SINGAPORE POLYTECHNIC
SCHOOL OF ELECTRICAL AND ELECTRONICS ENGINEERING

ET0104 Embedded Computer Systems Laboratory

Laboratory 8 - Graphic User Interface (GUI) HTML

Objectives

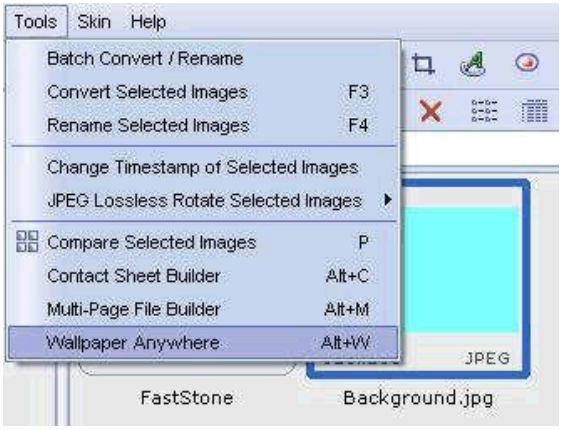
- To learn more about the use of software for image design.
- To be familiar with the GUI design concept.
- To gain experience with GUI display and hardware interaction.

The purpose of the laboratory is to experience the design concept of using GUI commonly found in everyday applications. In this laboratory, we will be going through the process in designing the different GUI screens needed for a particular application. The application for the GUI design concept is on a **Store Value Card Top-Up System**.

Procedure

To use FastStone in the design of GUI screen needed for the application.
In `D:\ECSLAB\IMAGES` folder, there is a file named Background.jpg.

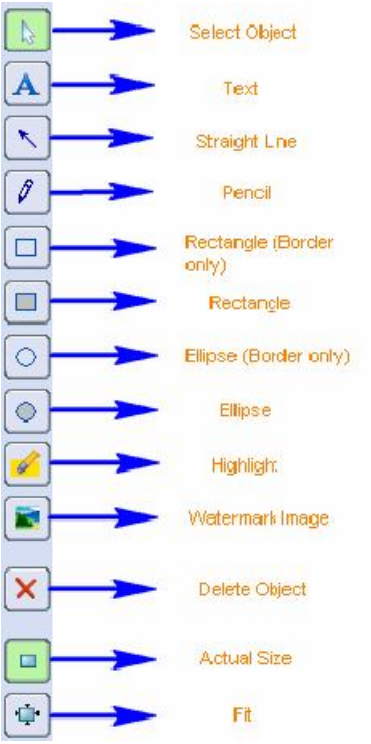
Start FastStone.
Highlight Background.jpg and click on "Wallpaper Anywhere" under "Tools".



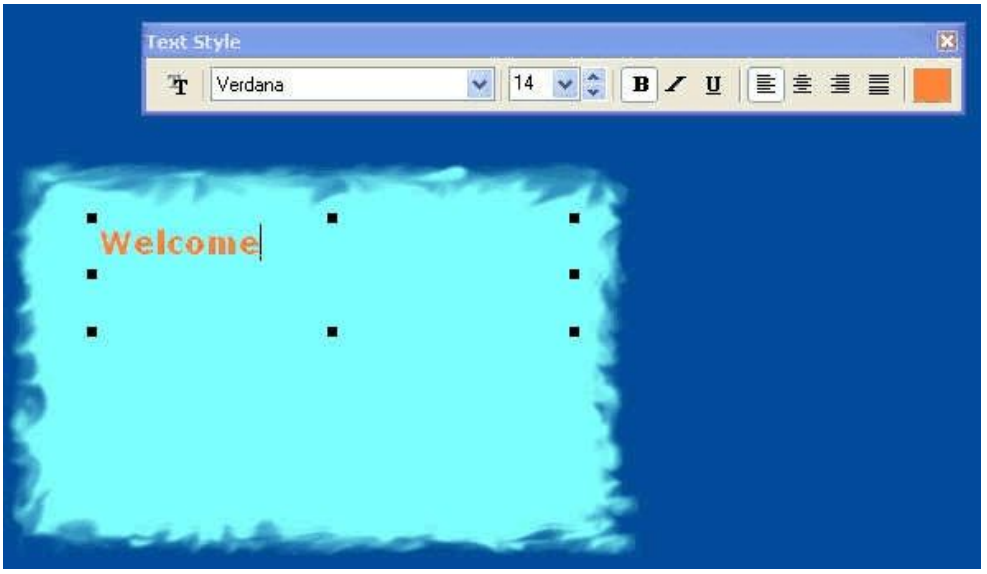
Select Mask No.10 on the left hand side of the screen. Click on "Save as File" and save the file as BG1.bmp.

Adding other graphic objects to our image

Now we will add text to BG1.bmp. Highlight BG1.bmp and click on "Draw Board" under "Edit".

A menu will appear with the picture you want to draw on. On the left side are the tools that are available in the draw board. These are indicated as follows:	

First, add text to your picture by clicking on the "Text" tool and clicking and dragging an area on the picture where you would like to place your text.



You can edit the text object you have just inserted by double clicking on it. Create more text objects until it looks like this.

Filename : welcome.bmp

Click “Ok”. Then save the image as indicated, under “File”.

Next we will have to crop the image to get rid of the outer blue area. The size of the final image has to be 320 by 200 pixels.

To crop this image, select BG1.bmp and click on “Crop Board” under “Edit”. Using the crop tool, drag an area around the border of the main page. An example is an image below.

Click on “Crop” and save the image as indicated.
Next, select the newly saved image and click on “Resize / Resample” under edit. Ensure that the “Preserve Aspect Ratio” button is unchecked. Resize the image such that it is 320 by 200 pixels.
Save the image as welcome.bmp. Next, select the image and change its colour depth to 256 colours (8bit) under “Edit”.
Save the image. Your first image has now been completed.

Using the above steps, create for yourself three more screens as shown below.

Filename : amount.bmp

Filename : 20.bmp

Filename : 50.bmp

Filename : thankyou.bmp

Save all image files in D:\ECSLAB\images directory. Transfer all five files to the SBC to an appropriate directory.

Open up the workspace and add lab8.cpp into your project. Build and Run the application.

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