User Manual
For:
Heroscape Army Builder

Version 0.1.3.1

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About

Heroscape Army Builder (HAB) is designed to aid in managing the units that one has and allow for better creation of armies. This version, 0.1.1 has limited functionality due to still being in development. This version was developed using Python 3.9.4, and as such the user will need that version, or a newer version, of python.

This version of HAB currently is only able to run the Card Viewer (described on page 6), Copy Database (described on page 11), and Set Default (described on page [SET ME]), other functionality will be added in future updates.

HAB is developed by Benjamin Jones, or Jazack on heroscapers.com. Any inquiries, bugs, or other items about HAB, ought to be brought to Benjamin Jones via either a message through heroscapers.com or an email to flenogo@gmail.com, with “Heroscape Army Builder” in the subject line.

I hope that you enjoy the program.

Running the program

This program has been compiled for windows, and as such is not guaranteed to function on other operating systems. It is recommended that new users download all the files, these being:

- Heroscape Army Builder V.0.1.3.1.exe
  - This is the program, and will manage the databases
- Official Units.db
  - This database contains all of the official units from Heroscape
- units.db
  - This database contains all of the official units from Heroscape as well as many of the cv units.
- setup.heroscape
  - This file contains the setup information for the program, it will keep track of the preferred database to use.

While this program will work fine with only downloading the first file, if you do that you will need to manually add all of the units.

Heroscape Army Builder

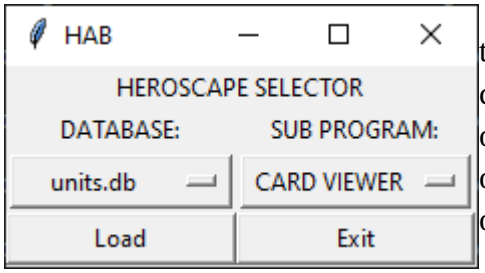

Figure 1: the main menu

The Heroscape Army Builder starts with a couple options, the default for the database is the units.db, this can be changed via clicking the box and picking a new database to use. The initial options are units.db and NEW. NEW will allow you to name your own database, while units.db is a standard database that has many of the original and cv characters.

The other item is the SUB PROGRAM, this is what allows you to choose which sub program you wish to run, whether it's the card viewer, database copier, or one of the other army managers that is currently in development (NOTE: currently only the card viewer and database copier are available).

Once the items are chosen, you click on the Load button, and it will load the sub program with the chosen database.

Card Viewer

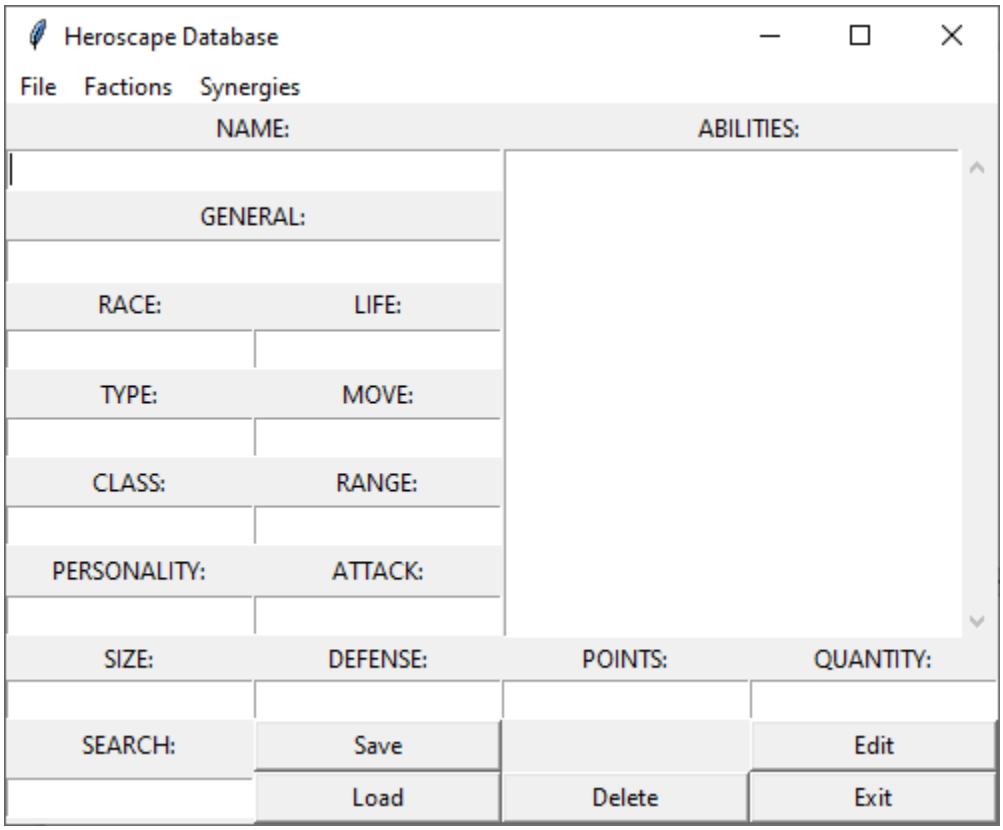

Figure 2: The entry screen for the Card Viewer

The card viewer initializes at an empty card. Here you can manage the units in your database, and it will show you how each unit interacts with other units.

Reading the card

The card contains various fields from, each of which corresponds to a field found on any unit card. This contains, the Name of the unit in the NAME field, the Arch Kyrie that the unit follows in the GENERAL field, the race of the creature in the RACE field, and so on and so forth. The QUANTITY field is the amount of that specific unit you have. This will be used in later renditions of the program to build armies using your available units.

All of the card elements are locked from being edited, save for the quantity section. The editing process will be explained lower.

Each Arch Kyrie also has their own color to aid in readability. Also, if the unit has a special ability that affects a specific group of units, that will appear on the side with a link to each unit so as to be able to understand what that unit does.

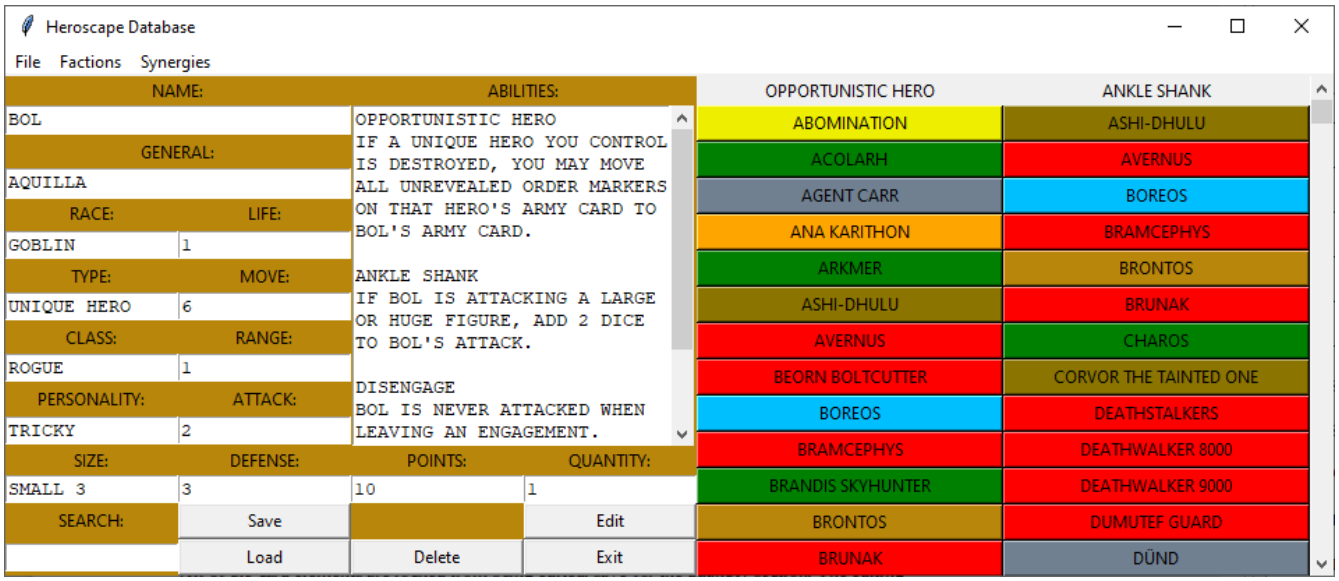

Figure 3: The card for Bol

The card for Bol is shown in *Figure 4.* As can be seen, his Opportunist Hero ability is able to work on many units, all gathered in alphabetical order, and then the section over is his Ankle Shank ability with all of those units in alphabetical order. Clicking on any of their names will instantly direct you to their respective cards.

To see what abilities other units have that can affect a given unit, go to the Synergies drop down menu, and it will give three options, these being “Allies”, “Enemies”, and “Neutral”. Each of these three menus will show units whose abilities will only work on the selected unit if they are an ally, enemy, or if it will affect them regardless of status.

Synergies

All of the synergies that a given unit has will be displayed in two locations. The first location is to the right of the unit information. The synergies, if any, that are displayed here are ones where the unit directly affects them in one way or another, such as in *Figure 4*, where Bol’s synergies can be seen on the right of his figure, both the ability that comes into play with allies, and the ability that comes into play with enemies.

The other location can be found via the synergies menu at the top of the screen. This section of synergies are ones where a different unit can affect the current unit. It is divided up into three sections, these being synergies that come from being allied with the unit, synergies that just occur, and synergies that come from being an opponent of the unit.

Load

To load a unit, you can either type in the units complete name in the search bar and then press load, or you can click on Factions → *the faction the unit is in* → *the unit name that is desired to be loaded*.

It’s as simple as that.

Creating a New Unit

Creating a new unit can be done in one of two ways. These being either going through the drop-down menu, File → New, or by editing an already existing unit and changing their name to a new name.

NOTE: The program saves each unit based on their name, and so if an existing unit already has the same name, the new version will be saved on top of the previous version.

Deleting a Unit

In order to delete a unit, you must first go to that unit’s card, and then press the Delete button. The unit will then be deleted.

This will not be reflected until you leave the said unit’s card, at which point it will become permanent.

Setting all quantities to zero

If, for whatever reason, you desire to set all quantities to zero, the button to do so can be found at File → Empty All. Here you will be presented with an option to set all to zero, or leave it be. If you choose to set to zero, it will not take place until after you close the Card Viewer, and then it will take a minute or two to properly go through and update each card.

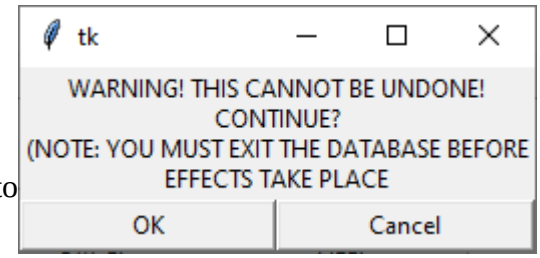

Figure 4: Message asking if you are sure about setting all quantities to zero

If you by mistake decided to click the OK button on *Figure 5*, you are able to go through the same steps (File → Empty All) and click Cancel, that will stop it from emptying.

Editing a Unit

To edit a unit, you press the Edit button, and every field will become editable, and you will notice that in the Abilities section there will be some extra items. In *Figure 6*, on the next page, you can note that there are various elements such as <POWER> or <CLA>, these will be explained in the section Abilities.

You will make any changes that are desired to for the unit, and then press Save, either via the button, or File → Save. Either way will save the unit.

After saving, everything will automatically be made into uppercase for your convenience.

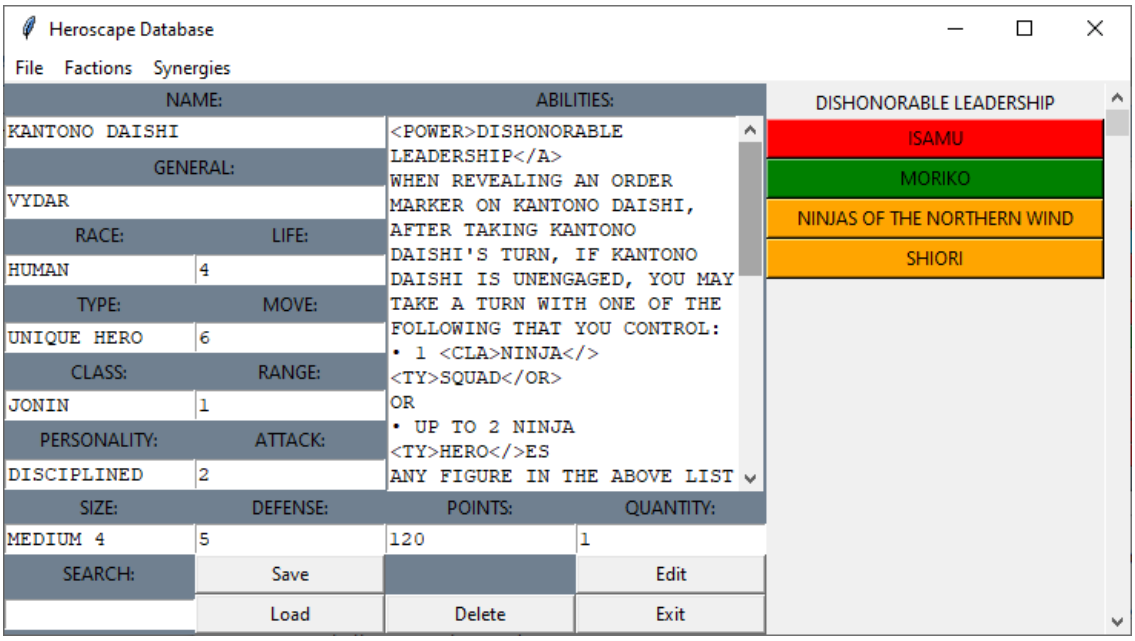

Figure 5: Kantono Daishi

Abilities

The abilities section is perhaps one of the most complex sections, as there are many tags to be aware of. A complete index of each tag, and what it is used for, can be found in Appendix A. There are two types of tags, opening and closing tags. Opening tags with follow a format of <*tag*>, and closing tags with have an extra "/", so that </*tag*> will be a closing tag. Each opening tag must be coupled with a closing tag.

To start, you will place a <POWER> tag before the name of the ability, and at the end of the ability you will place one of the following end tags, </A>, </N>, </E>, these signifying that they affect allies, that they affect both allies and enemies equally (or not at all, such as with flying), or that they affect enemies, each respectively.

For example, in *Figure 6*, Dishonorable Leadership, which affects allies, is encapsulated by <POWER> … </A>, meaning that it is an ability that affects allies.

Then, you will find all keywords, the words that describe who is affected (ignoring all words that show who controls the unit, as that can vary from game to game, and so is marked by the end tag with the power), and encapsulate them with a tag. If there are multiple descriptors that use the same tag, you will use an </OR> end tag on each of those items, save for the last one. Again, referring back to *Figure 6*, Dishonorable Leadership affects squads and heroes, and as "SQUAD" comes before "HEROES", it is encapsulated thusly: <TY>SQUAD</OR>, and "HEROES" is encapsulated as such: <TY>HERO</>ES (heroes is a special case, where the end tag precedes the end "ES", all other keywords will have an end tag at the end)

Card Stat Viewer

Unit Stats

File View Generals

NAME	GENERAL	POINTS	QUANTITY	WINS	LOSSES	RATIO	WORTH
10TH REGIMENT OF FOOT	EINAR	75	1	0	0	N/A	1.0
4TH MASSACHUSETTS LINE	JANDAR	70	2	0	0	N/A	1.0
53RD NORTH CAROLINA SHARPSHOOTERS	VYDAR	55	1	0	0	N/A	1.0
ABOMINATION	MARVEL	320	2	0	0	N/A	1.0
ACOLARH	ULLAR	110	1	0	0	N/A	1.0
AGENT CARR	VYDAR	100	4	0	0	N/A	1.0
AGENT SKAHEN	VYDAR	120	0	0	0	N/A	1.0
AIR ELEMENTAL	JANDAR	30	0	0	0	N/A	1.0
AIRBORNE ELITE	JANDAR	110	5	0	0	N/A	1.0
ALASTAIR MACDIRK	JANDAR	110	0	0	0	N/A	1.0

EXIT FIRST BACK Showing 1 - 10 out of 292 NEXT LAST EXIT

Figure 6: Starting screen of the Card Stat Viewer

The Card Stat Viewer allows for comparing several basic stats, such as the points of the units and the quantity possessed. It also allows for viewing the quantity of wins with that unit, as well as the losses. From that data it will find the ratio of wins to losses.

It will also compute a 'WORTH' score, which follows the formula of

> WORTH = (quantity of abilities) + (quantity of positive abilities that affect it) + (total wins) + (defense + attack + range + move + life) – (total losses) – (quantity of negative abilities that affect it) – (point cost)

Each item in the formula is also multiplied by a level of importance, the multipliers will be altered as this project is updated. Attempting to find the best results.

First Back Showing 1 - 10 out of 284 Next Last

Figure 7: Bottom of Card Stat Viewer, with the First, Back, Next, and Last buttons, as well as the current selection being shown

At the bottom of the screen, there is the 'First' button, which will set the location to the very beginning of the list, the 'Last' button does the inverse. The 'Next' and 'Back' buttons will bring the current selection either forward or backward in accordance with the current amount being viewed.

In the middle of the buttons it explains the current section being viewed out of the total quantity that is viewable.

NAME	GENERAL	POINTS	QUANTITY	WINS	LOSSES	RATIO	WORTH

Figure 8: Options for quick sorting

Along the top there are the options for how to sort. Clicking on the option will sort it first by ascending order, and clicking again will start the sorting by descending order. If two or more items

share the same value by which they are being sorted, it will default to alphabetical order according to ‘NAME’. The first option, ‘NAME’, will never have multiple items with the same value.

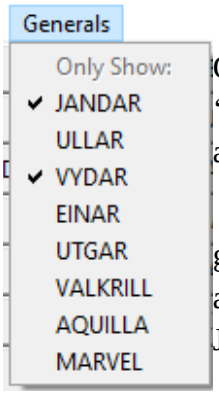

Figure 9: Generals menu with JANDAR and VYDAR selected

In the General menu there is another way to filter the options, which is by General. By default nothing is selected, which displays all of the units available, ‘JANDAR’ will display only units that follow Jandar, ‘ULLAR’ is the same for Ullar, and so forth.

If multiple generals are selected, the units that follow either general will be displayed. Such as *Figure* 10, which has JANDAR and VYDAR selected, and as such it will display only units from Jandar and Vydar.

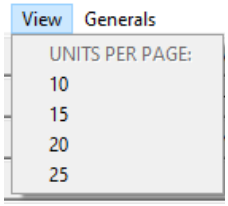

Figure 10: View menu

The View menu allows for altering the amount of units viewed per page. This can be done in increments of 5, from 10 to 25.

If there is not enough units to fill the view window with the selected units per page, it will show all the units available, and it will default back to the selected quantity per page once there are enough units for it.

Also, each unit listed under name is able to be selected. Doing so will bring you to the Card Viewer page for the selected unit so as to allow for viewing all of the relative information for the unit. It will allow for the user to explore other units as well. After finishing viewing the units in card mode and exiting the Card Viewer, it will return you back to the same section that you were viewing before. Allowing for ease of army planning.

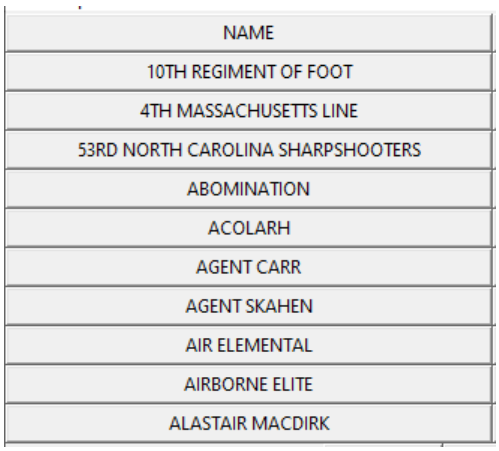

Figure 11: Units available for selection to view in Card View

Army Generator

The army generator sub program will generate an army based off of your play style given a set of parameters. These being the unit with which to start, the points to build within, the generals allowed, if to stick with only units possessed by you, or using all units within the database regardless of your possession, and singleton or not. After the options have been chosen, you click generate, and it will generate an army. Depending on the points chosen, this may take some time.

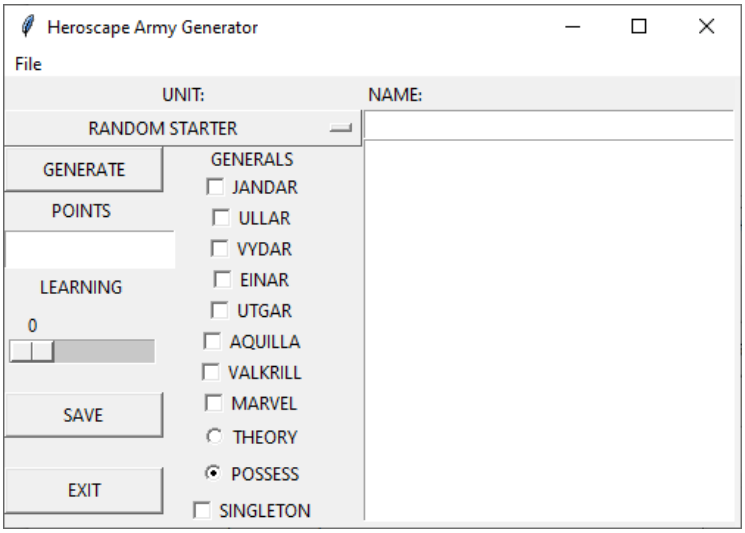

Figure 12: The Army Generator program having made an army using the given parameters

When an army is generated, you may save the army into your database. To do so, you will give it a name, and then click the SAVE button. Afterwards, the army can be found in the ARMY DISPLAY subprogram.

Starter Unit

The UNIT option allows for choosing a starting unit, or starting with a randomly selected starter unit.

Every unit is sorted by their generals, and then alphabetically. It will only allow for units given under the generals section, so in the case of *Figure 13* it will only allow for units that follow Jandar and Ullar.

Points

The POINTS section allows for determining how many points will be allowed for the army being created. If it is left blank it will default to 500 points. If it is filled, the army generated will do their best to fill the given point value, it may be less than the chosen amount but never more than it.

Learning

The LEARNING section allows for the program to experiment and try new units that are not necessarily as optimal, it represents the likelihood of trying something new. If learning is set to 0, it will always pick the most optimal unit, if it is set to 100 it will always pick a less optimal unit.

Generals

This section allows for choosing which generals will be allowed, if none are selected then it will default to allowing all generals. When the army is generated, it will only choose units which follow those generals.

Theoryscape or Possessions

The THEORY and POSSESS options determine the quantity allowed for the different units. For the theory option it will allow for the units chosen to exceed the quantity that you possess. For instance, if you only have one squad of Armoc Vipers, the theory option will allow for generating an army that has four squads.

In contrast, the possess option will only work with the units which you possess. As such, in the previous example, it would only allow for the one squad to be chosen of Armoc Vipers.

Singleton

The SINGLETON option allows for generating in the play style of Singleton. Which is to say that every unit will be treated as unique, and so a max of one set of each army card is allowed. If it is not selected, it will allow for treating cards as normal.

Army Display

The Army Display subprogram allows for the creation and management of your armies. It is here that you will be able to add/remove units, report wins and losses with the army, as well as save and delete your armies.

Previously saved armies can be found under the Armies menu along the menu bar, and under the File menu the selection can be cleared with the New selection

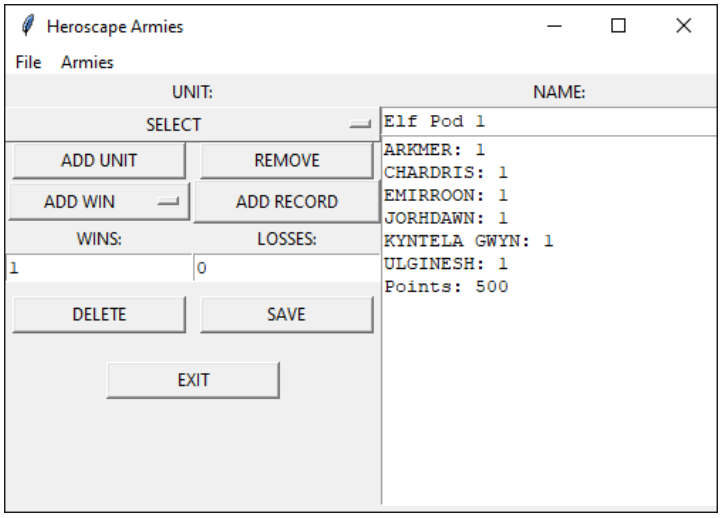

Figure 13: An army named Elf Pod 1

Unit

This section is where you can choose the unit to add to the army. It is organized by general and alphabetical. To add a unit, you select the unit, and then click the ADD UNIT button, to remove a unit you select the unit and then click the REMOVE button.

Once a unit has been added or removed, the army display will be updated with the information and the points will be adjusted accordingly.

Reporting wins and losses

Figure 15 shows the record selection drop down menu, this menu allows for choosing what to report. Either a win, a loss, or the removal of one of those. Once the selection has been chosen, the ADD RECORD button will add the desired item.

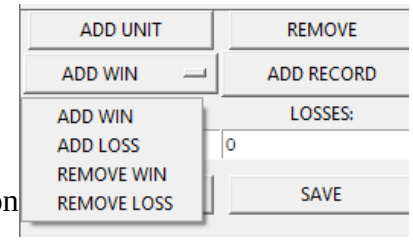

Figure 14: The record selection drop down menu

In the case of removals, it will lower the selected to a minimum of 0.

Unit Battle Report

The Unit Battle Report allows for reporting wins and losses of given units.

When a unit is selected from the UNIT menu, it will update the WINS and LOSSES text boxes with the respective wins and losses of the chosen unit. The UNIT menu is divided into groups based on the Generals.

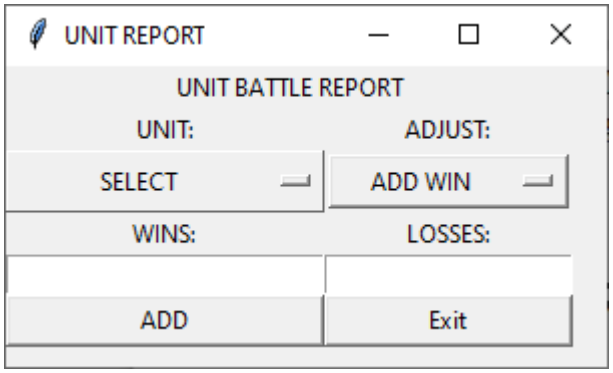

Figure 15: Unit Battle Report menu

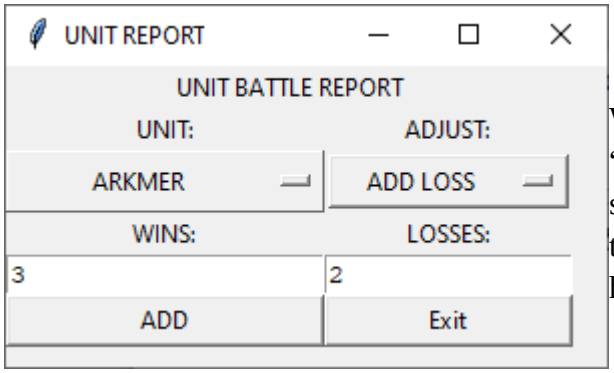

Figure 16: Arkmer with 3 wins and 2 losses

The ADJUST menu allows for the options to "ADD WIN", "ADD LOSS", "REMOVE WIN", and "REMOVE LOSS". Each item does what its name suggests (i.e. "ADD WIN" adds a win to the unit) when the "ADD" button is placed. In *Figure 17*, Arkmer has had three wins added and two losses added to him.

If it is attempted to lower the wins or losses below zero, it will not do anything.

Update Values

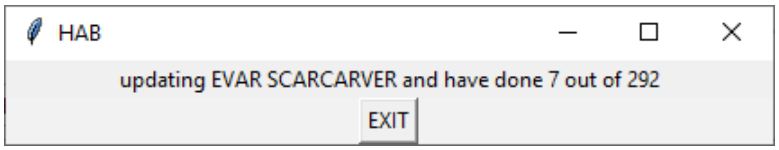

Figure 17: The Update Values subprogram

The Update Values subprogram will allow for updating the values of all of the units, this is to be used if the formula for determining the worth of the units has been changed and so the value needs to be updated. Generally, this will only be needed if an update to the program occurs that attempts to improve the selection of units for generating armies.

Copy Database

To copy a database, you first will select the COPY DATABASE from the sub program menu, as well as the database that you desire to copy, and then click "Load". This will bring you to a new window, which is shown in *Figure 19*, here you will enter the name for the new database that will be created.

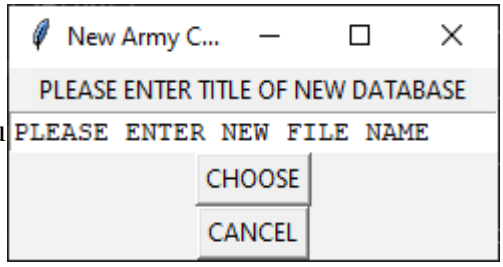

Figure 18: Input screen for a new database

After you have entered a name, click on "CHOOSE" to select the name, and the new database will be created and you will be brought back to the main menu.

If you decide to not go through with it, the CANCEL button will stop the process.

Merge Databases

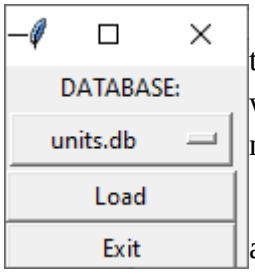

Figure 19: Merge Database

The merge databases program first has you select the database that will receive the update, after which it will take you to a screen to choose the database with which to merge. Next, it will find all of the units that are in second database and not the first, and add them to the first database.

It should be noted that this does not create a new database, if it is desired to avoid altering the two databases that you wish to merge, it would be recommended to make a copy of one of them, and use that copy as the first selection.

Set Default

To set a default database to use on opening the program, set the database item to the desired default database, and then set the sub program to SET DEFAULT, and then click the Load button. This will make the program open up with the selected database as the new default database.

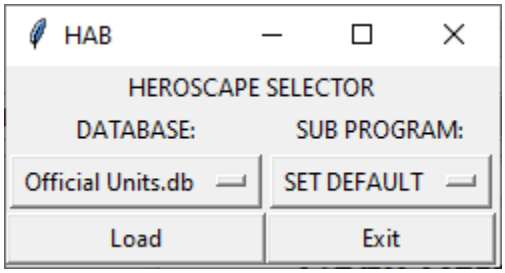

Figure 20: The Set Default Sub Program

Reset Win Loss Record

Resetting the win loss record will go through each unit and set the win and loss rate back to 0, as well as altering the score of each unit back to default values.

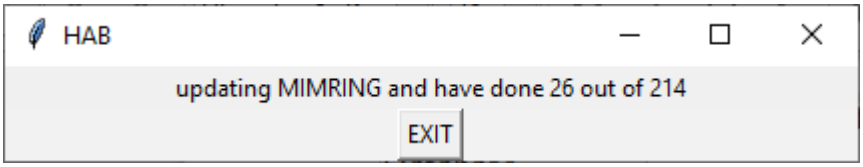

Figure 21: The Reset Win Loss Record sub program

It will display the unit that is being reset, how many have been completed, and how many total there is left to do.

Exiting during this will leave all units that were not reset as they were.

Appendix A

A list of tags for editing abilities (The tag defines the units that can be affected by it):

</> - this tag is a generic closing tag. It will close whichever tag proceeds it.

</A> - This tag is used to signify the end of an abilities name, and that the power directly affects allies of the unit.

<ABILITIES> - This tag is used to signify that an ability keyword is about to be used. Such as Su-Bak-Na's Hive Supremacy, which looks for abilities with the roll keyword.

See also <POW>

<ATTACK> - This tag is used to signify a number of attack dice. This tag only exists so that the abilities can be edited in any way, no official character (that I'm, aware of) would use this tag,

<CLA> - This tag is used to signify that a class keyword is about to be used, such as Ninja or Warrior.

<DEFENSE> - This tag is used to signify that a defense keyword is about to be used. This tag only exists so that the abilities can be edited in any way, no official character (that I'm, aware of) would use this tag,

</E> - Two uses: (1) is for power, (2) is for inside of abilities
(1) This tag is used to signify the end of an abilities name, and that the power directly affects enemies of the unit.
(2) This tag is used to signify that something must appear exactly as is (give or take a plural), such as with the Goblin Slashers You Got This, Boss! Power which affects only goblins and not hobgoblins

<GENERAL> - This tag is used to signify that a General keyword is about to be used, such as Jandar or Ullar.

<GRAN> - look up <RAN>

<HID> - This tag is used to hide a section from standard view. Either for notes or editing purposes, such as with Kelda to allow for Healing Touch to work properly. To hide something you use the tag, and once the section that needs to be hidden away is finished, you use the tag again and it will stop hiding it.

This tag is the only tag that uses itself as an end tag. Alternates are: <HIDDEN>

<LIFE> - This tag is used to signify that a life keyword is going to be used. Look at Kelda in edit for an example

<LRAN> - Look up <RAN>

<MOVE> - This tag is used to signify how much movement the affected unit has. This tag only exists so that the abilities can be edited in any way, no official character (that I'm, aware of) would use this tag,

</N> - This tag has two uses, one with ability heads (being coupled with <POWER>), and one for keywords.

(1)The <POWER> usage is used to signify the end of an abilities name, and that the power can be used to affect both allies and enemies, and so is therefore a neutral ability, such as Brontos' Abduct ability which can be used on both allies and enemies. Passive abilities such as flying can also use this tag. Technically </> can be used in place of this tag, but that is bad practice.

(2)The keyword usage is used to signify that something is **not** allowed for the ability, such as Kee-Mo-Shi's Toxic Skin ability, which does **not** affect soulborgs.

<NAME> - This tag is used to specify a name, such as the Rechet's of Bogdan's ability Iskra's Summoning.

</OR> - This tag is used to signify that the previous tag has ended, and that another tag of the same type will occur and that either of the two keywords can be usable, such as with Kanto Katsuro Kanto Katsuro's Command being able to affect squads **or** heroes.

<PERSONALITY> - This tag is used to signify that a personality keyword is about to be used, such as the 4th Massachusetts Line Valiant Army Defense Bonus.

<POINTS> - This tag is used to signify that a points keyword is about to be used. This tag only exists so that the abilities can be edited in any way, no official character (that I'm, aware of) would use this tag,

<POW> - This tag is used to signify that a power keyword is about to be used, such as Venoc Warlord's Frenzy Enhancement, which aids any power with the Frenzy keyword.

<POWER> - This tag is used to identify abilities, it will directly proceed an abilities name, it'll generally be coupled with either </A>, </N>, or </E>

<RACE> - This is used to signify that a race keyword is about to be used, such as Orc, or Elf.

<RAN> - This tag, couple with <GRAN> and <LRAN> are used for range keywords.

<RAN> is used for if a specific range is required, such as Finn the Viking Champion requiring a range of 1 for Attack Aura 1.

<GRAN> is used for if a range greater than or equal to a specific range is given, such as Laglor's Vydar's Range Enhancement Aura.

<LRAN> is used for if a range less than or equal to a specific range is given.

<SIZE> - This tag signifies that a size keyword is about to be used.

</T> - This tag signifies the end of one group of classifications for an ability and where another will begin, such as in the Greenscale Warriors' Loyalty to the Lizard King ability, where either a unique lizardfolk hero, or a large or huge unique dragon hero, is allowed. The two categories are quite discrete and so a stronger or end tag is needed, or a True or statement, if you will.

<TY> - This tag signifies that a Type keyword is about to be used, such as Unique, Uncommon, Common, Hero, or Squad. Note, if the keyword is “HEROES”, place the closing tag between the “O” and “E”, such as “<TY>HERO</>ES”.

<QUANTITY> - This tag signifies a quantity keyword. This would be the quantity that you possess. This tag only exists so that the abilities can be edited in any way, no official character (that I’m, aware of) would use this tag,