

MICROSOFT PAINT

Complete Notes for ADCA Course

Drawing • Image Editing • Colors • Transformations • Printing

Prepared by	SOFTUCATOR COMPUTER EDUCATION
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Coverage	7 modules covering the complete syllabus with theory, tool procedures, practical exercises, shortcuts and viva preparation.

A structured classroom and practical-lab guide for ADCA learners.

Course Contents

Module	Topic
1	Introduction to MS Paint & Interface
2	Basic Drawing Tools & Brushes
3	Shapes & Line Tools
4	Selection Techniques & Object Manipulation
5	Image Transformation & Resizing
6	Color Palette & Customization
7	File Operations & Printing

Learning outcomes: By the end of this course, the learner should be able to create drawings, edit images, work with selections, colors, text and transformations, and save, print and manage image files using MS Paint.

Study method
For every module: understand the concept, follow the practical procedure in Paint, complete the exercise, and revise the questions. Tool names and exact interface details can vary slightly by Windows version.

MODULE 1: Introduction to MS Paint & Interface

Learning objective: launch Paint, identify the workspace and control the canvas, zoom and display options.

1.1 What is MS Paint?

Microsoft Paint is a basic raster graphics application included with Windows editions. It is commonly used for simple drawings, image editing, cropping, resizing, annotations, screenshots and introductory graphics practice.

1.2 Launching MS Paint

Paint can generally be launched from the Windows Start menu by searching for Paint. In supported Windows versions, typing “Paint” in Windows Search is the quickest method.

1.3 Paint User Interface

- Title Bar – shows the application and image/document name.
- Quick Access Toolbar – provides frequently used commands such as Save, Undo and Redo in versions that expose it.
- Ribbon – organizes commands into tabs such as Home and View in classic Paint versions.
- Tool groups – contain selection, image, tools, brushes, shapes, colors and related commands.
- Canvas – the working area where the drawing or image is displayed and edited.
- Status Bar – displays image information and, depending on version, other status indicators.

1.4 Canvas Dimensions

Canvas size determines the pixel dimensions of the working image. A larger canvas provides more drawing space but may produce a larger file. When creating graphics for a specific use, decide the required dimensions before detailed work.

1.5 Zoom Controls

- Zoom In – enlarges the displayed view for detailed editing.
- Zoom Out – reduces the displayed view.
- 100% – displays the image at its actual pixel scale.
- Fit/other zoom options may be available depending on the Paint version.

1.6 Display Settings

View options may include rulers, gridlines and the status bar. Rulers can help estimate position; gridlines can help with alignment; the status bar provides useful image information. These display aids affect the workspace view rather than the underlying image.

1.7 Important Concept: Raster Image

Paint works primarily with pixels. Enlarging a raster image substantially can make edges appear blocky. This is why maintaining appropriate resolution and saving a high-quality source copy is useful.

Practical Exercises

1. Launch Paint and identify the Title Bar, Ribbon, canvas and Status Bar.
2. Create a new canvas and record its width and height.
3. Turn zoom to 100%, zoom in, then zoom out.

4 Show and hide available rulers, gridlines and status information.

Revision Questions

1. **What is MS Paint?**
2. **What is a canvas?**
3. **What is the purpose of Zoom?**
4. **What are gridlines used for?**
5. **What is a raster image?**

MODULE 2: Basic Drawing Tools & Brushes

Learning objective: draw freehand, erase and fill areas, sample colors and use different brush styles.

2.1 Pencil Tool

The Pencil tool creates fine freehand strokes. It is useful for sketches, pixel-level corrections and precise outlines. Line thickness options may vary by Paint version.

2.2 Eraser Tool

The Eraser removes pixels by replacing them with the current background/secondary color behavior of the application. Use size controls to erase large or small areas. In classic Paint, Ctrl + + and Ctrl + - can be used to increase or decrease tool size in relevant contexts.

2.3 Fill with Color (Bucket)

The Fill with Color tool fills a connected region with the selected color. It works best when the boundary is closed. If there is a gap in an outline, color may leak into neighboring regions.

2.4 Fixing Color Leaks

- Inspect the boundary for small gaps.
- Use the Pencil or appropriate brush to close the gap.
- Undo the incorrect fill if necessary.
- Refill the closed region.

2.5 Color Picker / Eyedropper

Color Picker samples a color from an existing part of the image. Select the tool, click the desired color and then use that color for drawing or filling. This is useful for matching colors accurately.

2.6 Magnifier

The Magnifier tool enlarges a selected area for detailed work. Zooming changes how the image is displayed, not necessarily its actual pixel dimensions.

2.7 Brushes

Brushes provide different stroke textures. Depending on Paint version, available brushes can include Calligraphy Brush, Airbrush, Oil Brush, Crayon, Marker, Natural Pencil and Watercolor Brush. The exact list can vary by Windows/Paint release.

2.8 Brush Selection Principles

- Use Pencil for precise pixel-style lines.
- Use a soft/airbrush effect for gradual or textured marks where available.
- Use Marker or Crayon styles for illustrative effects.
- Choose brush size based on the scale of the drawing.
- Practice on a separate copy before editing an important image.

Practical Exercises

1. Draw a simple landscape using Pencil and several brush types.
2. Use the Eraser with at least two sizes.
3. Create a closed shape and fill it with the Bucket tool.
4. Create a deliberate color leak, undo it, close the boundary and refill.

5 Use Color Picker to match a color from an image.

6 Zoom into a small area and make a precise correction.

Revision Questions

1. **What is the Pencil tool used for?**
2. **How does the Eraser work?**
3. **What causes color leaks with the Fill tool?**
4. **What does Color Picker do?**
5. **Name four brush types available in relevant Paint versions.**

MODULE 3: Shapes & Line Tools

Learning objective: create geometric drawings using lines, curves and shapes with controlled outlines, fills and proportions.

3.1 Line Tool

The Line tool draws straight lines between two points. Hold Shift while drawing, where supported, to constrain the line to standard angles such as horizontal, vertical or diagonal increments.

3.2 Curve Tool

The Curve tool starts with a straight segment and can then be manipulated by dragging to create a curved line. Curve behavior can depend on the Paint version.

3.3 Standard Shapes

- Oval/Ellipse – circles and oval shapes.
- Rectangle – rectangular objects.
- Rounded Rectangle – rectangles with rounded corners.
- Polygon – multi-sided shapes.
- Star – star-shaped graphics.
- Arrows – directional shapes.
- Callouts – speech/thought or annotation-style shapes.

3.4 Shape Outline and Fill

Shape options allow the outline and fill to be controlled. Depending on the version, outline styles may include No Outline, Solid Color and texture-like styles such as Crayon or Marker. Fill can be set to no fill, solid color or other supported options.

3.5 Perfect Circles and Squares

Hold Shift while drawing an ellipse to constrain it to a circle, and use the same constraint concept for a rectangle to create a square where supported.

3.6 Drawing Tips

Use the shape tools instead of freehand drawing when geometric accuracy matters. Select an appropriate outline and fill before or immediately after drawing, depending on the interface version.

Practical Exercises

1. Draw horizontal, vertical and diagonal lines using the Line tool.
2. Create a curved line and manipulate its curvature.
3. Create a composition using a circle, square, polygon, star, arrow and callout.
4. Demonstrate No Outline and a solid outline.
5. Use Shift to create a perfect circle and square.

Revision Questions

1. What is the Line tool?

2. What is the Curve tool used for?

3. Name five standard shapes.

4. What is the purpose of Shape Fill?

5. How can you draw a perfect circle?

MODULE 4: Selection Techniques & Object Manipulation

Learning objective: select image regions accurately and perform cut, copy, paste, delete and background-handling operations.

4.1 Why Selection Matters

A selection isolates a rectangular, free-form or entire image area so that operations can be applied only to the selected region.

4.2 Rectangular Selection

Selects a rectangular area. It is useful for straight-edged objects, cropping-style preparation and moving rectangular image regions.

4.3 Free-form Selection

Selects an irregular area by drawing around the object or region. Careful tracing produces cleaner results.

4.4 Select All and Invert Selection

Select All selects the entire image. Invert Selection changes the selected region to its opposite area where supported. This can be useful when editing the background around an object.

4.5 Transparent Selection

Transparent Selection treats a chosen background/secondary color as transparent during certain selection operations. This is useful for moving simple objects without carrying a solid background color into the destination.

4.6 Cut, Copy and Paste

- Cut (Ctrl+X) removes the selection and places it on the clipboard.
- Copy (Ctrl+C) leaves the original and copies the selection to the clipboard.
- Paste (Ctrl+V) inserts the clipboard contents.
- Paste From inserts an image from an external file into the canvas where supported.

4.7 Delete and Clear

Delete removes the selected pixels or clears the selected area according to the current background behavior. Selecting the whole canvas and deleting can be used to clear the image, subject to the current Paint implementation.

4.8 Moving and Duplicating Objects

After selection, drag the selected region to move it. Copy and paste can create duplicates. Use careful selection boundaries to avoid unwanted background pixels.

Practical Exercises

1. Create a drawing containing three separate objects.
2. Select one object using Rectangular Selection and move it.
3. Select an irregular object using Free-form Selection.
4. Copy an object and paste a duplicate.
5. Use Transparent Selection while moving a simple object.
6. Select all and practice clearing or replacing the canvas.

Revision Questions

1. **What is a selection?**
2. **Differentiate Rectangular and Free-form Selection.**
3. **What does Ctrl+C do?**
4. **What does Ctrl+X do?**
5. **What is Transparent Selection used for?**

MODULE 5: Image Transformation & Resizing

Learning objective: crop, resize, skew, rotate, flip and add formatted text to images.

5.1 Crop

Crop removes areas outside the selected region. It is useful for focusing an image, removing unwanted borders and reducing canvas area.

5.2 Resize

Resize changes the image dimensions. You can generally choose percentage or pixel-based sizing. Keeping the aspect ratio maintains the original width-to-height relationship.

5.3 Maintain Aspect Ratio

When aspect ratio is maintained, changing one dimension automatically adjusts the other proportionally. Unchecking the option allows independent width and height changes but can distort the image.

5.4 Skew

Skew tilts the image horizontally or vertically by an angle. It can create a slanted effect but may distort the original composition.

5.5 Rotate and Flip

- Rotate 90° Right turns the image clockwise.
- Rotate 90° Left turns it counterclockwise.
- Rotate 180° turns the image upside down.
- Flip Horizontal mirrors the image left-to-right.
- Flip Vertical mirrors the image top-to-bottom.

5.6 Text Tool

Use the Text tool to draw a text box and enter text. Available options can include font family, font size, bold, italic, underline, text color and background mode.

5.7 Opaque vs Transparent Text Background

An opaque text background places a solid background behind the text box, while a transparent background lets the existing image show through around the text. Choose the mode according to the intended design.

5.8 Text Editing Tip

Complete text formatting before clicking away from the text box when possible. After committing text in many Paint versions, it may be treated as image pixels and may no longer be editable as text.

Practical Exercises

1. Crop a photo to a rectangular subject area.
2. Resize an image to 75% while maintaining aspect ratio.
3. Resize another copy by pixels and compare the result.
4. Apply a horizontal and vertical skew.
5. Rotate an image 90° right, 90° left and 180°.
6. Flip an image horizontally and vertically.
7. Add a title using the Text tool with bold and italic formatting.

8 Create one text box with an opaque background and another with a transparent background.

Revision Questions

1. **What is Crop?**
2. **Why is aspect ratio important?**
3. **What is skew?**
4. **Differentiate Rotate and Flip.**
5. **What is the difference between opaque and transparent text background?**

MODULE 6: Color Palette & Customization

Learning objective: work with foreground/background colors and create custom RGB and HSL colors.

6.1 Color 1 and Color 2

In classic Paint terminology, Color 1 is the primary/foreground color used for most drawing actions, while Color 2 is the secondary/background color used by certain tools and operations. The exact visual interface can differ in modern versions.

6.2 Standard Palette

The standard color palette provides ready-to-use colors. Recent color slots can retain recently selected colors in supported versions, making repeated color selection faster.

6.3 Choosing Colors

Click the appropriate color control to set Color 1 or Color 2. For drawing, the primary color is normally the first choice; secondary color is used for background-related operations.

6.4 Edit Colors

Edit Colors can be used to define a custom color instead of relying only on the standard palette.

6.5 RGB Color Model

- R = Red component.
- G = Green component.
- B = Blue component.
- Each component contributes to the final displayed color. Common RGB systems use values from 0 to 255 per channel.

6.6 HSL Color Model

- H = Hue, the basic color family measured around a color wheel.
- S = Saturation, representing color intensity/purity.
- L = Luminance or lightness, representing relative brightness.

6.7 Color Matching Exercise

Use Color Picker to sample a color from an image, then compare it with a custom RGB/HSL color created through Edit Colors. This demonstrates both sampling and manual color specification.

Practical Exercises

1. Set different colors for Color 1 and Color 2.
2. Use the standard palette to draw a multicolor pattern.
3. Create a custom color using RGB values.
4. Create or adjust a color using HSL controls where available.
5. Sample a color with Color Picker and use it to recolor part of a drawing.

Revision Questions

1. What is Color 1?

2. What is Color 2?

3. What do RGB letters stand for?

4. What is Hue in HSL?

5. What is Saturation?

MODULE 7: File Operations & Printing

Learning objective: create, open, save, export and print Paint images using appropriate file formats and page settings.

7.1 New Canvas

Use New to start a new image. Set the canvas dimensions appropriate to the intended output before drawing where possible.

7.2 Open Existing Images

Use Open to load supported image files such as PNG, JPEG and BMP. Always keep an untouched original when editing an important image.

7.3 Save vs Save As

Save updates the current file. Save As creates a separate file or lets you select another supported format/name. Save As is useful when you want to preserve an editable/original copy before making a format conversion.

7.4 Common Image Formats

- PNG – lossless compression; generally suitable for graphics, screenshots, text and images needing clean edges/transparency where supported.
- JPEG/JPG – compressed format commonly used for photographs; repeated re-saving can reduce quality.
- BMP – bitmap format with comparatively large file sizes and straightforward pixel storage.
- GIF – supports limited-color images and simple animation in appropriate contexts; modern workflows often use other formats for photographs and high-color graphics.

7.5 Choosing the Right Format

Use PNG for clean diagrams and screenshots, JPEG for many photographic images, BMP when a bitmap workflow specifically requires it, and GIF for suitable simple graphics/animation use cases.

7.6 Set as Desktop Background

Windows can allow a Paint image to be used as a desktop background. Depending on the system, options may include Fill, Tile or Center. Fill scales the image to cover the desktop, Tile repeats it, and Center places it centrally.

7.7 Page Setup

Page Setup controls print-related settings such as paper size, orientation, margins and scaling depending on the Paint/Windows version.

7.8 Print Preview and Printing

Use Print Preview where available to check how the image will appear on paper. Confirm printer, paper size, orientation, margins and scaling before printing.

7.9 Print Quality Tips

- Use a suitable image resolution.
- Check that important content is inside printable margins.
- Choose portrait or landscape orientation according to the image shape.
- Preview before printing to avoid unnecessary paper and ink usage.

Practical Exercises

1. Create a new 800 × 600 pixel drawing and save it as PNG.
2. Open an existing JPEG image and save a copy as PNG.
3. Save the same drawing in PNG, JPEG, BMP and GIF where supported; compare file sizes and quality.
4. Set a drawing as the desktop background and test Fill, Tile and Center where available.
5. Open Page Setup, select an appropriate orientation and preview the drawing.
6. Print the final drawing after checking the preview.

Revision Questions

1. What is the difference between Save and Save As?

2. Why is PNG often suitable for screenshots and diagrams?

3. What is JPEG commonly used for?

4. What is BMP?

5. What is the purpose of Print Preview?

MS Paint Tools – Quick Reference

Tool/Feature	Main Use
Pencil	Precise freehand drawing and pixel-level sketching.
Eraser	Removes/clears selected pixels by erasing.
Fill with Color	Fills a connected area with a selected color.
Color Picker	Samples an existing color from the image.
Magnifier	Zooms into an area for detailed editing.
Brushes	Creates strokes with different textures/styles.
Line	Draws straight lines.
Curve	Creates curved line segments.
Shapes	Creates geometric and annotation objects.
Select	Selects rectangular or free-form image regions.
Crop	Removes image area outside the selected region.
Resize	Changes image dimensions.
Skew	Tilts the image horizontally/vertically.
Rotate/Flip	Changes orientation or mirrors the image.
Text	Adds formatted text to the canvas.
Color Palette	Selects primary and secondary colors.
Edit Colors	Creates custom colors using supported controls.

Useful MS Paint Keyboard Shortcuts

Shortcut	Function	Shortcut	Function
Ctrl+N	New image	Ctrl+O	Open image
Ctrl+S	Save	Ctrl+Shift+S	Save As where supported
Ctrl+P	Print	Ctrl+Z	Undo
Ctrl+Y	Redo	Ctrl+C	Copy
Ctrl+X	Cut	Ctrl+V	Paste
Ctrl+A	Select all	Ctrl+W	Close window/document where supported
Ctrl+E	Image properties/details in supported Paint versions	Ctrl+G	Show/hide gridlines in supported versions
Ctrl+R	Show/hide rulers in supported versions	Ctrl++	Increase tool size where supported
Ctrl+-	Decrease tool size where supported	Delete	Delete selected area
Esc	Cancel/exit an active operation where supported	F11	Full screen in some Windows/Paint versions

Shortcut note
Keyboard shortcuts can vary by Paint release. The syllabus-specific Ctrl + + / Ctrl + - size controls are commonly associated with classic Paint tool sizing; learners should verify the exact behavior in the installed Windows version.

ADCA MS Paint Practical Project

Create a complete “Softucator Computer Education” poster and image-editing portfolio in Paint.

Required components

1. Create a suitable canvas size for the poster.
2. Use Pencil and at least two brush types for decorative elements.
3. Create geometric elements using shapes and lines.
4. Use Shift to create a perfect circle and square.
5. Use Color Picker to match a color from an existing image.
6. Insert the Softucator logo or another permitted image using Paste From.
7. Use Rectangular and Free-form Selection to manipulate objects.
8. Demonstrate Copy, Cut, Paste and Transparent Selection.
9. Crop an image and resize a copy while maintaining aspect ratio.
10. Rotate and flip an image.
11. Add a title and subtitle using the Text tool.
12. Create at least two custom colors using RGB/HSL controls where available.
13. Save the final project as PNG and JPEG.
14. Open Page Setup, preview the output and produce a print-ready version.

Suggested assessment areas
Correct tool usage, clean drawing, selection accuracy, color handling, image transformations, text formatting, appropriate file format, print setup and overall visual presentation.

Common mistakes to avoid

- Using an unsuitable canvas size for the intended output.
- Leaving gaps in outlines before using the Fill tool.
- Stretching images without considering aspect ratio.
- Selecting too much background around an object.
- Saving only one copy of an important image.
- Using JPEG for artwork that requires repeated editing and clean edges.
- Printing without checking Page Setup or Preview.
- Using too many colors or decorative elements without a clear purpose.

ADCA Viva & Examination Preparation

Question	Short Answer
What is MS Paint?	A basic raster graphics application used for drawing and simple image editing.
What is a canvas?	The image area on which drawing and editing take place.
What is the Pencil tool?	A tool for freehand and fine pixel-level drawing.
What is the Fill tool?	A tool that fills a connected region with a selected color.
What does Color Picker do?	Samples a color from an existing part of an image.
What is Transparent Selection?	A selection mode that can treat the selected background/secondary color as transparent during mo
What is Crop?	Removal of areas outside a selected region.
What is Resize?	Changing the width/height or scale of an image.
What is Skew?	Tilting an image horizontally or vertically.
What is RGB?	A color model based on Red, Green and Blue components.
What is HSL?	A color model based on Hue, Saturation and Luminance/Lightness.
What is PNG?	A lossless image format commonly used for graphics and screenshots.
What is JPEG?	A compressed image format commonly used for photographs.
What is Page Setup?	Print configuration for page size, orientation, margins and related settings.

Long-Answer Practice

1. Explain the MS Paint interface and the purpose of the canvas and zoom controls.
2. Describe the Pencil, Eraser, Fill, Color Picker, Magnifier and Brush tools.
3. Explain how to create shapes, use outlines/fills and draw perfect circles and squares.
4. Explain Rectangular Selection, Free-form Selection, Transparent Selection, Cut, Copy and Paste.
5. Describe Crop, Resize, Skew, Rotate, Flip and Text tool operations.
6. Explain Color 1, Color 2, RGB and HSL color customization.
7. Compare PNG, JPEG, BMP and GIF and explain when each is appropriate.
8. Describe Page Setup, Print Preview and printing workflow.

Quick Glossary

Term	Meaning
Canvas	The image area on which drawing and editing are performed.
Crop	Removes areas outside the selected image region.
Fill	Fills a connected area with a chosen color.
Free-form Selection	Irregular selection drawn around an object or region.
Gridlines	Visual guide lines used for alignment; they do not normally print as part of the image.
HSL	Hue, Saturation and Luminance/Lightness color model.
JPEG	Lossy compressed image format commonly used for photographs.
PNG	Lossless compressed image format commonly used for graphics and screenshots.
RGB	Red, Green and Blue color model.
Raster	Image representation based on pixels.
Resize	Changes image dimensions.
Skew	Tilts image content horizontally or vertically.
Transparent Selection	Selection mode that can treat a background color as transparent during object movement.
Zoom	Changes the displayed magnification of the image.

Important note
MS Paint has changed across Windows releases. The classic Ribbon/Home/View terminology and some tools or shortcuts may differ in newer Paint versions. These notes follow the syllabus terminology while explaining the underlying concepts so they remain useful across common versions.

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