# AcademiCS Application Framework

**Use Case Descriptions for The Big Pixel**
**Associated with the Fifth Set of Milestones and Deliverables**

## UD1. Start the Application

Unchanged.

## UD2. Open an Existing Document

**Actors:** User, File System.

**Preconditions:** A BigPixel (`.bpx`) file exists on the File System.
Open is enabled.

**Triggers:** The User clicks on File and then Open.

**Flow:** 1. The system presents the User with a file dialog displaying the appropriate files.
2. The User selects a file.
3. The User confirms the selection.
4. The system reads the selected file from the File System into the current document.
5. The system displays the file name in the title bar.
6. New, Open, Close, Save As, Print Image, and Quit are enabled in the File menu.
7. All items are enabled in the Options menu.

## UD3. Quit the Application

Unchanged.

## UD4. Create a New Document

**Actors:** User.

**Preconditions:** New is enabled.

**Triggers:** The User clicks on File and then New.

**Flow:**
1. The system displays the new  document.
2. The system sets the title bar to "(No Name)".
3. The system enables all menu items.
5. New, Open, Close, Save As, Print Image, and Quit are enabled in the File menu.
6. All items are enabled in the Options menu.

## UD5. Print the Current Document

Unchanged.

## UD6. Set the Brush Color

Unchanged.

## UD7. Change the Brush Size

Unchanged.

## UD8. Show/Hide the Grid

Unchanged.

## UD9. Paint a Big Picture Element

**Actors:**            User.

**Preconditions:**     A current color has been selected.
The brush size is greater than 0.
A (modified or unmodified) document is available for painting.

**Triggers:**          The user clicks on the upper-left cell of the big picture element.

**Flow:**              1. The system determines if the big picture element will fit in the picture (to the right and below the selected cell) given the current brush size.
2. If the big picture element will fit the system adds a big picture element of the current brush size with the current color to the picture at the appropriate position.
3. The system appends a * to the current title to indicate that the current document has been edited.
4. The system displays the current document.
5. The system disables/enables the appropriate functionality.
6. Close and Print Image are enabled in the File menu.
   6a. If the document has a name then Save and Save As are also enabled in the File menu.
   6b. If the document doesn't have a name then Save As are also enabled in the File menu.
7. All items are enabled in the Options menu.

## UD10. Save the Current Document with the Current Name

**Actors:**            User, File System

**Preconditions:**     Save is enabled.
There is available space on the File System.

**Triggers:**          The User clicks on File and then Save.

**Flow:**              1. The system presents the User with a file dialog displaying the appropriate files.
2. The User selects a file.
3. The User confirms the selection.
4. The system writes the current picture into the selected file.
5. The system "removes" the * (indicating the file was modified) from the title bar.
6. The system disables Save.

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## UD11. Save the Current Document with a New Name

| | |
|---|---|
| **Actors:** | User, File System |
| **Preconditions:** | Save As is enabled.<br>There is available space on the File System. |
| **Triggers:** | The User clicks on File and then Save As. |
| **Flow:** | 1. The system presents the User with a file dialog displaying the appropriate files.<br>2. The User selects a file.<br>3. The User confirms the selection.<br>4. The system writes the current picture into the selected file.<br>5. The system "removes" the * (indicating the file was modified) from the title bar. |