

MODUL PCD

II

2.1 Tujuan

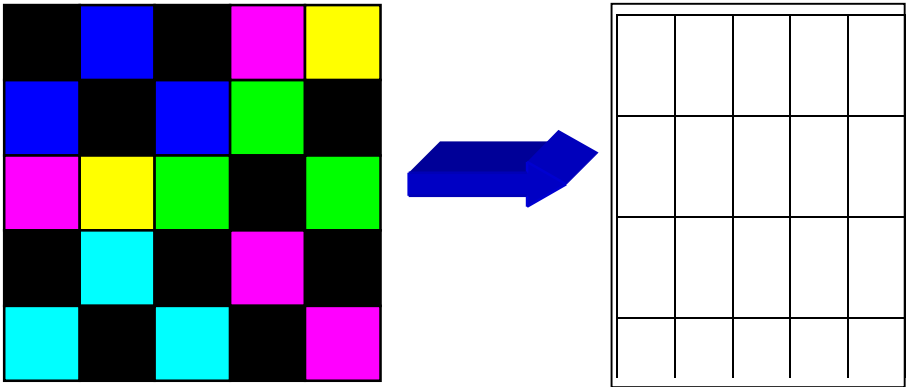
pixel

Pixel

2.2 Dasar Teori

Gambar / Citra

pixel picture element



Gambar 2.1 Ilustrasi citra dan data yang disimpan di memori

Bit Depth **Kedalaman Warna** *pixel depth* *color depth*

bit

bit

=

pixel

resolusi

pixel

pixel

pixel

Format File Citra

Bitmap/bmp

bitmap

GIF (Graphics Interchange Format)

LZW

compression

loseless

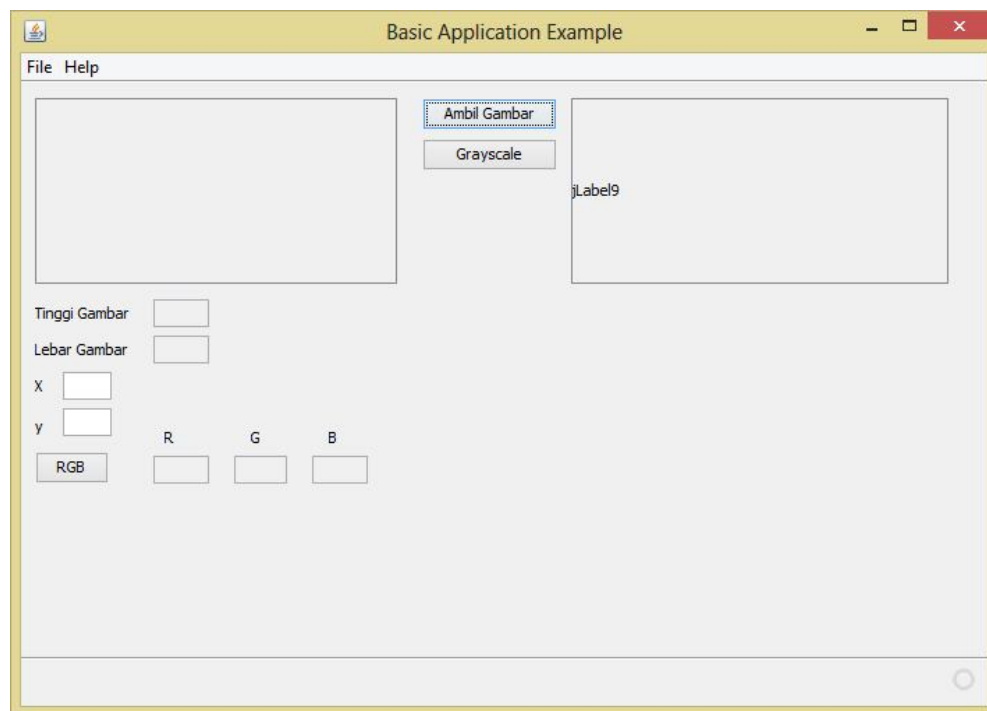
JPEG/JPG (Joint Photographic Experts Group)

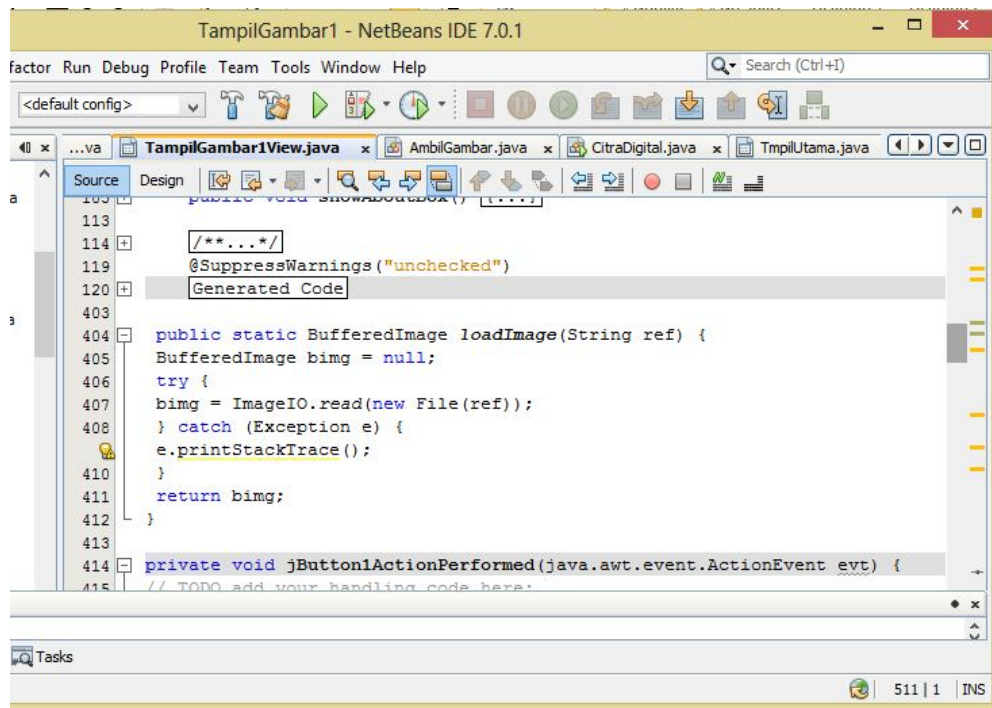
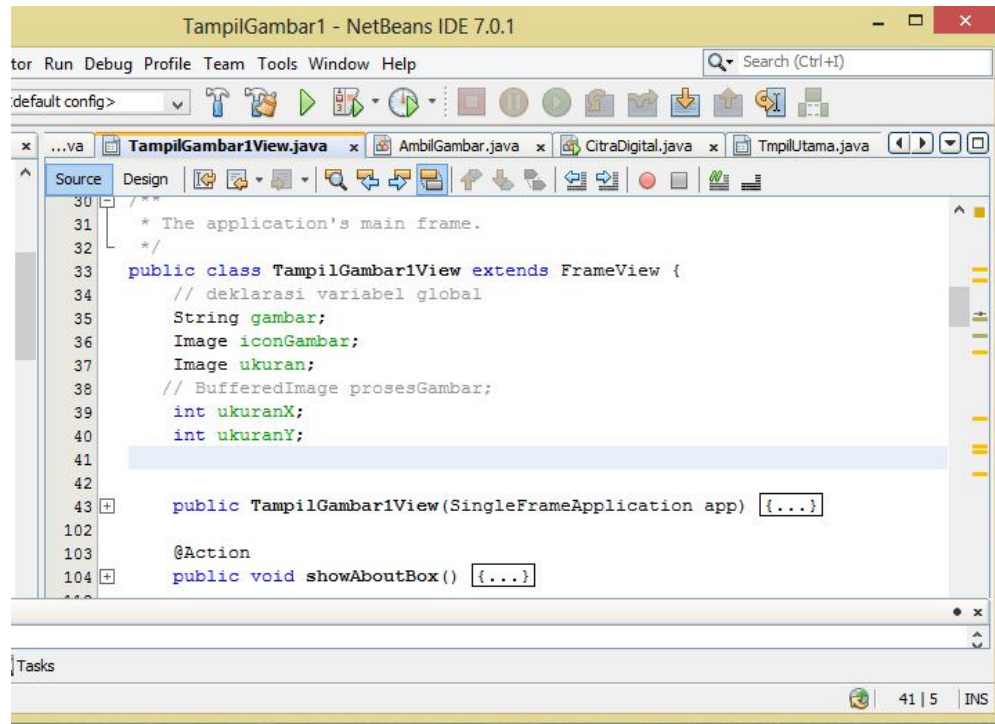
lossy

compression

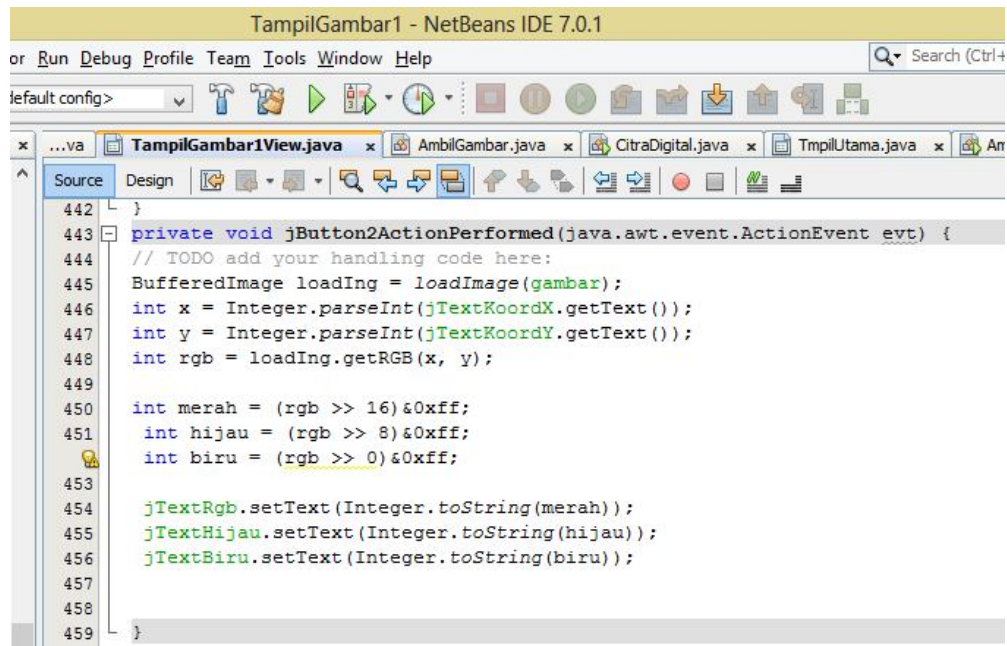
Portable Document Format)

2.3 Langkah Praktikum

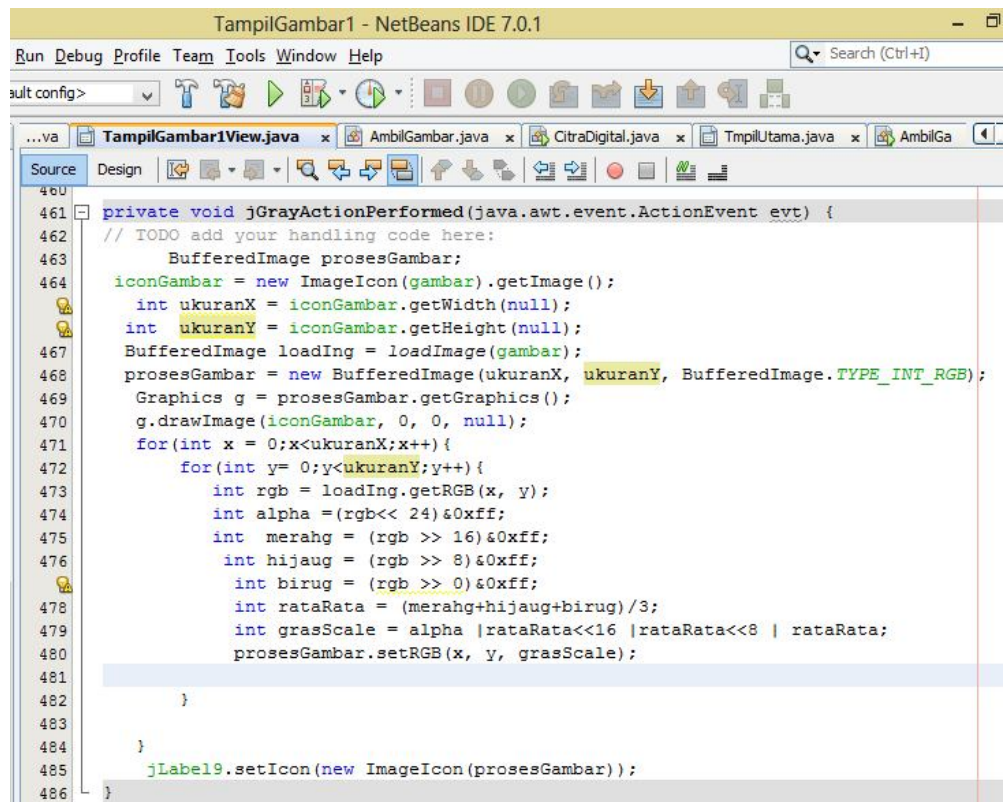




→ →



```
442 }
443 private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {
444     // TODO add your handling code here:
445     BufferedImage loadIng = loadImage(gambar);
446     int x = Integer.parseInt(jTextKoordX.getText());
447     int y = Integer.parseInt(jTextKoordY.getText());
448     int rgb = loadIng.getRGB(x, y);
449
450     int merah = (rgb >> 16)&0xff;
451     int hijau = (rgb >> 8)&0xff;
452     int biru = (rgb >> 0)&0xff;
453
454     jTextRgb.setText(Integer.toString(merah));
455     jTextHijau.setText(Integer.toString(hijau));
456     jTextBiru.setText(Integer.toString(biru));
457
458
459 }
```



```
460
461 private void jGrayActionPerformed(java.awt.event.ActionEvent evt) {
462     // TODO add your handling code here:
463     BufferedImage prosesGambar;
464     ImageIcon iconGambar = new ImageIcon(gambar).getImage();
465     int ukuranX = iconGambar.getWidth(null);
466     int ukuranY = iconGambar.getHeight(null);
467     BufferedImage loading = loadImage(gambar);
468     prosesGambar = new BufferedImage(ukuranX, ukuranY, BufferedImage.TYPE_INT_RGB);
469     Graphics g = prosesGambar.getGraphics();
470     g.drawImage(iconGambar, 0, 0, null);
471     for(int x = 0; x < ukuranX; x++) {
472         for(int y = 0; y < ukuranY; y++) {
473             int rgb = loadIng.getRGB(x, y);
474             int alpha = (rgb << 24) & 0xff;
475             int merahg = (rgb >> 16) & 0xff;
476             int hijaug = (rgb >> 8) & 0xff;
477             int birug = (rgb >> 0) & 0xff;
478             int rataRata = (merahg + hijaug + birug) / 3;
479             int grasScale = alpha | rataRata << 16 | rataRata << 8 | rataRata;
480             prosesGambar.setRGB(x, y, grasScale);
481
482         }
483     }
484     jLabel9.setIcon(new ImageIcon(prosesGambar));
485
486 }
```