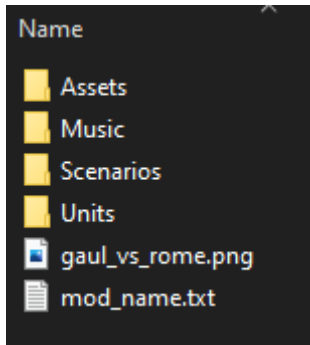# Creating Mods for Roma Invicta

At program start the game checks all possible modules in the „Modules" folder.

That's how a module folder looks like...

In the „Assets" folder are all the .png files you use for your custom units.

In the „Music" folder you can put your mp3s (mp3 format only!). The game will randomly pick one after another.

In „Scenarios" are the presets for battles. They are just .txt files with dictionaries of the unit names.

In „Units" you can create and customize your units. They are also just .txt dictionaries.

If you put a .png file into the folder, it will be picked as the background in the mod menu. Make sure it is 1920x1080.

The „mod_name.txt" tells the game how the mod is called.

! In the RI folder there is a file called „settings.txt". If you set the "development_mode" to true, the game will start in the mod menu. That helps a lot while testing!

Assets

There is a folder called „Asset Collection" in the RI main folder including all the unit graphics. Feel free to use and to customize them as you wish. So it is way easier for you as to start from scratch.

I personally use „Aseprite" for my pixel art. But you can use any application that can export .pngs. Use .pngs only!!!

Except the bodies all the items are single sprites, so their canvas size can be resized if needed. But as they are centered make sure you resize them as centered (symmetrically).
Unfortunately the bodies are spritesheets, so they can not be resized. I think the border goes one pixel outside my current paintings, means you can increase your drawings at least by one pixel.

Units

Those .txt dictionaries define the units. The name of a unit is taken from the filename (without the „.txt")

shown_in_menu
If true you can choose them in the menu. Set it to false if they are just placeholders, for instance squad leaders or banner carriers.

type
RI distinguishes between „infantry", „cavalry", „cavalry_archer", „spear", „pike", „archer", „crossbow", „skirmisher", „scorpion", „cannon", „crew", „bannercarrier" and „gun".

behavior
This is needed for the additional definition of the unit. You can choose between „melee", „ranged", „gun", „cavalry", and „artillery".

Sometimes the combination of the two factors may seem a bit strange. In the provided module „Knights vs Orcs" I put in a lot of archetypes so you can use them as your templates.

number_of_soldiers
self-explanatory

formation_rows
self-explanatory

formation
Here you can choose between „tight", „dense", „loose", „cavalry" and „wild"

leader_type_1 or 2
Here you can have a differnt unit type to be in the formation, like a general or a banner carrier.

abilities
Give them the ability to „charge" or to form a „shieldwall".

movement
You can choose between „walk" and „run". It defines just the animation.

speed
If the unit walks, a good factor will be between 1.0 and 1.2, for running units try around 1.5. If the type is „cavalry" or „cavalry_archer", they already have horses and the speed should be set around 1.0.

avoid_melee
Set it true for ranged units if they should avoid close combat as long as they have ammo left.

armor_movement_sound_percentage
the chance in percent if a footstep will trigger an armor sound (for armored units)

morale, stamina, attack, defence
self-explanatory

shield-value
only matters if the soldier has a shield in his hand, a factor for the chance to block an attack

charge-energy
Only matters for the „charge" ability (try numbers between 2 and 5). Defines the impact when they hit the enemy.

unable_to_retreat
If true the unit will never run away, even with low morale. Note: By default a soldier will always run away if he is alone in the squad. So if you want to create a unit with a single soldier, always set this to true.

lose_helmet_possibility
gives a chance that the helmet drops when dying (1.0 means 100%, so a good value would be 0.5 if you want that to happen often)

voice_pitch_down
Interesting for fantasy settings. If true the voice will be pitched down (I used this for the Orcs)

close_range_missiles
Needs to be true if you want the unit to have pila or for gunners (everything that is shot left or right).

close_range_type
The game knows „pilum", „javelin" or „custom".
For gunners this does not matter as they always shoot bullets.

close_range_png
If you have chosen „custom", put here the name of the .png file in the „Assets" folder, it will be used as projectile (for instance „spear" if the file name is „spear.png"). Note that the graphical results might look strange with custom projectiles when flying or when they get stuck in shields or bodies. I found no good solution for this.

close_range_ammo
self-explanatory

close_range_missile_strenght
The power of the projectile. For a pilum the value is 1.0 for instance...that hits very hard already. For gunners this the value for the chance to hit (as a bullet will always kill when it hits). Try 0.4 for average accuracy.

close_range_range
the range in pixel, try 500 for pilum

show_close_range_ammo
If true the remaining ammo will be shown on the soldier (set it to false if it looks strange)

gun_reload_time

the reload time for gunners in seconds (6.0 turned out to be a good value)

long_range_missiles

Needs to be true if you want to have a ranged unit (archers, skirmishers, …)

long_range_type

The game knows „arrow", „pilum", „javelin" or „custom".

long_range_png

If you have chosen „custom", put here the name of the .png file in the „Assets" folder, that should be used as projectile (for instance „spear" if the file name is „spear.png"). Note that the graphical results mitght look strange with custom projectiles when flying or when they get stuck in shields or bodies.

long_range_ammo

self-explanatory

long_range_missile_strenght

for skirmishers or archers try values between 0.5 and 1.0

long_range_range

the range in pixel, try 1500 for archers and 1200 for skirmishers

show_long_range_ammo

If true the remaining ammo will be shown on the soldier (set it to false if it looks strange)

heads, helmets, bodies, cloaks, shields, weapons, bows

Put here the names of the .png files from the „Assets" folder. The game will pick one at random on start. If you want to leave something empty or want to have a random chance that a soldier will have no helmet for instance, just put „empty" in it and also make sure you have an „empty.png" in the „Assets" folder.

If for a soldier the „shields" is „empty" he will really have no shield and also no protection from it.

side note: The bow- and the crossbow- graphics looks weird because they are mirrowed in the game (for the dynamic animation when they are drawn)

Scenarios

In this dictionary are the slots where you can put in the unit names. They are in the order as they appear in the menu and on the battlefield. Each number represents a slot. „231" means player 2, row 3, position 1. Just write the name of the unit between the '' ''