GAMING ETC PRICING PROGRAM USER GUIDE

Instruction Manual

Abstract

Instructional manual for auto-pricing program designed for GamingETC using TCGPlayer.com as a data source.

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Introduction

Scope and Purpose

This manual covers user procedures for the GamingETC pricing program, to be used to facilitate the process of gathering prices from TCGPlayer.com at its current state on 7/5/16. The program is designed to take input of Card Name and Set Name and give output of Median price and Market Price.

The program assumes basic user knowledge of the Microsoft Windows operating system, including basic text file creation and manipulation. The program is designed to facilitate day to day pricing activities as well as long term repricing plans.

Basic Process Overview

The process managed by the software is limited to the information provided by TCGplayer.com. The abstract principle the software works with is by visiting each page and reading and processing the relevant information on the page. User interaction is limited to the custom designed user interface, with minimal interaction during the Captcha sequences.

Basic User Workflow

1. Open GamingETC pricing program
2. Configure GamingETC pricing program for cards to be priced
    a. Select Cards to be priced
        i. Case List cards
        ii. MTGstocks interests
        iii. Pre-existing set
        iv. Custom list of cards/sets
3. Set speed for program
4. Basic operation of program process
    a. Step 1
    b. Step 2
        i. Captcha entry
    c. Step 3
5. Interpreting the report
6. Basic Troubleshooting and bug reporting

Note: This process is described in detail in part 3: detailed user workflow

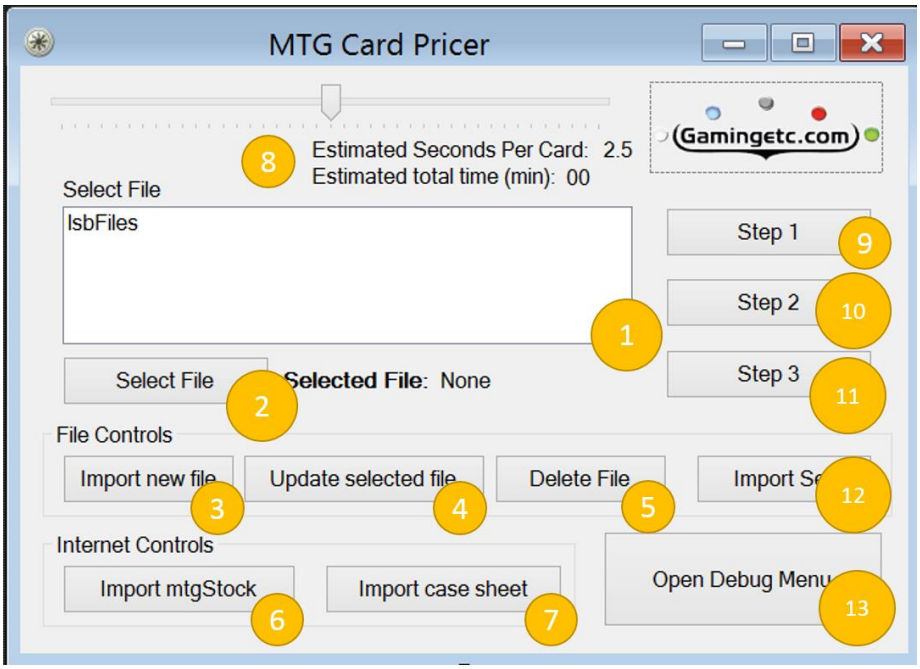
Working with the Interface

This section will provide a basic overview of working with the GamingETC pricing program interface as well as a key regarding what the individual buttons do. Throughout the duration of this guide, these buttons will be referred to using the code [Menu Name,Button#].

Ex: [Base Menu,3] will refer to the Import new file button

Base Menu Interface

The base menu appears when you open the program.

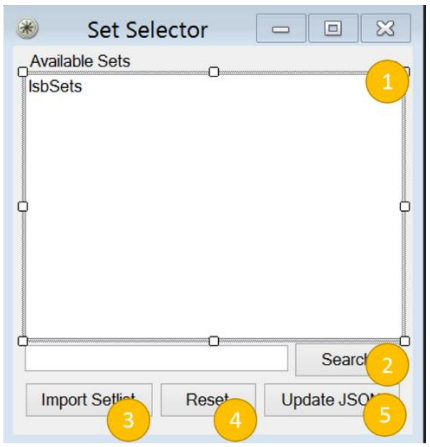


Base Menu Key

1) File Selection menu [this is a basic listbox, click on a file to highlight it (note: simply highlighting will not select a file)]
2) Select File button [this button selects a file; it is required to press this in order to move on with the process]
3) Import new file [this button allows you to select a file for importing, the newly imported text file should appear in the File Selection Menu (1)]
4) Update Selected File [this allows you to update the currently selected file]
5) Delete File [press here to remove the selected file]
6) Import MtgStock [this button imports the current “Daily Interests” list and compares it against the file “case sheet.txt”]
7) Import Case Sheet [currently being developed, this will theoretically allow you to retrieve the current case information]
8) Time control [this control will allow you to set the speed of the program]
9) Step 1 button [available after selecting a file]
10) Step 2 button [available after step 1]
11) Step 3 button [available after step 2, will open output]
12) Import set [Opens the import set menu]
13) Open Debug Menu [opens the debug menu]

Set Selector Interface

The set selector interface is used to import full sets directly into the program.

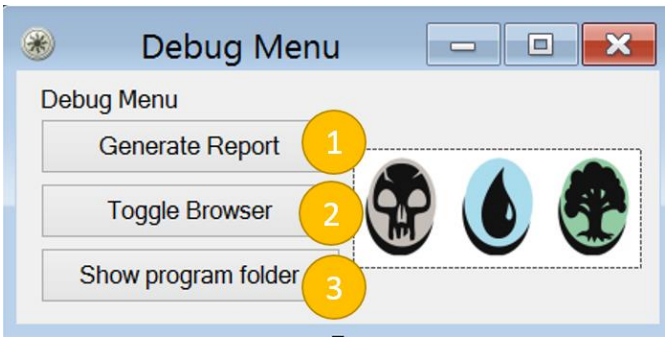


Set Selector Key

1) Available sets [a list of all full sets currently in the system ready for direct import]
2) Search [a way to search the list of sets for a specific set]
3) Import Setlist [imports the currently highlighted set list]
4) Reset [resets the available sets used after searches or update of JSON]
5) Update JSON [to be used after new sets come in]

Debug Menu Interface

The debug menu is used for simple user-level troubleshooting as well as some basic developer tools.

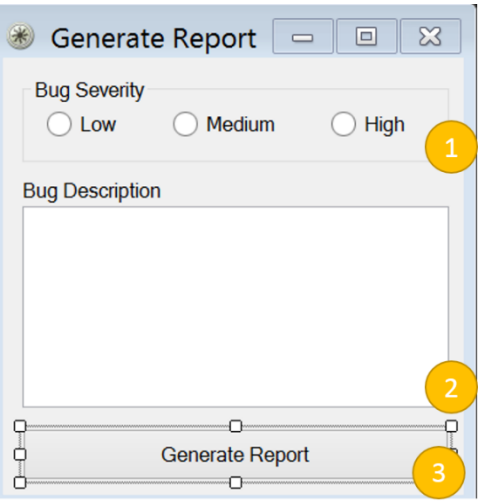


Debug Menu Key

1) Generate Report [opens the report generation form]
2) Toggle Browser [toggles the browser to show during step 2 TCG query step, troubleshooting tool]
3) Show Program Folder [opens the program installation directory]

Generate Report Interface

This menu is used to generate a detailed report that a developer can use in order to troubleshoot the program.



Generate Report Key

1) Bug Severity radio buttons [These buttons represent the severity of the bug being reported. 1 represents feedback notes and small errors, High represents errors that prevent the program from running, and medium is everything that falls between]
2) Bug description panel [A section for user input describing the nature of the problem as well as the steps leading up to the issue]
3) Generate report [opens an output panel to save the report for future analysis]

Detailed User Workflows

This section will provide a detailed description of the potential use cases as well as directions to utilize different features that the program offers. This section will cover a few examples of use cases for the program.

1) Basic Program Usage
2) Importing Case Prices for Repricing
3) Importing full sets for pricing
4) Using MTGStocks daily interests
5) Creating a custom list of cards

Basic Processes

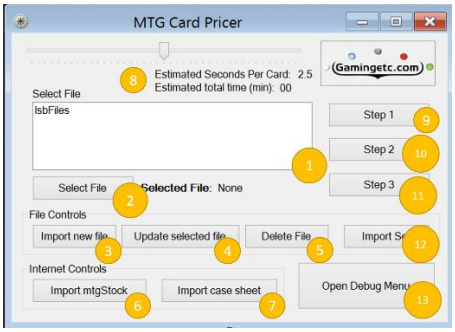
Basic program usage on compatible file

These are the directions to use the base features of the program. This use case assumes that the file you want to reprice already exists in [Base Menu,1]. If not, please read ahead to learn how to import a file into the pricing program. Other steps will refer to this section as Basic Program Usage

Running the program

To run the program, first select the ‘case sheet.txt’ file we’ve just imported in [Base Menu,1] and then hit select file [Base Menu,2]. Going through step 2 **will take time**, and you should be patient while it

works, although the program seems to be froze, it is actually working. After this go through the 3 step process to run the program [Base Menu,9/10/11] after which the output will be automatically presented to the user in the form of an HTML table. Hitting step 3 again will open the same output as long as the user does not close the program.



Running into CAPTCHAs

You will occasionally run into Captchas designed to protect TCGPlayer.com from data scraping. If these occur, the program should prompt you to stop and complete the captcha before moving on. Simply fill out the captcha and then press ok on the prompt. It is key that you complete the captcha **before** hitting continue in the messagebox.

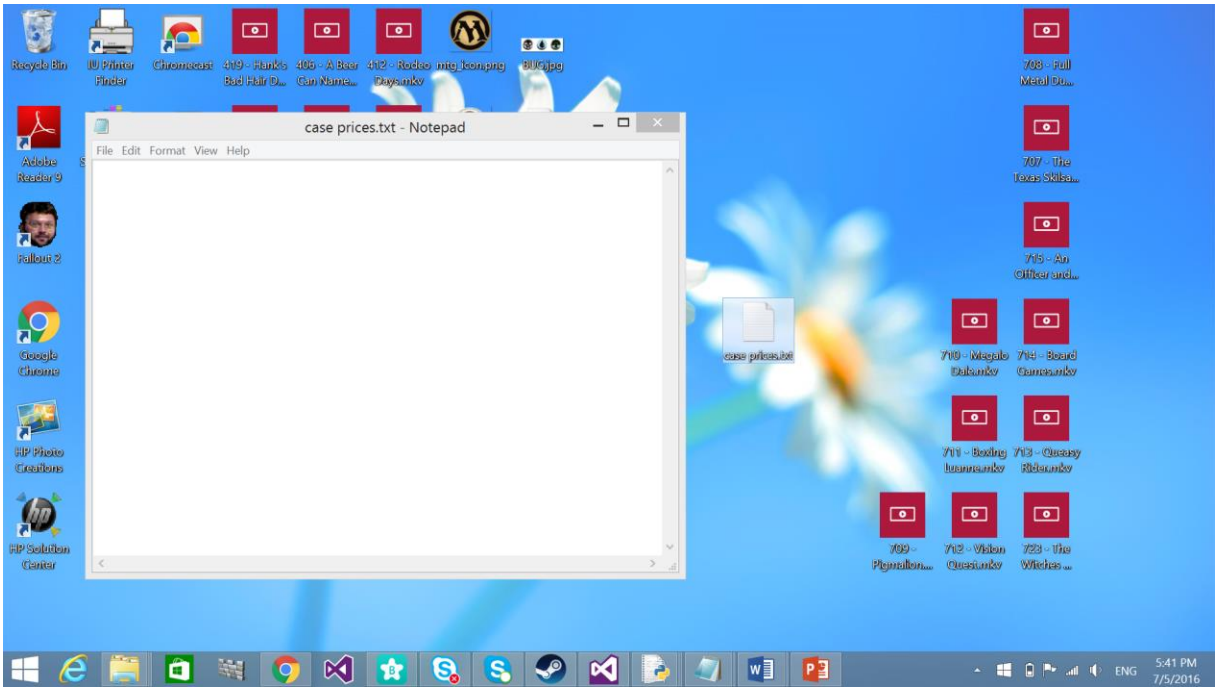
Saving the output

Upon exiting the program after completion, the user will be presented with the option to save the current output of the program.

Importing Case Prices for Repricing

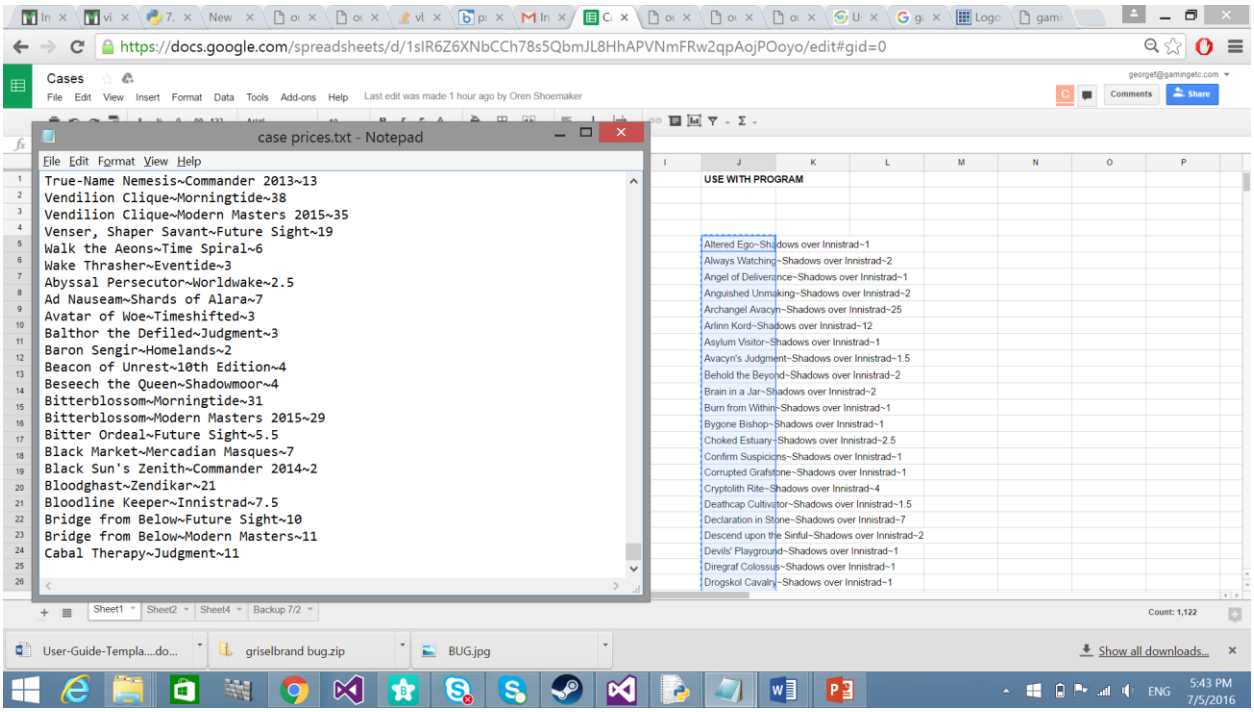
Creating text file

First create a new empty text file on the desktop, I highly recommend you name this new text file ‘case prices.txt’ as this will help enable the usage of the MTGstocks feature.



Copying current case prices

Go to the Google sheet containing the case prices. In column J there should be a title “USE WITH PROGRAM”. Beginning with the **first card**, copy this list into the just created ‘case prices.txt’ file. Save the file after copying the data.



Importing data into the program

To import this new data into the program, first open the program. If this is the first time you’re importing ‘case sheet.txt’, use the import file button [Base Menu,3], otherwise, first select the ‘case

sheet.txt' in the select file box, and use the update file button [Base Menu,4]. Use the time slider [Base Menu,8] in order to control the speed of the program. (*Note: lower speeds will reduce running time, but increase stability. Recommended number is 3 seconds, change at your own risk!*)

After this go to section "Basic Program Usage".

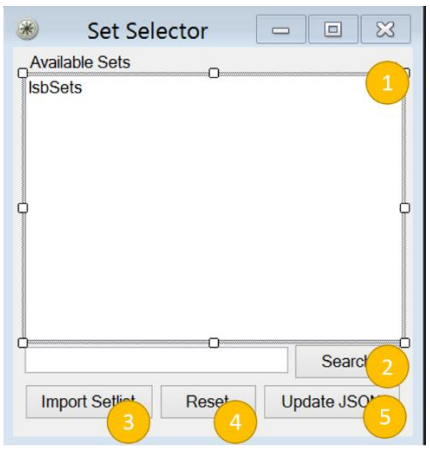
Importing a specific set

Open Set Selector

Using [Base Menu,12] open the set selector menu.

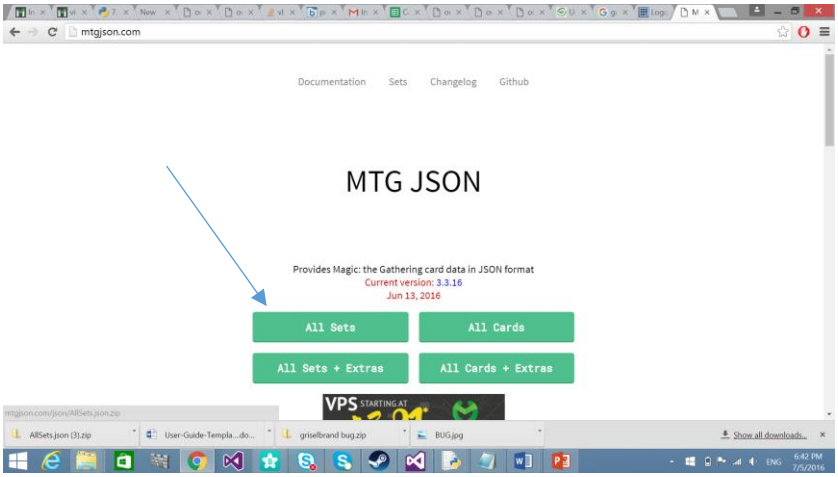
Select and import set

Using the list of available sets' or the search function, find the set you wish to import and press [Set Menu,3] to import the currently highlighted set list. The list should appear in [Base Menu,1] and be selectable. Using the recently created set, go to section "Basic Program Usage".



Updating the SetList

To update the master setlist when a new set comes out, first go to http://mtgjson.com/ and download press the button labeled “All Sets” in order to download a zip file containing the json file needed.



After downloading the All Sets file, navigate to the file in the file browser and extract the zip folder. In the Set Selector interface, press button labled “Update JSON” [Set Selector,5]. Navigate to the directory containing the recently extracted download and select the correct JSON file. This will update the setlist.

Using MTGStocks Daily Interests (Quick Price)

Ensure ‘case price.txt’ exists and is up to date

Following directions in section “Importing case prices for repricing” ensure that the file ‘case file.txt’ exists, and is up to date.

Use ImportMTG Stocks feature

Press ImportMTG stocks button [Base Menu,6] this will create a new file in the list box titled MTG Stocks. Go to section “Basic Program Usage” with this newly created file.

Creating a custom list

Creating text file

First create a new empty text file on the desktop to store the custom list.

Formatting your data

I assume you have a list of cards you want to price, and you already know what set each of those cards belong to. The correct format the program accepts is [CardName]~[SetName]~[CurrentPrice]. If there is no current price (ie, the first time you’re pricing a card) then Current price should be set at 0.

Example:

I want to price Archangel Avacyn, Surgical Extraction, and Thoughtseize

I know that Avacyn is from Shadows over Innistrad, Extraction is from new Phyrexia and the Thoughtseize I want is from Theros

I don’t have pre-existing prices.

In the text file I would write

“””

Archangel Avacyn~Shadows over Innistrad~0

Surgical Extraction~New Phyrexia~0

Thoughtseize~Theros~0

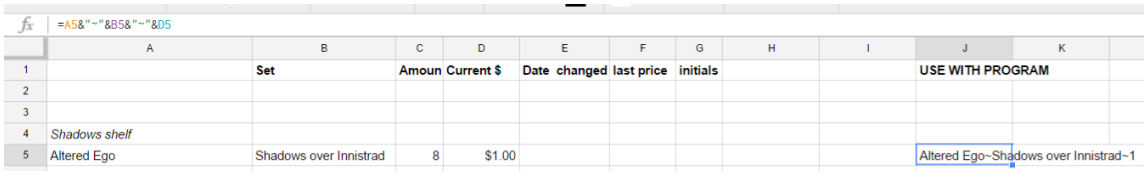
“””

Import the newly created file

Using the import file feature [Base Menu,12], locate and import your newly created file. Then go to section “basic program usage”

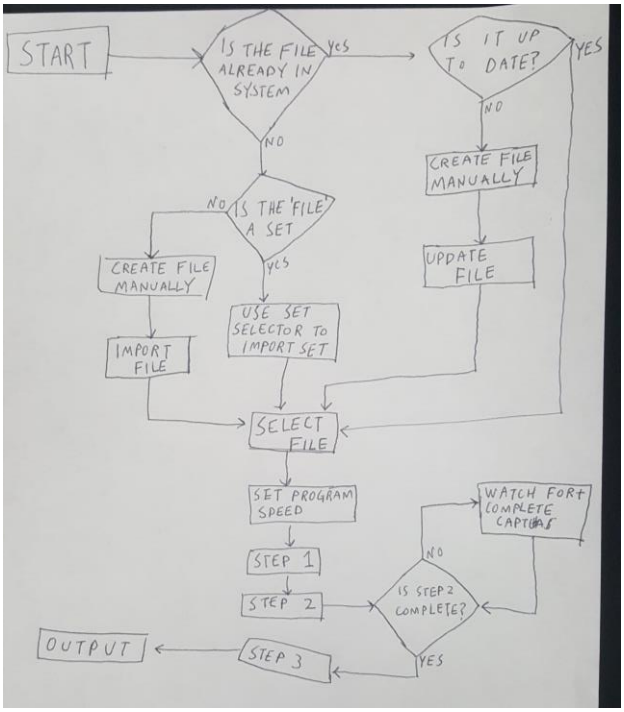
Using Excel to facilitate creating a custom list

Microsoft excel, or google spreadsheet can help facilitate the custom list making process, if you can get a spreadsheet table containing the card name, and the set symbol next to it, a simple excel concatenations formula can help format the list. In the example below the formula is: *=A5&”~”&B5&”~”&D5,* which is simply joining the 3 cells with a ~ delimeter.



	A	B	C	D	E	F	G	H	I	J	K
1		Set	Amoun	Current $	Date changed	last price	initials			USE WITH PROGRAM	
2											
3											
4	*Shadows shelf*										
5	Altered Ego	Shadows over Innistrad	8	$1.00						Altered Ego~Shadows over Innistrad~1	

Basic Process Diagram



Interpreting the output

The program will output information as a basic HTML table, readable in any browser. The table is divided between cards with >$1 in price, and all other cards.

The colors represent a highlighted change. Currently, if a card is priced at 2 dollars or under, it will never be highlighted or in the top list.

If an error has occurred in the program, the card will be priced at $9,999 and the card will have to be manually priced. Please refer to the troubleshooting section to fix or report the bug.

Cards with > $1 Difference in Price

Card Name	Card Set	Case Price	TCG Median	TCG Market	Direction
Relentless Dead	Shadows over Innistrad	$6.00	$9.00	$7.44	
Nimbus Maze	Future Sight	$7.50	$35.00	$23.67	
Ancient Tomb	Tempest	$19.00	$24.02	$20.35	
Mesmeric Orb	Mirrodin	$10.00	$11.63	$10.57	
Back to Basics	Urza's Saga	$7.00	$8.90	$9.25	
Glimpse the Unthinkable	Ravnica	$35.00	$36.68	$32.66	
Archive Trap	Zendikar	$10.00	$8.69	$8.51	
Urza's Incubator	Commander 2015	$7.50	$5.68	$5.78	
Dust Bowl	Mercadian Masques	$12.00	$10.99	$10.98	

All Cards

Card Name	Card Set	Case Price	TCG Median	TCG Market	Direction
Triskaidekaphobia	Shadows over Innistrad	$1.00	$2.19	$1.68	
Demonic Pact	Magic Origins	$3.00	$4.00	$3.68	
Relentless Dead	Shadows over Innistrad	$6.00	$9.00	$7.44	

Troubleshooting

Basic User Troubleshooting

This section provides troubleshooting tips regarding common errors for the basic user. This should be the first source the basic user consults if running into trouble.

Commonly Encountered Errors

It keeps asking me to select a file

This occurs when you've highlighted a file, but have failed to hit the select file button. You have to hit both of these for the program to continue with any process.

I'm getting ERROR $9,999 on some cards

Some of the biggest reasons for this are:

1) Misnamed cards
2) Misnamed sets
3) Incorrect Formatting
4) Speed set too low
5) Messed up on the captcha

If you are encountering this error on multiple cards there are a few steps you can take:

1) Make sure your set name is consistent with the naming convention currently in the cases sheet. For example, M11 is labeled Magic 2011 m11. Another example is a set named Rise of the Eldrazi cannot be titled "Rise of Eldrazi"
2) Try increasing the allowed time per card, this will decrease the error margin
3) Try restarting the computer
4) Try reinstalling the program (this will delete all current txt files, consult advanced user to backup files)

I can't tell if it's working, it seems frozen to me!

If this happens there is one way to check if the program is progressing or not. In the debug menu, press the Show Program Folder button, [Debug Menu,3]. This will open the installation directory of the program. During step 2, there will be a file named "pricelist.csv". Refreshing the folder should see this file growing. If it is not growing in size, the program has become stuck for some reason. Please create a bug report describing the situation.

The program is very slow, captchas are not appearing

Try restarting the computer. If this doesn't do anything, submit a bug report.

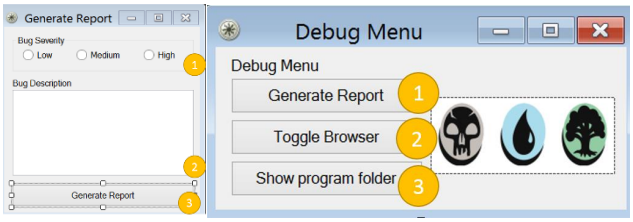
Reporting a Bug

Bug reporting is done through the Debug Menu available through the debug button [base menu,13]. Through the debug menu, use the Generate Report button to open the corresponding bug report menu [Debug menu,1]. This will open the Generate report menu, where the user can describe the bug. A proper description should include:

1) Describe the bug, what happened, and where you can find the result of the bug
2) Describe what you were doing when the bug occurred

3) Describe any unexpected things that were happening when the bug occurred
4) Anything else you feel is important regarding the bug or the state of the program

Once you have a description of the bug, press the generate report button [Generate Report,3], and select an output destination for the bug report. Go to the file location, zip the file you've created, and e-mail it to the current IT director of gamingETC.



Bug Severity Descriptions

Low Severity

Used for general feedback as well as small errors. If one or two cards error once, but it isn't re-creatable, it can also be put under the "low" category. UI, design, and functionality recommendations for future versions go here.

Medium Severity

Bugs that effect the accuracy or functionality of the program go here. Reoccurring bugs regarding errors or misprices get labeled under Medium Severity

High Severity

Bugs that prevent the program from running get put under high severity. These include crashes and multiple errors (>15%-20% of cards)

Advanced User Troubleshooting

This section is for the advanced user for additional troubleshooting tips. Basic users should be cautious in attempting to navigate this section as messing with the system files can have unexpected results.

Developer notes

Here I will detail the process that the program works through and some basic highlights any developer trying to modify the program should know. First the program is developed over 3 programming languages, Python, Visual Basic, and AutoHotKey. Visual basic is responsible for some basic file manipulation and the interface that the user interacts with, to edit these files, you will probably want to use Visual Studio, as a student you will have a free license to the community edition, I believe.

The program is fully functional without the user interface and the process is split into 3 steps, represented by the buttons. The first step is the python file named step1, this is responsible for taking the input file, and turning it into more complicated files usable by step2 and step3. This step, as well as step 3 are only responsible for the formatting of the files.

Step 2 is where the magic happens, in step 2 the computer emulates an instance of internet explorer and uses that emulation to artificially browse TCGPlayer.com. step 2 uses the output of step 1 in order to obtain the list of cards to be processed, if there is something major that goes wrong in the program, it

is likely in step 2. The output of step 2 is pricelist.csv, which contains the full HTML of each page for each card.

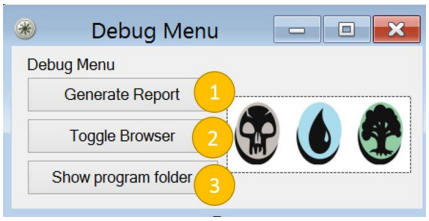
Step 3 goes through all this HTML as well as another file generated in step 1 to reconcile all the cards that were inputted by the user. Any error in step 3 will result in the miscommunication of prices. Errors regarding incorrectly priced cards should be first investigated in step 3.

One thing I would like to highlight is there are a few instances in the code where the code for the interface directly changes (via rewriting) the code in the parts. While not a good practice, it was the most straightforward at the time as I didn't know how to pass parameters. Due to this, there are some lines that should never be changed in the code, these are highlighted by comments.

Troubleshooters toolbox

Accessing the code

To access the code, use [Debug Menu,3] to open the installation directory.



Step 3

There are a few tools I use to troubleshoot the program when it goes wrong. When it seems to be in part 2 or 3 that the error happened, I go to the part 3 python file. There is a commented line that says print for searched card, uncomment that, and you can look at the HTML for the part that it went wrong.

Step 2

The first step in troubleshooting step 2 is to toggle the browser, currently only do-able by setting browser-visible = true in the step2.ahk file. Once you do this you can see exactly what page is being opened. The program is saving the HTML of the opened pages to the file so you can see exactly what's coming out of step 2 and going into step 3.

Predicted Errors

TCGPlayer changes their site layout

If TCGPlayer changes their site layout by moving things around or removing an element, the program will likely throw errors. The correct fix for this is dependent on how TCGPlayer has changed their site, if it is in the URL the change will be in part 2, if it is in the page structure, the change will be in part 3.

Changes are most likely in part 3.

Part 2 works for the first card, but never moves on, when I close the browser it says something about Wait()

This is an error resulting from TCGPlayer changing their loading style, it shouldn't happen, but if it does the correct change is in the wait for page function of the AHK script. Instead of waiting for windows to send a ready, perhaps wait for it to read the </HTML> in the page. Since this is not something that happens now, you will have to be creative, but the change will be in the wait function.