config/plugins directory
3. Add CHelper's actions to the toolbar
4. Create new Java Module project (with src directory)
5. Copy chelper.properties to src directory
6. Add chelper2.33.jar to the new project's classpath
7. Try the Chelper's actions ... and it didn't work ...

Anybody has the same issue ?

Thx alot :)
→ Reply

Nova

2 years ago, # ^ | 0

Had you restarted Idea after copying chelper.properties?
→ Reply

Egor

2 years ago, # ^ | 0

yes, I had :(

thx for your reply :D
→ Reply

Nova

2 years ago, # ^ | 0

Just noticed - you copied chelper.properties to
src directory, but it should be in project root
→ Reply

Egor

Egor

2 years ago, # ^ | 0
thank you for your support, it's working now :D

oh, if i change my settings in chelper.properties, i will also restart the IDE too ?
→ Reply

Nova

2 years ago, # ^ | +3
Yep, would change it in next version
→ Reply

Egor

2 years ago, # 0 ^
|
oh, can i have another question, please ?

How can I define my own Input Class ? Is there any "template" feature ?
→ Reply

Nova

2 years +3
ago, #
^ |
You just need to make sure that your class takes InputStream as argument and has method next, which returns next token from input as string. Everything else you can write as you like
→ Reply

Egor

2 years   0
ago, # ^
|
I mean that

how can I put my class definition automatically :-?

Should I copy & paste it manually to the Main.java ?

→ Reply

Nova

2 years ago, 0

^ |

You just need to write class and put it somewhere under your source (e.g. in src/nova directory) and then fill nova.MyInputClass under inputClass in chelper.properties

→ Reply

Egor

2 years ago, 0

\# ^ |

thx to your helping, i've got it working :D

also thx for such an useful, and ... wow plug-in :D :D :D

→ Reply

Nova

2 years ago, 2 Rev. 2

\# ^ 0

|

Nova

Nova   deleted
                        →
                        Reply

2 years ago, # | ← Rev. 2   ▲ **0** ▼

To Egor,

Your plugin have a few "bugs" with Topcoder SRM Task :D. I've used it on SRM 530 and 531 and found some issues :D

1. CHelper can't "parse" the task. When I open a task, there is only moj created code file and it isn't parsed into CHelper's TopCoder Task. I had this issue with task UnsortedSequence (SRM 531 — Div 2 — 250 Task), another tasks just work fine :)

2. Wrong example input/output parsed. I'm not sure it's CHelper's problem or just moj's :-?. Had this issue with task GogoXCake (SRM 530 — Div 2 — 500 Task), another tasks just work fine :)

Just a "report" for you :D, hope you will see and fix them soon :D

Again, thanks for such an useful plugin :D
→ Reply

Nova

2 years ago, # ^ | ▲ **0** ▼

I'll look into it
→ Reply

Egor

2 years ago, # ^ | ▲ **0** ▼

I too faced the same problem in 531 Div2 -250.
→ Reply

phantom11

2 years ago, # ^ | ▲ **0** ▼

For SRM 531 D2 250 empty arrays were handled incorrectly. I will fix this ASAP As SRM 530 currently unavailable I'll look into that later
→ Reply

Egor

2 years ago, # | ▲ **0** ▼

There is problem on creating ,parsing contest,none function work from toolbar
→ Reply

vksgupta44

2 years ago, # ^ | ▲ **0** ▼

Please help me
→ Reply

vksgupta44

2 years ago,   #   ^ | ▲ **0** ▼

Nothing is working or only contest parsing?
→ Reply

Egor

2 years ago,   #   ^ | ▲ **0** ▼

Now contest parsing work ,how will it generate
automatically Main file,it is not working
→ Reply

vksgupta44

2 years ago,   #   ^ | ▲ **0** ▼

This is my chelper.properties file inputClass =
java.util.Scanner outputClass =
java.io.PrintWriter excludePackages =
java.,javax.,com.sun. outputDirectory = src
author = Vikash archiveDirectory =
archive/unsorted defaultDirectory = src/My
topcoderDirectory = topcoder testDirectory =
lib/test enableUnitTests = false
→ Reply

vksgupta44

2 years ago,   #   ^ | ▲ **0** ▼

It should generate the Main file when you run or
debug created configuration
→ Reply

Egor

2 years ago,   #   ^ | ▲ **0** ▼

When I select contest id 131(or any) in
codeforces it doesn't generate any
thing in default directory
→ Reply

vksgupta44

8 months ago,   #←^Rev. 2   ▲ **0** ▼

Hi Egor. This is my configuration:
default dir: src/main Archive dir:
archive/unsorted Output dir: src Input
class:
net.egork.chelper.util.InputReader
Output class:
net.egork.chelper.util.OutputWriter

When I click on *Run the selected*

configuration, it successfully generates a Main.java file under src (so src/Main.java). The generated file includes the classes from your library but the methods are empty. This is what I get:

```
class InputReader {

    public
InputReader(java.io.InputStream
stream) { /* compiled code */ }

    public int readInt() { /*
compiled code */ }

    }
```

kojak_

So, I'm getting compile errors.

I installed according to https://code.google.com/p/idea-chelper/wiki/MainPage Intellij IDEA 12.1.4 @ Windows

any hints?

UPD: If I leave the output dir empty, it compiles correctly:

```
- before compiling, it yields
"outputDirectory should be under
source and in default package".

- it then generates the file on
the project root directory (so,
on the same level as the src
directory). The file still has
empty methods for your library
classes with /* compiled code */
bodies.
- I created a sample case and it
correctly showed me the results
on the intellij console.
```
→ Reply

2 years ago, # | ▲ **0** ▼

phantom11

Hi Egor, Can you tell me how the inline functions work...I cannot figure it out..Suppose I have a method isPrime(int) that returns whether the number is prime or not.I want to use it directly and not write the whole thing everytime.I think the inline code does exactly this.But I dont know how to use it.Could you tell me or better demonstrate it with an example???
→ Reply

2 years ago, # ^ | ▲ **0** ▼

You need to create some class, like IntegerUtils and create static method isPrime. Then you can use it in your solutions
→ Reply

Egor

2 years ago,   #   ^ | ▲ **0** ▼

And where do I have to save that class??
→ Reply

phantom11

2 years ago,   #   ^ | ▲ **0** ▼

Anywhere it will be visible fromyour solution
→ Reply

Egor

2 years ago,   #   ^ | ▲ **0** ▼

I created a class algorithms in src and
a static method isPrime(Object a) in
that.Then I compiled it. After that when
I go to a Task and write boolean
check=algorithms.isPrime((Object)a)
,then it is shown in red .i.e. it cannot
compile...What should I do...Should I
have to restart??
→ Reply

phantom11

2 years ago,   #   ^ | ▲ **+2** ▼

Are you sure your method
was public?
→ Reply

Egor

2 years ago,   # **0**^
|

Yes it is public...Do
I have to change
something in the
properties file or put
the class in a
directory under the
src??
→ Reply

phantom11

2 year **+1** ▼
ago,   #
^ |

Well, it
should be
somewhere
under
source —
just like for
any Java
project
→ Reply

Egor

2 years **0** ▼
ago,   #

^ |

Ok. now its working .When I created a new directory under src and put the class in it.Thanks for the replies and your time:-) The thing I dont like in this is that it is showing all the methods in that class even if it is not called but some other method of that class is called ..Can this be changed??

phantom11

→ Reply

2 years ago, +15 # ^ |

In the created source (the one you will submit to the server) all unused methods will be removed

Egor

→ Reply

2 years ago, 0 # ^ |

When I submitted a problem in topcoder SRM 535

phantom11

using IntegerUtils class it gave an error regarding too much unused code.I think that inline code is not working..Its definatley not working on codechef where I can see my submitted solution
→ Reply

2 years ago, **0**
^ |

That is bug in TopCoder algorithm, I receive that warning quite regular, but never had my submission judged as UCR violation after I started to use Java. Can you point to your codechef submit where inlining/unused code removal had not worked?
→ Reply

Egor

2 year **0**
ago, #
^ |

I have messaged it to you.
→ Reply

phantom11

2 yea **0**
ago, #
^ |

Check 's comment

at the bottom, maybe you have same problem
Egor
→ Reply

---

2 years ago, # | ▲ 0 ▼

I was solving a problem of Light OJ, but seems unused codes are not removed in my Main File.

Here is my code: http://ideone.com/gsgDb

Here readLong is not removed, which is actually unused.
→ Reply

emo

---

2 years ago, # ^ | ▲ 0 ▼

Strange, not repetable on my computer By the way, you can use Test Type: MULTI_TEST, that's exactly why that type was created
→ Reply

Egor

---

2 years ago, # ^ | ▲ 0 ▼

Did you mean MULTI_NUMBER?

BTW, do you suggest me to do anything to make unused code remove working? I'm using chelper2.33.
→ Reply

emo

---

2 years ago, # ^ | ← Rev. 2   ▲ 0 ▼

Yes

It seems for whatever reason Idea considers readLong method as used. Could you open your created source (i.e. Main.java) in Idea and see if method name is grayed out as unused or not?
→ Reply

Egor

---

2 years ago, # ^ | ▲ 0 ▼

Yes, it was grayed out.

But problem is resolved now.

I changed outputDirectory = src from outputDirectory = src/output

And now it's working. Sorry, I think I didn't read the instructions carefully.

Thanks for this awesome software.
→ Reply

emo

---

2 years ago,   # | ← Rev. 3   ▲ **0** ▼

I changed the properties file and it does work for codeforces and codechef.
And when I see my code at the topcoder practise arena it does indeed have
the unused codes+every time I run the code for topcoder problems it gives a
warning "OutPut directory should be under source and in defualt package "
for only topcoder problems but then it runs...What should be done??

phantom11   → Reply

2 years ago,   #   ^ | ▲ **0** ▼

I had the same problem but it seems I had not configured my
directories correctly. Now, it's ok. My directories in properties are:
outputDirectory = src, archiveDirectory = archive/unsorted,
defaultDirectory = src/mypackage, topcoderDirectory = src And
make sure moj outputs to your src directory. Thanks for the great
plugin, Egor!

zdravko_b   → Reply

2 years ago,   # | ▲ **0** ▼

Thank you for your plugin. It's great.
→ Reply

zhendeaini6001

21 month(s) ago,   # | ← Rev. 3   ▲ **0** ▼

Thank you for your great work! But I can't find the
"%home_dir%.IntelliJIdea10configplugins" means, so I can't continue to set
up this plugin in my PC corrcetly.. Help! Thank you!

drm   → Reply
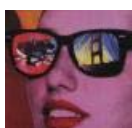
21 month(s) ago,   #   ^ | ← Rev. 2   ▲ **0** ▼

Launch IntelliJ and choose

```
File -> Settings -> Plugins -> Install plugin from disk -> path_to_chelper2.41.jar
```
→ Reply

CountZero

21 month(s) ago,   #   ^ | ▲ **0** ▼

Thank you for your reply! But I mean I don't know where
to mkdir the IntelliJIdea10configplugins, that means I
don't what ""%home_dir%" mean. Is it the Home
directory "~/"? Thank you!

drm   → Reply

21 month(s) ago,   #   ^ | ▲ **0** ▼

I fixed path that got broken after markdown
introduction

Yes, that's home directory

Egor   → Reply

21 month(s) ago,   #   ^ | ▲ **0** ▼

Oh, got it! Thanks all~

→ Reply

drm

21 month(s) ago,   #   ∧ | ▲ 0 ▼

BTW, in the Checker file, there are
some imports I can not find in the
project.. They are "import
net.egork.chelper.task.Test; import
net.egork.chelper.tester.Verdict;" And
my config is " inputClass =
lozy.InputReader outputClass =
java.io.PrintWriter excludePackages =
java.,javax.,com.sun. outputDirectory =
src author = Lozy archiveDirectory =
archive/unsorted defaultDirectory =
src/cf topcoderDirectory = topcoder
testDirectory = lib/test
enableUnitTests = false " Is there any
problem in my config file or should I do
some other works? Thanks a lot!

→ Reply

drm

21 month(s) ago,   #   ∧   **0** ▼

"...also you should include
chelper.jar to class path of
your project (Project
Structure -> Dependencies ->
Add Single Entry Module
Library…)"

→ Reply

Egor

21 month(s) ago, rev. 2,   **0**
∧ |

Sorry for my
carelessness... I
didn't see the word
"also"... Thank you
for your reply and
your time!

→ Reply

drm

12 months ago,   # | ▲ 0 ▼

how can i use chelper in eclipse IDE ?

→ Reply

engnaruto

12 months ago,   #   ∧ | ▲ 0 ▼

Idea plugins are incompatible with Eclipse

→ Reply

Egor

8 months ago, # | ← Rev. 3　　▲ 0 ▼

Google

1. That's an error.

Request not allowed from your country That's all we know.

Why? **UPD:** Fixed!I downloaded it whit VPN. :)
→ Reply

__76__

8 months ago, # | ▲ 0 ▼

Why I can't open and Install ? I have installed Java before !
→ Reply

__76__

8 months ago, # ^ | ▲ 0 ▼

You do not need to download anything from Google actually. Just use IntelliJ Idea Plugin repository (and you do understand that this is plugin for IntelliJ Idea, right?)
→ Reply

Egor

8 months ago, # ^ | ▲ 0 ▼

"You need to download plug-in and configuration. "
plug-in : http://code.google.com/p/idea-chelper/downloads/detail?name=chelper2.4.jar

!
→ Reply

__76__

8 months ago, # ^ | ▲ 0 ▼

That's old information. Refer to manual on plugin web site
→ Reply

Egor

7 months ago, # | ▲ 0 ▼

When I use static imports in Task class it will not appear in the generated Main class which will produce some compilation errors. Is there a fix (a way to have a predefined Main class)?
→ Reply

Nipuna_Samarasekara

7 months ago, # ^ | ▲ +3 ▼

Static imports are currently not supported
→ Reply

Egor

7 months ago, # ^ | ▲ 0 ▼

Thanks.Is there a way to add permanently

```
import static java.lang.Math.*;
```

```
import static java.util.Arrays.*;
```

at the beginning of generated Main class?
→ Reply

Nipuna_Samarasekara

7 months ago, # ^ | ▲ **0** ▼

Currently no
→ Reply

Egor

5 months ago, # | ▲ **0** ▼

Great plugin !
→ Reply

Ericcwang

5 weeks ago, # | ▲ **-8** ▼

Egor How Can I change the template code that generates automatically in the main? solver class name?
→ Reply

shamir14

5 weeks ago, # ^ | ▲ **-8** ▼

You can change solver class name (Main class name), but unable to change generated code
→ Reply

Egor

5 weeks ago, # ^ | ▲ **-8** ▼

some of the problem's input file is terminated by EOF. How can I handled those problem with CHelper regular test types? I've chose "Number of tests unknown" but it gives me RE :(
→ Reply

shamir14

5 weeks ago, # ^ | ▲ **-8** ▼

you should throw UnknownError when there's no more test.
→ Reply

AlexDmitriev

5 weeks ago, # ^ | ▲ **-8** ▼

thank you man, it works...
→ Reply

shamir14

5 weeks ago, # | ← Rev. 2   ▲ **0** ▼

Egor, great thanks for your plugin, it makes me efficient! I use it on IDEA 12 on MacOS and I have 2 questions:

1. Every time When I submit a task I have to change i/o streams otherwise, I receive next error during submission: java.lang.RuntimeException: java.io.FileNotFoundException: ÑÑ‚Ð°Ð½Ð´Ð°ÑÑ‚Ð½Ñ‹Ð¹ Ð²Ð²Ð¾Ð´ (The system cannot find the file specified) at Main.main(Main.java:22)

2. Sometimes during compilation I receive next error, only main.java removal fixes that: 17:48:32 IllegalStateException: Attempt to modify PSI for non-committed Document!: Attempt to modify PSI for non-committed Document!

MatFack

Thank you for help!
→ Reply

5 weeks ago, # ^ | ▲ **0** ▼

1. Well, if judge uses stdin/stdout you should specify those in your task as well

2. I need a look at you chelper.properties
→ Reply

Egor

3 weeks ago, # | ▲ **+5** ▼

In IDEA 13.1.1 I get the following exception when running a task:

17:20:01 IncorrectOperationException: Must not change document outside command or undo-transparent action. See com.intellij.openapi.command.WriteCommandAction or com.intellij.openapi.command.CommandProcessor: Must not change document outside command or undo-transparent action. See com.intellij.openapi.command.WriteCommandAction or com.intellij.openapi.command.CommandProcessor

slycelote

Works OK in 13.0.
→ Reply

27 hours ago, # | ▲ **0** ▼

When i run the codeforces programm using chelper , I get null pointer exception net.egork.chelper.util.CodeGenerationUtilities$InlineVisitor.addClass(CodeGenerationUtilities.java:534)

My configuration file is: inputClass = net.egork.chelper.util.InputReader outputClass = net.egork.chelper.util.OutputWriter excludePackages = java.,javax.,com.sun. outputDirectory = src/output author = Himalay archiveDirectory = archive/unsorted defaultDirectory = src/main/mypackage topcoderDirectory = topcoder testDirectory = lib/test enableUnitTests = false

himalay

→ Reply

27 hours ago, # ^ | ▲ **0** ▼

It is not able to create Main.java file
→ Reply

himalay