

Raster Graphic

This program holds the data of a raster graphic application (there are no actual graphics) using a forward list (aka singly-linked list) in dynamic memory for its data.

The RasterGraphic is a series of GraphicElements held in a forward list. When the list runs it displays the details of each GraphicElement at intervals of 1 second using the system clock

- add a new GraphicElement to the RasterGraphic at a position selected by the user,
- delete the first GraphicElement in the list,
- report the RasterGraphic to show the list of GraphicElement details one after another at 1 second intervals (code supplied),
- quit leaving no allocated dynamic memory (i.e. no memory leak),

Example Output:

```
MENU
1. Insert a GraphicElement
2. Delete the first GraphicElement
3. Report the RasterGraphic
4. Quit
1
Insert a GraphicElement in the RasterGraphic
Please enter the GraphicElement filename: GraphicElement_1
This is the first GraphicElement in the list

MENU
1. Insert a GraphicElement
2. Delete the first GraphicElement
3. Report the RasterGraphic
4. Quit
1
Insert a GraphicElement in the RasterGraphic
Please enter the GraphicElement filename: GraphicElement_2
There are 1 GraphicElement(s) in the list. Please specify the position (<= 1) to insert at : 1

MENU
1. Insert a GraphicElement
2. Delete the first GraphicElement
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4. Quit
1
Insert a GraphicElement in the RasterGraphic
Please enter the GraphicElement filename: GraphicElement_3
There are 2 GraphicElement(s) in the list. Please specify the position (<= 2) to insert at : 0

MENU
1. Insert a GraphicElement
2. Delete the first GraphicElement
3. Report the RasterGraphic
4. Quit
3
Report the RasterGraphic
GraphicElement #0, time = 1 sec
Image file name = GraphicElement_3
GraphicElement #1, time = 2 sec
Image file name = GraphicElement_1
GraphicElement #2, time = 3 sec
Image file name = GraphicElement_2

MENU
1. Insert a GraphicElement
2. Delete the first GraphicElement
3. Report the RasterGraphic
4. Quit
2

MENU
1. Insert a GraphicElement
2. Delete the first GraphicElement
3. Report the RasterGraphic
4. Quit
3
Report the RasterGraphic
GraphicElement #0, time = 1 sec
Image file name = GraphicElement_1
GraphicElement #1, time = 2 sec
Image file name = GraphicElement_2

MENU
1. Insert a GraphicElement
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3. Report the RasterGraphic
4. Quit
```