**Homework 13B: M6**

**B - Filename, Tag, and Variable Inventory**

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**Table 1. Tag Naming Conventions**

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| **Component Type** | **Standard Tag Name**  (if not using a particular component type, enter NA) |
| Push Button | push\_ |
| Slider | slide\_ |
| Radio Button | radio\_ |
| Checkbox | check\_ |
| Edit Text | edit\_ |
| Static Text | text\_ |
| Pop-up Menu | menu\_ |
| Listbox | list\_ |
| Toggle Button | toggle\_ |
| Table | table\_ |
| Axes | plot\_ |
| Panel | panel\_ |
| Button Group | bgroup\_ |
| Popup box | popup\_ |
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**Table 2. GUI Filename with Associated Tags and Variables**

\*Every single component that your team puts on a GUI that will change or the user interacts with needs to be listed individually here. So this table will be large.

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| --- | --- | --- | --- | --- | --- | --- |
| **GUI Filename** | | **GUI component** | | **Tag** | **Variable Names:**   * **that must be passed between GUIs** * **that must be assigned to *handles*** | |
| compute1 | | Edit text box in which user types data file name to upload | | edit\_datafile  (edit\_ because it is an Edit Text component) | Loaded data will get parsed into two variables for sharing:  handles.time  handles.rate | |
| compute | | Push button to send results to results GUI | | pb\_compute | Variables send to results.fig:  handles.time  handles.rate  distance | |
| compute1 | | Exit button – user presses to close the current screen and exit the program. | | pb\_exit  (pb\_ because it is a Push Button component) | NA | |
| NanoPlane\_ewidlosk.fig | | Tension vs time plot, with bounds on tension and time shown | | plot\_tension | Total runtime of simulation:  handles.runtime  Set state to either 'success' or 'crashed':  handles.state | |
| NanoPlane\_ewidlosk.fig | | Start button for simulation | | push\_takeoff | Set state to 'simulating':  handles.state | |
| NanoPlane\_ewidlosk.fig | | Exit button | | push\_exit | NA | |
| NanoPlane\_ewidlosk.fig | | Truss length slider | | slide\_truss | Truss length of nanostructure:  handles.truss  handles.mass  handles.strength | |
| NanoPlane\_ewidlosk.fig | | Airplane selection popup menu | | menu\_plane | User selected airplane type:  handles.plane | |
| NanoPlane\_ewidlosk.fig | | Display truss length as static text | | static\_truss | NA | |
| NanoPlane\_ewidlosk.fig | | Show current simulation state as static text (crashed, success, running, waiting) | | static\_state | NA | |
| NanoPlane\_ewidlosk.fig | | Provide tips to user based on current simulation state | | static\_tip | NA | |
| NanoPlane\_ewidlosk.fig | | Show wing mass as static text | | static\_mass | NA | |
| NanoPlane\_ewidlosk.fig | | Show wing strength as static text | | static\_strength | NA | |
| NanoPlaneIntro\_ewidlosk.fig  NanoPlane\_ewidlosk | | Allows user to move to next gui | | push\_next | NA | |
| NanoPlaneIntro\_ewidlosk.fig, NanoPlane\_ewidlosk.fig | | Takes user to main menu | | push\_mainmenu | NA | |
| NanoPlane\_ewidlosk.fig NanoPlaneIntro\_ewidlosk.fig | | Exits the program | | push\_exit | NA | |
| NanoPlane\_ewidlosk.fig NanoPlaneIntro\_ewidlosk.fig | | Takes user to previous slide | | push\_previous | NA | |
| NanoSizeIntro\_nluehrs.fig | | Allows user to move to next gui | | push\_next | NA | |
| NanoSize\_nluehrs.fig, NanoSizeIntro\_nluehrs.fig | | Takes user to main menu | | push\_mainmenu | NA | |
| NanoSize\_nluehrs.fig NanoSizeIntro\_nluehrs.fig | | Exits the program | | push\_exit | NA | |
| NanoSize\_nluehrs.fig | | Takes user to previous slide | | push\_previous | NA | |
| NanoSize\_nluehrs.fig | | Shows image currently being interacted with | | plot\_nanosize | When the user clicks the image, the coordinates of the click are placed in a handle, and the distance from a certain point in the image is calculated. handles.coord | |
| NanoSize\_nluehrs.fig | | Gives the user directions on what to do with the current image | | static\_directions1 static\_directions2 | Change when user moves to next plot handles.directions1 handles.directions2 | |
| NanoSize\_nluehrs.fig | | Shows how far from the center of one image the user was when they clicked | | static\_result | Displayed after user clicks image  handles.conversion %to convert distance into nanometers | |
| NanoEnergy\_hallowj.fig | | Allows user to select a metal for use | | radio\_Aluminum | Passes cohesive energy of Aluminum and the atom size of it | |
| NanoEnergy\_hallowj.fig | | Allows user to select a metal for use | | radio\_Copper | Passes cohesive energy of Copper and the atom size of it | |
| NanoEnergy\_hallowj.fig | | Allows user to select a metal for use | | radio\_manganese | Passes cohesive energy of Manganese and the atom size of it | |
| NanoEnergy\_hallowj.fig | | Allows user to select a metal for use | | radio\_silicon | Passes cohesive energy of Silicon and the atom size of it | |
| NanoEnergy\_hallowj.fig | | Takes input from user of nanoparticle size | | edit\_nanoparticle | NA | |
| NanoEnergy\_hallowj.fig | | Graphs the chosen metal and its input | | plot\_coenergy | Accept | |
| NanoEnergy\_hallowj.fig  NanoEnergyIntro\_hallowj.fig | | Allows user to go to main menu | | push\_mainmenu | NA | |
| NanoEnergy\_hallowj.fig  NanoEnergyIntro\_hallowj.fig | | Allows user to go to next slide | | push\_next | NA | |
| NanoEnergy\_hallowj.fig  NanoEnergyIntro\_hallowj.fig | | Allows user to go to previous slide | | push\_previous | NA | |
| NanoEnergy\_hallowj.fig  NanoEnergyIntro\_hallowj.fig | | Allows user to exit GUI | | push\_exit | NA | |
| NanoEnergy\_hallowj.fig | | Graphs data based on inputs | | push\_graph | Graphs the results of the equation | |
| NanoMeltIntro\_ksermers.fig  NanoMelt\_ksermers.fig | Returns user to Main Menu | | push\_mainmenu | | | NA |
| NanoMeltIntro\_ksermers.fig  NanoMelt\_ksermers.fig | Takes user to the next gui | | push\_next | | | NA |
| NanoMeltIntro\_ksermers.fig  NanoMelt\_ksermers.fig | Closes gui | | push\_exit | | | NA |
| NanoMelt\_ksermers.fig | Returns to the previous gui | | push\_previous | | | NA |
| NanoMelt\_ksermers.fig | Contains all the material options | | bgroup\_material | | | NA |
| NanoMelt\_ksermers.fig | Assigns variables specific to the material Gold | | radio\_gold | | | NA |
| NanoMelt\_ksermers.fig | Assigns variables specific to the material Aluminum | | radio\_aluminum | | | NA |
| NanoMelt\_ksermers.fig | Assigns variables specific to the material Copper | | radio\_copper | | | NA |
| NanoMelt\_ksermers.fig | Assigns variables specific to the material Titanium | | radio\_titanium | | | NA |
| NanoMelt\_ksermers.fig | Sets the radius variable to a specified radius | | slide\_radius | | | handles.radius |
| NanoMelt\_ksermers.fig | Graphs the specific options chosen on an axis | | push\_graph | | | Read in all data:  handles.radio\_copper  handles.radio\_titanium  handles.radio\_aluminum  handles.radio\_gold  handles.slide\_radius  Push to plot:  handles.plot\_phase\_change |
| NanoMelt\_ksermers.fig | axis where the phase change graph of each material would appear on | | plot\_phase\_change | | | NA |
| NanoSize\_nluehrs | | Hold radio buttons that will plot various things to compare sizes | | bgroup\_plot | handles.conversion | |
| NanoSize\_nluehrs | | For plotting rivets | | radio\_rivets |  | |
| NanoSize\_nluehrs | | For plotting nanotubes | | radio\_tubes |  | |
| NanoSize\_nluehrs | | For plotting grapheme molecule | | radio\_graphene |  | |
| NanoSize\_nluehrs | | To start game | | push\_start | handles.conversion | |
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