SCC210 Group Project

Group 61

Which project + why? (Amos)

We will be doing the pixel based graphics editor. Initially we chose this as we were more familiar with the software than we were with chart editors and we believed having an understanding of the project early on was advantageous.

It made the project easier to scope as we had all used similar software - ie MS Paint

Although we chose not to develop a project as complex as photoshop we still believe this shows the extent of the desired features. As many of us are gamers we have come to enjoy the retro feel of pixel art. And this is supported by the fact that there are loads of new games that use pixel art as the foundation for the game. т

In our project we anticipate the user will be able to complete the following tasks?

- Create a new file - create an image using a selection of tools, shapes and graphic drawing devices
- Save the file for access at a later stage and continue to amend
- Export to XXXX File type
- Delete files once no longer needed

Software Requirements

- Java
- Linux + Windows
- Packages:
  - [Graphics 2D](#)
  - [Graphics](#)
  - [JavaFX?](#)
  - Swing?
  -
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Desired Features

- Features we are thinking of:
  - Basic Tools:
    - Including transparency / alpha layers?
    - Pencil - 1px of a color drawing tool.
    - Paint brush - circle/ oval drawing tool, multiple sizes.
    - Paint bucket - Fill in 1 connected type of color with another.
    - Eraser - erase colours replacing them with background colour (maybe extends paint brush)
    - Exporting
    - Clear button - Delete everything
    - Text - Adding text of a user's font / size
    - Line / Shape tools
    - Select tool - allows user to select and move pixels. Rectangle / shape
    - Undo/Redo (history)
  - Clean user interface - only pop-ups for file interfaces.
 - General input / output

Desired Features cont.

- User interface:
  - New file
  - Open file
  - Save file
  - Export file
  - Help / FAQ feature
  - About
- Tool UI
  - Size selector for paint brush
  - Colour selector / colour picker / Hex / HSV
  - Tool container
  - Zoom in/ out
  - Keyboard shortcuts
  - Eyedropper

Time management

- We will be using Gantt Charts to keep account of our time spent on the project.
- We will be using Microsoft
- I can set up a Trello board if it helps? (Amos)

UI Mockups
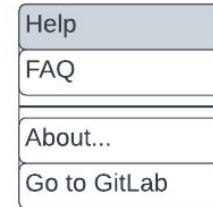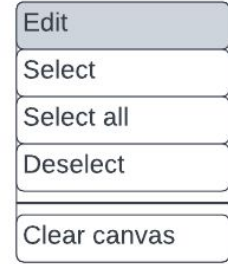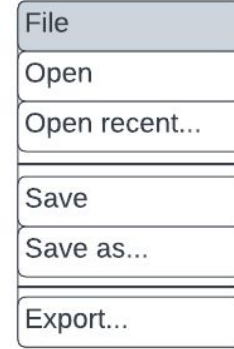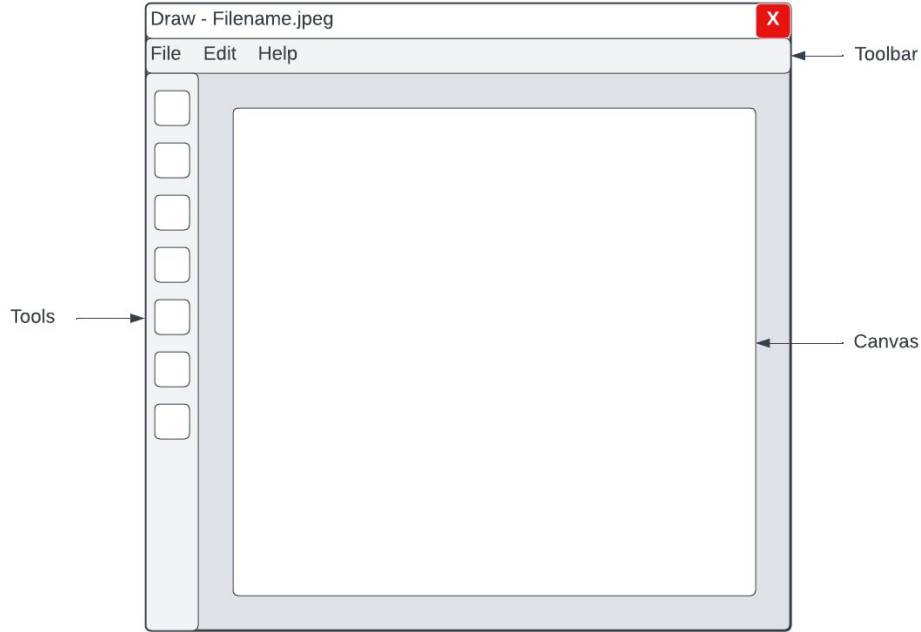
Code Structure - class etc.

Driver

GUI

Tools → ex. brush

Design Principles

- Encapsulation
- Polymorphism
- Inheritance
- Abstracts + interfaces
- Recursion
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Costing (Amos)

- *Total length of time for each task from task list multiplied by a day rate of £50 (junior developers) (exc testing tasks as itemised separately below)*
- *Testing costs - assuming for demo that this is different role to dev - so split for this purposes (dont include test tasks in dev cost above) £30*
- *Plus hosting and maintenance etc (not within scope) but can be noted so all aware we recognise these as potential costs - suggest AWS - can get basic costings for this online so might as well inc*
- *Plus any specific hardware - (not required I dont think but worth noting we took it into consideration)*
- *No office costs as done by remote developers and online resources - ie Teams and Discord - (Trello and Git?)*

Acceptance testing (Amos)

- *How do you know your program meets your specifications?*
- *Test against each requirement*
- *Steps to test*
- *Expected outcome*
- *Acceptance test section will be a large table of these tests, 1 per row.*