Graphics Programming with GDI+

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ew Project					×
Project Types:		Templates:		000	5-5- 5-5- 5-5-
Visual Basic Visual C# Pr Visual C+ I Setup and D Other Projec Visual Studic	Projects ojects Projects Jeployment Projects cts o Solutions	Windows Application	Class Library	Windows Control Library	
	F is all inc.	ASP.NET Web Application	ASP.NET Web Service	Web Control Library	•
Mame:	FirstGDI+App	ows user interrace			
Location:	D:\Books\GDI+\ReadyFo	orEditor\Ch02\Code\	FirstGDI++ 💌	Browse	1
C <u>A</u> dd to Solution Project will be create		ı orEditor\Ch02\Code'	\FirstGDI+App\I	FirstGDI+App.	
¥More		ок	Cancel	Help	

FIGURE 2.5: Creating a Windows application

Component Name	Version	Path		
System.Data.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		Select
System.Data.OracleClient.dll	1.0.3300.0	C:\Program Files\Microsoft.N		
System.Design.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.DirectoryServices.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.Drawing.Design.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.Drawing.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.EnterpriseServices	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.Management	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.Messaging.dll	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.Runtime.Remoting	1.0.3300.0	C:\WINNT\Microsoft.NET\Fra		
System.Runtime.Serialization	1.0.3300.0	C:\WINNT\Microsoft.NET\Era	-	
ected Components:				
Component Name	Туре	Source		Remo <u>v</u> i
ystem.Drawing.dll 📐	.NET	C:\WINNT\Microsoft.NET\Fram		
42				



FIGURE 2.7: The System. Drawing namespace in a project

•	2	
	Move	
	Paint	Form1_Paint 🔹 🔻
	ParentChanged	
	QueryAccessibilityHelp	
	QueryContinueDrag	
	Resize	
	RightToLeftChanged	
	SizeChanged	
	StyleChanged	
	SystemColorsChanged	
	TabIndexChanged	
	TabStopChanged	
	TextChanged	
P	aint	







FIGURE 2.11: Using PointF to draw a line





E-Form1	_ 🗆 🗙
Rectangle RectangleF	

FIGURE 2.14: Using the Round, Truncate, Union, Inflate, Ceiling, and Intersect methods of Rectangle



FIGURE 3.20: A curve-drawing application



FIGURE 3.26: Drawing a polygon



FIGURE 4.4: A sample hatch brush application



FIGURE 4.5: The default hatch style rectangle



🖶 Hatch Brushes				- 🗆 🗵
Select Style:	DiagonalCross	•		
Foreground Color:		Pick		
Background Color:		Pick	Apply Style	

🛃 Texture Brush		-미×
Context Menu		
: Clamp		
· TileFlipY		
TileFlipXY		
Type Here]	· · · · · · · ·
· · · · · · · · · · · · · · · · · · ·		
· · · · · · · · · · · · · · · · · · ·		

FIGURE 4.8: The texture brush application



FIGURE 4.9: Using texture brushes



FIGURE 4.10: Clamping a texture



FIGURE 4.11: The TileFlipY texture option



FIGURE 4.12: A color gradient





🔚 Linear Gradient Bru	ısh		
Linear Gradient Mode:	comboBox1	💌: : : 🗖 Oth	er Rectangle
Starting Color:	Pick	🗖 Gan	nma Correction
Ending Color:	Pick	Apply Settings	
· · · · · · · · · · · · · · · · · · ·	¹		
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· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	

FIGURE 4.14: Our linear gradient brush application

🔛 Linear Gradient Br	ush		<u>- 🗆 ×</u>
Linear Gradient Mode:	BackwardDiagonal	💌 🗖 Othe	er Rectangle
Starting Color:	Pick	🗖 Gam	ma Correction
Ending Color:	Pick	Apply Settings	Properties

FIGURE 4.15: The default linear gradient brush output

🔚 Linear Gradient Bru	ısh		_ 🗆 X
Linear Gradient Mode:	Horizontal	🗾 🗌 Other Re	ectangle
Starting Color: Ending Color:	Pick Pick	Gamma	Correction Properties

🔚 Linear Gradient Bru	sh		_ 🗆 🗙
Linear Gradient Mode:	ForwardDiagonal	▼ V Other	Rectangle
Starting Color:	Pick	Gamr	na Correction
Ending Color:	Pick	Apply Settings	Properties

FIGURE 4.17: Using a rectangle in a linear gradient brush





FIGURE 4.19: Creating and using pens



FIGURE 4.20: Displaying pen types

📙 Pe	n Alignment and Pen Types Sample	
Pen/	Alignment:	
• • • •		
Pen∖	Vidth: •• 🖻 📼 • Pen Color: 🔤 ••••••	
	·····	
	· · · · · · · · · · · · · · · · · · ·	
	Draw Graphice	
	·····	

FIGURE 4.21: Our pen alignment application



FIGURE 4.22: Drawing with center pen alignment



FIGURE 4.23: Drawing with inset pen alignment



FIGURE 4.25: Drawing dashed lines with different cap styles



FIGURE 4.26: Graphics shapes with cap and dash styles



FIGURE 4.27: Rotation and scaling



FIGURE 4.30: Transformation in path gradient brushes



FIGURE 4.31: Using system pens and system brushes





FIGURE 4.33: GDI+Painter in action



FIGURE 5.1: Creating colors using different methods



FIGURE 5.2: Getting brightness, hue, and saturation components of a color



FIGURE 5.3: Using system colors to draw graphics objects



FIGURE 5.4: Converting colors



FIGURE 5.11: Getting line spacing, ascent, descent, free (extra) space, and height of a font





FIGURE 5.14: Alignment and trimming options

<u>Student Grades Table</u>					
ID	Math	Physics	Chemistry		
1002	76	89	92		
1003	53	98	90		
1008	99	78	65		

FIGURE 5.15: Drawing tabbed text on a form





FIGURE 5.18: Using a private font collection
🔜 Text	Transformation Sample	_ 🗆 🗙
1	Colors, fonts, and text are common elements of graphics programming. In this chapter, you learned about the colors, fonts, and text representations in the .NET Framework class library. You learned how to create these elements and use them in GDI+.	



Colors, fonts, and common elements graphics program this chapter, you I about the colors, f text representation the .NET Framewo library. You learne create these eleme use them in GDI+





COLOR FIGURES 41







FIGURE 6.10: Bounds of an infinite region



FIGURE 6.12: Using Clip methods





FIGURE 6.18: Client and nonclient areas of a form



FIGURE 6.19: A nonrectangular form and controls



FIGURE 6.20: The nonrectangular forms application



FIGURE 6.21: A circular form



FIGURE 6.22: A triangular form



FIGURE 7.1: A zoomed raster image



FIGURE 7.2: A zoomed vector image

🔚 Image Viewer	- 🗆 ×
File Type Here	
Open File	
: Save File	 ::::::
Exit	
Type Here	:::::
	 ::::::
	 ::::::
· · · · · · · · · · · · · · · · · · ·	
	 ::::::
	 ::::::
	 ::::::

FIGURE 7.3: A simple image viewer application

Image¥iewer: O	pen Image File			? ×
Look in:	🔁 Debug	•	🔶 🗈 💣 🎟•	
History Desktop My Computer	■ 031.jpg ■ 302.jpg			
My Network P	File name: Files of type:	031.jpg All Image files	•	Open Cancel
				Help

FIGURE 7.4: Browsing a file



FIGURE 7.5: Viewing an image



FIGURE 7.6: Reading the properties of an image



FIGURE 7.7: A thumbnail image

🛃 In	nage Viewer				_ 🗆 🗙
File	Options Type Here				
	Create Thumbnail			::	
::::	Rotate 🕨 🕨	90	:::	::	
	Flip 🕨	180		::	
	Fit 🕨	270		::	
	Zoom	Type Here]:::	::	
	Type Here			::	
				::	

FIGURE 7.8: Rotate menu items



FIGURE 7.9: Flip menu items



FIGURE 7.10: An image with default settings



FIGURE 7.11: The image of Figure 7.10, rotated 90 degrees



FIGURE 7.12: The image of Figure 7.10, rotated 180 degrees



FIGURE 7.13: The image of Figure 7.10, rotated 270 degrees



FIGURE 7.14: The image of Figure 7.10, flipped in the *x*-direction



FIGURE 7.15: The image of Figure 7.10, flipped in the y-direction



FIGURE 7.16: The image of Figure 7.10, flipped in both the *x*-and the *y*-directions

🛃 In	nage Viewer		_ 🗆 X
File	Options Type Here		
	Create Thumbnail		
::::	Rotate 🕨 🕨		
::::	Flip 🕨		
	Fit 🕨 🕨	Fit Height	
	Zoom	Fit Width	
::::	Type Here	Fit Original	
		Fit All	
		Type Here	
: : : :			
::::			
::::			

FIGURE 7.17: Fit menu items



FIGURE 7.18: An image in ImageViewer



FIGURE 7.19: The image of Figure 7.18 after Fit Width



FIGURE 7.20: The image of Figure 7.18 after Fit Height



FIGURE 7.21: The image of Figure 7.18 after Fit Original



FIGURE 7.22: The image of Figure 7.18 after Fit All

File	Options	Type Here		
	Create Rotate Flip Fit	[humbnail		
	Zoom	1	25	
	Type H	ete	50	
			100	
· · · ·	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		200	
			500	
A. A. A. A.			100 COLOR	

FIGURE 7.23: Zoom menu items



FIGURE 7.24: An image in ImageViewer



FIGURE 7.25: The image of Figure 7.24 with 25 percent zoom



FIGURE 7.26: The image of Figure 7.24 with 50 percent zoom



FIGURE 7.27: The image of Figure 7.24 with 200 percent zoom



FIGURE 7.28: The image of Figure 7.24 with 500 percent zoom



FIGURE 7.29: An animated image with three frames

🛃 Image Animation S	Sample	- 🗆 ×
File Type Here		
Open File	Type Here	
Exit	<u></u>	
Type Here		
· · · · · · · · · · · · · · · · · · ·		
* * * * * * * * * * * * * * * * * * * *		
· · · · · · · · · · · · · · · · · · ·		
Start A	nimation Stop Animation	

FIGURE 7.30: An image animation example

🛃 Image Animation Sample		_ 🗆 ×
File		
Start Animation	Stop Animation	

FIGURE 7.31: The first frame of an animated image

🛃 Image Animation Sample		- 🗆 ×
File		
Start Animation	Stop Animation	

FIGURE 7.32: The second frame of an animated image

Bitmap Properties Horz Resolution (DPI) Vert Resolution (DPI) Transparent Apply Settings	🔚 Form1	_ 🗆 ×
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Bitmap Properties Horz Resolution (DPI) Vert Resolution (DPI) Transparent Apply Settings		
Bitmap Properties Horz Resolution (DPI) Vert Resolution (DPI)		
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Vert Resolution (DPI) Transparent Apply Settings		THE R. P. LEWIS CO., LANSING MICH. & MICH. & MICH.
Vert Resolution (DPI) Transparent Apply Settings		N. N
Vert Resolution (DPI) Transparent Apply Settings		
Vert Resolution (DPI) Transparent Apply Settings		
Vert Resolution (DPI) Transparent Apply Settings		
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Transparent Apply Settings		
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Transparent Apply Settings		S. Susukusususususususususususususus
Transparent Apply Settings		
Transparent Apply Settings		+++++++++++++++++++++++++++++++++++++
Apply Settings		
Apply Settings		Transparent
Apply Settings		
Apply Settings		E 1990)
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		a site a second se

FIGURE 7.33: A bitmap example



FIGURE 7.34: Changing the pixel colors of a bitmap



FIGURE 7.35: Viewing icons



FIGURE 7.36: A skewing application



FIGURE 7.37: Normal view of an image



FIGURE 7.38: Skewed image



FIGURE 7.39: Drawing transparent graphics objects



FIGURE 7.40: Drawing multiple images



FIGURE 7.41: Viewing an image in a picture box



FIGURE 7.42: Saving images with different sizes



FIGURE 7.43: New image, with width of 200 and height of 200





FIGURE 8.2: Changing the pixel format of a partial bitmap



FIGURE 8.3: Viewing a metafile



FIGURE 8.4: A metafile created programmatically



FIGURE 8.5: Reading metafile records



FIGURE 8.6: Reading metafile header attributes



FIGURE 8.7: Applying a color remap table



FIGURE 8.8: Wrapping images



FIGURE 8.9: Drawing semitransparent images







FIGURE 9.4: Reading line caps



FIGURE 9.5: Reading line dash styles



FIGURE 9.6: Getting line dash caps



FIGURE 9.7: A rectangle, an ellipse, and a curve with different line styles



FIGURE 9.8: A line with custom caps



FIGURE 9.9: The line join test application



🔚 Form1	
	Line Join
	C Bevel
	Miter
	C Miter Clipped
	C Round
	Apply LineJoin








FIGURE 9.14: Setting customized starting and ending caps



FIGURE 9.15: Adjustable arrow caps



FIGURE 9.16: A simple graphics path



FIGURE 9.17: A filled graphics path



FIGURE 9.18: A shaped form



FIGURE 9.19: Three subpaths



FIGURE 9.20: Nested containers





FIGURE 9.22: Saving and restoring graphics states



FIGURE 9.23: Using graphics containers to draw text



FIGURE 9.24: Using graphics containers to draw shapes



FIGURE 9.25: Reading the metadata of a bitmap



FIGURE 9.26: Color blending examples



FIGURE 9.27: Transparent graphics shapes in an image using alpha blending



FIGURE 9.28: Mixed blending effects



FIGURE 9.29: Using linear gradient brushes



FIGURE 9.30: Using a rectangle in the linear gradient brush



🛃 Blend	ing Sample	
Blending	Color Blending	Alpha Blending
-		



FIGURE 9.33: Comparing the effects of SetBlendTriangularShape and SetSigmaBellShape



FIGURE 9.34: Setting the center of a gradient



FIGURE 9.35: A multicolor gradient



FIGURE 9.36: Using blending in a linear gradient brush









FIGURE 9.39: Blending multiple colors







FIGURE 9.42: Drawing semitransparent graphics shapes



FIGURE 9.43: Drawing semitransparent shapes on an image







FIGURE 9.46: A mixed blending example







FIGURE 10.1: Steps in the transformation process



FIGURE 10.2: Transformation stages



FIGURE 10.3: Drawing a line from point (0, 0) to point (120, 80)



FIGURE 10.4: Drawing a line from point (0, 0) to point (120, 80) with origin (50, 40)







FIGURE 10.7: Combining page and device coordinates



FIGURE 10.8: Drawing a line and filling a rectangle





🔜 Form1			_ 🗆 🗙
Matrix Operations	Matrix Class		

FIGURE 10.11: Resetting a transformation



FIGURE 10.12: Scaling a rectangle



FIGURE 10.13: Shearing a rectangle



FIGURE 10.14: Translating a rectangle



FIGURE 10.15: Composite transformation

🔚 Form1	- 🗆 ×
Transformation Types	
1 1	

FIGURE 10.16: Local transformation



FIGURE 10.17: Rotating images



FIGURE 10.18: Scaling images



FIGURE 10.19: Translating images



FIGURE 10.20: Shearing images



FIGURE 10.24: Translating colors



FIGURE 10.25: Scaling colors



FIGURE 10.26: Shearing colors



FIGURE 10.29: Rotating colors



FIGURE 10.30: Using the transformation matrix to transform text



FIGURE 10.31: Using the transformation matrix to shear text



FIGURE 10.32: Using the transformation matrix to reverse text



FIGURE 10.33: Scale ${\rm fi}$ Rotate ${\rm fi}$ Translate composite transformation





New Project				×
Project Types:	<u>T</u> emplates:		00	8-8- 8-8- 8-8-
 ✓ Visual Basic Projects ✓ Visual C# Projects ✓ Visual C++ Projects ✓ Setup and Deployment Projects ● Other Projects ● Other Solutions 	Windows Application ASP.NET Web Ap	Class Library	Windows Control Library	
Name: HelloPrinterSamp	sei intenace			_
Location: F:\Books\GDI+\Reviews\Dp	02\Ch13\Code	-	<u>B</u> rowse	
○ Add to Solution ○ Close Solution				
Project will be created at F:\Books\GDI+\Reviews\Dp	02\Ch13\Code	\HelloPrinterSam	ıp.	
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FIGURE 11.6: Creating a Windows application

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FIGURE 11.7: Your first printing application

🖶 Printer Settings		
Available Printers		
Get Paper Size		Get Printer Resolution
Get Printer Properties	1	
Printer Properties Printer Name:		
IsDefaultPrinter	Copies:	
IsPlotter	🗌 IsValid	
CanDuplex	Supports Colors	
Collate		

FIGURE 11.8: The printer settings form

🛃 Printer Settings	
Available Printers	
\\KRUSENTS\HP LaserJet 2100 Seri	-
Get Paper Size [PaperSize Letter Kind=Letter Height= [PaperSize Letter Small Kind=LetterSn [PaperSize Legal Kind=Legal Height=1 [PaperSize A4 Kind=A4 Height=1169 [PaperSize A4 Small Kind=A4Small Height=169]	Get Printer Resolution
PaperSize A5 Kind=A5 Height=827 W	/idth=583]
Get Printer Properties	
Printer Properties Printer Name: \\KRUSENTS\HP	LaserJet 2100 Series PCL 6
✓ IsDefaultPrinter Copies	. 1
🗖 IsPlotter 🔽 IsV	alid
CanDuplex Su	oports Colors
Collate	

FIGURE 11.9: Reading printer properties

•	comboBox1	▼	
· 1			•
• •			•
• • •			•
• •			•
			•
			•
• •			•
• •			•
• •			•
• •			•
• • •			
		PrintEvents Start	
			
			•
			•

FIGURE 11.11: The print events application

🔚 Form1	
comboBox1	
	Browse Text File
Print Text Print Events	Print Text File

FIGURE 11.12: The form with text file printing options

🔜 Form1	
Printing Type Here	
Draw Items View Image	
Print Image	
Print Graphics Items	Туре Неге
Type Here	· · · · · · · · · · · · · · · · · · ·
	· · · · · · · · · · · · · · · · · · ·

FIGURE 11.13: A graphics-printing application



FIGURE 11.14: Drawing simple graphics items


FIGURE 11.15: Viewing an image



FIGURE 11.16: Print dialogs in the Visual Studio.NET toolbox

🔜 Form1		IJ×
Print Dialog Type Here		
Open File		
Print Preview		
Print Setup		:::
Print Dialog		
Type Here		
	• • • • • • • • • • • • • • • • • • • •	:::
		:::
		:::
	•••••••••••••••••••••••••••••••••••••••	:::
		:::

FIGURE 11.17: The print dialog application



FIGURE 11.18: Viewing an image and text



FIGURE 11.19: The print preview dialog

Page Setup	? ×
	Advancemental deligne Advancemental deligne
Paper	
Size:	tter 🔽
Source: Au	ito Select
Orientation	Margins (inches)
Portrait	Left: 1" <u>R</u> ight: 1"
C L <u>a</u> ndscape	Iop: 1" Bottom: 1"
	OK Cancel <u>Printer</u>

FIGURE 11.20: The page setup dialog

Print	? ×
Printer —	
<u>N</u> ame:	\\KRUSENTS\HP LaserJet 2100 Series P(▼ Properties
Status:	Ready
Type:	HP LaserJet 2100 Series PCL 6
Where:	192.168.128.254
Commen	nt: KNTS HP LaserJet 2100 wp (PCL6) 🔽 Print to file
Print rang	Copies
 <u>A</u>I 	Number of <u>c</u> opies: 1
C Page	
C <u>S</u> ele	ction
	OK Cancel

FIGURE 11.21: The print dialog

	🚽 PageSetupDialog Sampl	e <u>×</u>
	Available Printers:	
		·····
	Dapar Draparties	
	Paper Propercies	
	Size:	▼11111
	Sources	· · · · · · · · · · · · · · · · · · ·
	: 50urce:	■ 11111
		· · · · · · · · · · · · · · · · · · ·
		· · · · · · · · · · · · · · · · · · ·
4		
- 1	-Dapor Orientation	-Baper Margins (In Inches)
	Paper Orientation	Paper Margins (In Inches)
	Paper Orientation	Paper Margins (In Inches) Left: Right:
	Paper Orientation	Paper Margins (In Inches)
	Paper Orientation	
	Paper Orientation C Portrait C Landscape	Paper Margins (In Inches) Left: Right: Top: Bottom:
	Paper Orientation C Portrait C Landscape	Paper Margins (In Inches) Left: Right: Top: Bottom:
	Paper Orientation O Portrait C Landscape	Paper Margins (In Inches) Left: Right: Top: Bottom:
	Paper Orientation O Portrait C Landscape Bounds (Rectangle):	Paper Margins (In Inches) Left: Right: Difference of the second
	Paper Orientation O Portrait C Landscape Bounds (Rectangle):	Paper Margins (In Inches) Left: Right: Difference of the second
	Paper Orientation Portrait C Landscape Bounds (Rectangle): Color Printing	Paper Margins (In Inches) Left: Right: Difference of the second
	Paper Orientation Portrait C Landscape Bounds (Rectangle): Color Printing	Paper Margins (In Inches) Left: Right: Top: Bottom: Set Properties Cancel

FIGURE 11.22: The custom page settings dialog

🛃 PageSetupDialog	Sample 📃	×
Available Printers:	\\KRUSENTS\HP LaserJet 2100 Series PCL	-
		-
Paper Properties		
Size:	A4	
Source:		
	PaperSource Tray 1 Kind=Upper	
Paper Orientation	Paper Margins (In Inches)	
Portrait	Left: 0 Right: 850	
C Landscape	Top: D Bottom: 1100	
		-
Bounds (Rectangle):	{X=0,Y=0,Width=850,Height=1100}	
Color Printing	Set Properties Cancel	

🖶 Multiple Page Printing	<u>_ 🗆 ×</u>
File Type Here	
Display Fonts	
Print	
Print Preview	:
Type Here	:
•	:
	:
	:
	:
	:
	:

FIGURE 11.24: A form for printing multiple pages



FIGURE 11.25: Print preview of multiple pages

爹 HP LaserJet 5P/5MP Post	Script			- 🗆 ×
Printer Document View Help				
Document Name	Status	Owner	Pages	Size
Our Test Document	Printing	Administrator	1	30.6 KB/3
•				•
1 document(s) in queue				11.

FIGURE 11.26: Setting a document name

🛃 Fo	rm1 _ 🗖	×
	Normal Printing	: :
· · · · · ·		::
	Marginal Printing	: :
		: :
		: :
		: :
: : : : :		::
		::
		: :
::::		::
		::

FIGURE 11.27: Marginal-printing test application



FIGURE 11.29: Print controller test form



FIGURE 11.30: Print controller output

New Project					X
Project Types:		<u>T</u> emplates:			5-5- 5-5- 5-5-
Visual Basic F Visual C# Pro Visual C++ F Setup and Du Prompt Projec Other Projec Visual Studio	Projects ojects eployment Projects ects ts Solutions	Windows Application ASP.NET Web Application	Class Library	Windows Control Library	
<u>N</u> ame:	FirstWebApp				_
Location:	http://localhost/GDIPlus@	Guide/FirstWebApp	•	Browse	1
• Add to Solution Project will be created		Guide/FirstWebApp.			
▼ Mor <u>e</u>		ОК	Cancel	Help	

FIGURE 12.3: The FirstWebApp project

K FirstWebApp - Microsoft Visual	C# .NET [design] - WebForm1.a: Debug Data Format Table	spx X Insert Frames Iools Window
Help	• w myParm	• 😡 🖻 🛠 翌 • "
Page Class WebForm1.aspx The page you are working or and objects will be arranged 1 coordinal To use flow layout (top to processing document), che property of the DOCUME	n is in grid layout mode, using absolute (x and y). tes. bottom, as in a word ange the pageLayout ENT to FlowLayout.	Solution 'FirstWebApp (2)' (1 pro
Design C HTML	······	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓



DOCUMENT Property Pages
General Color and Margins Keywords
Page title: First ASP.NET Web Application
Background image: Browse
Nonscrolling background
Target Schema: Internet Explorer 5.0
Character Set:
Page Layout: GridLayout 💽 🔽 Show Grid
Default scripting language
Client: JScript
Server: C#
OK Cancel Apply Help

FIGURE 12.6: An ASP.NET document's page properties







FIGURE 12.9: Drawing simple graphics objects on the Web



FIGURE 12.10: Drawing various graphics objects



FIGURE 12.11: Drawing an image





FIGURE 12.13: Drawing semitransparent objects

	vorites <u>T</u> ools <u>H</u> elp		
🗕 Back 🔹 🍝 👻 🎯	🔄 🖓 📿 Search	🚡 Favorites 🏼 🎯 M	edia 🎯 🖪 🗐 🗐 🗐
Address ⓐ http://locall	nost/GDIPlusGuide/Line	ChartSamp/WebForm1.	aspx 💌 🔗 Li
GDI+ Chart	Application:	Data Entry E	orm
obry charts	pproductorri	Dotta Lifery 1	
	X Pos	Y Pos	Color Name
Chart Size:	400	200	gray
Point 1 Data:	20	20	Red
Point 2 Data:	100	20	Green
Point 3 Data:	150	100	Yellow
Point 4 Data:	320	110	Blue
Point 5 Data:	340	180	Pink
	D	raw Chart	
) Done			Cocal intranet

FIGURE 12.14: Entering points on a chart



FIGURE 12.15: A line chart in ASP.NET

🚈 WebForm1 - Microsoft Internet Explorer 📃	
<u>Eile Edit View Favorites Tools H</u> elp	1
← Back → → → ② 🗿 🖓 🚫 Search 🐨 Favorites ③ Media 🄇	»
Address 🗟 http://localhost/GdiPlusGuide/PieChartSamp/WebForm1. 💌 🔗 Go	Links
GDI+ Pie Chart Application Draw Chart Fill Chart	X
😂 Done 🛛 👘 🛃 Local intranet	11.

FIGURE 12.16: A pie chart-drawing application in ASP.NET



FIGURE 12.17: The Draw Chart button click in action



FIGURE 12.18: The Fill Chart button click in action



FIGURE 13.2: Drawing on a form



FIGURE 13.3: Drawing on Windows controls



FIGURE 13.4: Drawing lines in a loop

🖶 Form1		- 🗆 ×
Normal Drawing	Draw Using Graphics Path	

FIGURE 13.5: The same result from two different drawing methods





FIGURE 13.7: Using system pens and brushes



FIGURE 15.1: An interactive GUI application



FIGURE 15.2: Designing transparent controls



FIGURE 15.3: Drawing a circular form and Windows controls



FIGURE 15.4: A graphics copyright application



FIGURE 15.5: Thumbnail view of an image



FIGURE 15.6: An image after copyright has been added to it

	Field Name	Data Type
8)	UserID	AutoNumber
	UserName	Text
	UserEmail	Text
	UserPhoto	OLE Object
	UserDescription	Memo

FIGURE 15.7: Users table schema



FIGURE 15.8: Reading and writing images in a database form



FIGURE 15.9: Displaying a bitmap after reading data from a database







FIGURE A.1: An error generated from Listing A.1



FIGURE A.2: An exception-handled error message