CS 4063/5063
Homework: Design A
Due Tuesday 2022.02.01 at 11:00pm.

All homework assignments are individual efforts, and must be completed entirely on your own.

In this homework you will: (1) learn about Balsamiq Wireframes; (2) gain experience laying out and customizing common widgets to create wireframes; (3) select a set of widgets suitable for editing movie metadata attributes of various types; (4) create and refine a wireframe that lays out those widgets in a design for both viewing and editing; and (5) document your design choices including how you expect your users to benefit.

Getting Wireframes

Go to balsamiq.com/wireframes/desktop/. Download for your system. Install and run like other apps on your system. To register, look in the Help menu. Enter the license name and key below. *(Our registration is for a course trial mode, which won't expire until after the course if over.)* If registration doesn't work, just use the default 30-day trial for now.

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Product:
Wireframes for Desktop

License Key:
HumanComputerInteraction2022|ABd6eJxzCncxiQ+p8SjNTcxTcM7PLSgtSS1S8MwDkonJJZn5eQpGBkZGNYZmpoYmxqZGBiAAANfnEDY=

License End Date:
May 31, 2022
```

Learning Wireframes

Wireframes is awesome. It's really easy to learn and use. Open it up and explore for a while. When you're ready, here are a few helpful links for learning and reference.

user guide: https://balsamiq.com/wireframes/desktop/docs/
tutorials: https://support.balsamiq.com/tutorials/
intro to wireframing: https://balsamiq.com/learn/courses/wireframing/

The Design Scenario

Imagine you are a designer on a large team. The team is developing a new application in JavaFX for browsing a personal movie collection on a desktop or laptop. The team is currently exploring how to support metadata editing capabilities in the application. After some discovery research to identify user wants and needs, the team provided you with a specification of movie metadata attributes, allowed attribute values, and limitations on which widgets you may utilize in your design. Your job is to design a unified UI that lets users see and edit all available metadata attributes at once in a single window. You will use Wireframes to wireframe a layout with comments to document your design choices.

The Design Specification

*"The **editing window** will show all available metadata attributes in a single pane. All UI elements for all attributes must be visible at all times. This means that menus, tabs, and similar ways of splitting up layouts that show only some elements at any given time may not be used in the design. Individual UI elements that show/hide a set of allowed values may be used for a given attribute. For instance, a popup menu may be used to reveal a set of available items to choose from, but the popup menu itself must always be visible.*

*The **editing window** will display common, appropriate UI elements (or combinations of elements) for editing each metadata attribute listed in the table below. The allowed values for each attribute will be restricted to those given in the table. Small images may be used as icons for labeling and modest decoration. A suitably representative larger image should be incorporated to represent the movie poster. The window should be laid out into sensible sections using labels, separators, boundaries, spacing, etc."*

Attribute	**Allowed Values**	**Widget/Element**
average review score	[0.0, 10.0] (float, rounded to tenths)	*your choice (must show the value)*
award, picture	true, false	*your choice*
award, directing	true, false	*your choice*
award, cinematography	true, false	*your choice*
award, acting	true, false	*your choice*
comments	string, unlimited lines	text area *in a* scroll pane
director	string, one line	*your choice*
genre	**any one or more** items from the following set: {action, comedy, documentary, drama, fantasy, horror, romance, sci-fi, thriller, western}	*your choice*
is animated	true, false	checkbox
is color	true, false	checkbox
number of reviews	integer, non-negative	spinner
poster, button to select file	*suitable button label and/or icon*	button *to show file selection dialog*
poster, path and name of file	string, with 0 to 255 characters	text field
poster image, not editable	image, with aspect ratio 1.0:1.5	*your choice (must show the image)*
rating	**exactly one** item from the following set: {G, PG, PG-13, R}	combobox ***or*** radio buttons
runtime (in minutes)	1 to 360 (integer)	slider
summary	string, up to 10 lines	*your choice*
title	string, one line	*your choice*
year	1900 to 2040	*your choice (must show the value)*

Wireframe a User Interface for Editing Movie Metadata

Think through what each metadata attribute means and how it relates to the others. Drawing from your experience, and following the specification above, decide which widget(s) you will use to show and edit each attribute.

Create a new Wireframes project, name it DesignA, and name the Wireframe itself Editor. Create Wireframes elements for the various widgets you chose, and lay them out to build your wireframe. Use labels, lines, boxes, space, etc. to organize the elements into reasonable groups in the layout. Populate the elements with the default values that the user will see when they add a new movie to their collection. Add a ***Comment*** element (the one that looks like a yellow sticky note, in the ***Markup*** group of controls) nearby that briefly explains your widget choices. Add another ***Comment*** element that briefly describes your general strategy for organizing them in the layout as you have.

When you're ready, duplicate your Editor wireframe and name it Refined. Populate the elements with representative values for a recent mainstream movie of your choosing. Import a suitable image as an asset to use as the movie poster. Examine your layout and consider how actual data affects the appearance of the layout. Based on your observations, refine the layout to improve the design in some appropriate, non-trivial way. Add a ***Comment*** element that briefly describes your refinements and how you believe they improve the UI for users.

In both wireframes, reproduce each UI element using the closest equivalent Wireframes widget: ***Button*** for buttons, ***Checkbox*** for checkboxes, etc. For each icon in the UI, find one in the built-in collection (Font Awesome Icon Set) that is readily recognizable for its purpose. For this assignment, don't use any imported assets, icons, widgets, etc. except for your movie poster image. The size of the poster image should be small (under 1MB).

Choose and refine wisely! In the second homework (Prototype A), you'll use JavaFX to implement a horizontal prototype of your refined design. You'll also describe how much of the design you were able to implement successfully, and how well. It would be wise to avoid unnecessary complexity and extensive decoration in your Wireframes!

Turning It In

Use the Project/Save Project As... menu item to save a copy of your project. The exact name of your file should be simply `DesignA.bmpr`. Make sure it contains all and only the wireframes, assets, elements, and markup comments that you wish to submit. Submit the file to the Homework - Design A assignment in Canvas.

To score the assignment, we'll be looking at: the completeness and quality of your two designs; the appropriateness of your element choices relative to the specification; how cogent, objective, and helpful your ***Comment***s are; and to what extent the refined design seems likely to improve upon the original. The maximum score is 20 out of 20.