First steps:

Create Rig from scratch first using all the techniques you want to include in the add-on, including having it be apart of the rig, the control board being controlled by bones (never enter object mode, only pos mode), having the GP objects being controlled by lattices AND bones correctly.

Learn how to create add ons. Buttons.

Notes for blender Cartoon faces add on

Stuff it can do:

Easily create and attach 2d faces to 3d or 2d objects using lattices and creating a face rig that uses drivers with a control panel to control the visibility of grease pencil layers for eyes (specific shapes), mouth (mouthing letters or expressions), and noses (direction), and uses drivers to affect mouth movements of a 3d object. Beginner friendly. Also, should somehow allow for editing if it recognizes the structure of the add-on face (naming conventions?). Maybe attach the armature to a bone specified by the user of another armature? Uses keyframed blinks or just moves the bones?

Options (flags):

Attach face to 3d object? (Default yes) – uses shrink wrap modifiers

Offset?

Use drivers to change 3d object’s shape to create deformation when mouth moves? (Default yes)

Add automatic blinking? (Default yes)

Multiple eye shapes? (Default yes)

Attach rig to another armature? – DOES NOT USE CONSTRAINTS – has to be done correctly!

Lighting toggle (on/off)

How it will do it:

Creates armature and controls based on mine. Change interface to one side with drawing, one side with created shapes so far in a grid layout. Creates 3 different grease pencil objects with lattice modifier and armature and enters draw mode for each one. Eye brows use sliders. Button will prompt user if they are finished with this shape. When drawing, you can use as many layers as possible, and they will be put all on one layer by using the order of layers to determine order of strokes (will send everything to back based on order) OR will attach that driver to all current layers- does this correctly by LOCKING previous layers. (if locked, ignore) Everything drawn is automatically added to vertex groups and a separate layer based on bone names. Lattices are then created with shrink-wrap modifiers on object specified by user with very small offset. Control board arrows are controlled with bones of the face armature. Control boards move with character. Control board size is proportional to number of items entered. Control board have a “free draw” option that lets the user draw anything without messing up GP keyframes – how does this get added to vertex group? Maybe manually added by saying ADD THIS TO VERTEX GROUP. Or done automatically? But what if groups are renamed by user?

Flags will set options up

Maybe a loop to keep drawing until button is pressed?

General Notes:

Everything is based on local space.

Master eye brow reset for eyebrow sliders – they are all parented to a master bone? Or there’s a button that resets their position? Maybe each one need a reset button?

Every GP object will need universal lattice controls, in a separate layer that the visibility can be toggled on and off.

Allow user to add as many eyes as they want (calculate distances/sections of bones with math)

Interface flow:

Main, generalized flow:

General Options 🡪 Eyes 🡪 Nose 🡪 Mouths 🡪

Specific flows:

Eyes:

Default eye shape 🡪 more eye shapes 🡪 Eye brow shapes 🡪