ICS3U
GUI: Graphical User Interface
January 2021

Creative GUI Application

Create a desktop application for an elementary math or word-based game.

Your application should demonstrate multiple skills acquired during the course

Integrate a wide range of GUI widgets (demonstrated in class) effectively.
Integrate widget events effectively.
Integrate lists and string manipulation.
Use supporting functions when necessary to perform specific tasks.

Paper Prototype Planning Video [10]

- Orate a brief description that includes the purpose of application and how this application is unique.

- Sketch your application on paper.
  Use multiple pieces of paper to provide examples of how application works.
  SKETCH LARGE.

- Create a video (2 minutes or less) using your paper prototypes demonstrating how the program will work.
  You can narrate in the video if you want.

Level 1	Level 2	Level 3	Level 4
Plan does not meet the expectations based on the elements listed above.	Plan is inconsistent in meeting the expectations of the elements above.	Plan meets expectations of the elements above.	Plan demonstrates a mastery level of the elements above.

What does that look like?

- All words are readable.
- Widget types are clear based on drawing.
  I can tell the difference between a scale, entry, button, menu, radio, check, etc..
- Widgets are lined up to demonstrate where columns and rows would occur.
- Widgets are customized.
  Text boxes are similar in size, buttons are similar in size, sticky is used.
- If colour is relevant, colour is used.
- Every event is demonstrated through additional paper items.
  OptionMenus show all the options
  Scales show results when moved
  Radiobuttons and Checkbuttons can be checked
  Canvas items that change are demonstrated
- Result of button click/mouse click are demonstrated through additional paper items, redrawn widgets, redrawn frames.
- Example input is included.
- Examples illustrate program functionality.

Completed Code [10]

Level 1	Level 2	Level 3	Level 4
Application may not be complete or has a minimal features included.	Code somewhat demonstrates coding practices developed in class.	Code mostly demonstrates coding practices developed in class.	Code demonstrates coding practices developed in class. Application is complex and sophisticated in nature.

What does that look like?

- Tkinter widgets and coding structures presented in unit are used.
- Large variety of widgets.
- Variable naming conventions used.
- Program is event based.
- Supporter functions are used to eliminate repetitive code or ensure that functions perform one specific task.
- Global variables are explicitly declared.
- String manipulation and/or formatting is incorporated.
- List use and/or manipulation is used.