IN-LECTURE QUESTIONS FOR VIDEO 7.3

Note: See the answer key at the bottom of this file.

1. Write the missing code to create a full color bitmap of size 100x200.
    ```
    _____(100,200,Bitmap.Config.ARGB_8888)
    ```

2. True or false? The method 'createBitmap' in the Bitmap class can be called directly (i.e. You do not need to create a new Bitmap object first).
    a. True
    b. False

3. Check all that apply. Which of the following are true?
    a. The bitmap configuration 'ARGB_8888' means that each pixel uses a total of 32 bits (4 bytes): 8 bits for alpha (opaqueness), 8 bits for red, 8 bits for green and 8 bits for the blue value.
    b. To paint a square or another bitmap image onto a bitmap create a Canvas object.
    c. Bitmaps are used to represent an image using colored picture-elements or "pixels."
    d. Bitmaps are used to represent integers and bits.

4. Choose the missing code to create a full-color bitmap (32 bits per pixel) of size 200x300.
    ```
    Bitmap.createBitmap(200,300,_____)
    ```
    a. Bitmap.Config.ALPHA_8
    b. Bitmap.Config.ARGB_4444
    c. Bitmap.Config.ARGB_8888
    d. Bitmap.Config.RGB_565

5. What does the following code do? `Bitmap duck;`
    a. Immediately creates a bitmap object
    b. Creates a pointer named duck that can be assigned to point to a bitmap

6. Check all that apply. Which of the following are true?
    a. Android supports other image representations. For example, RGB_565 which uses 5, 6, and 5 bits for the red, green, and blue components (using only 2 bytes per pixel) respectively.
    b. A byte is equivalent to 8 bits.
    c. A large alpha value means the color is transparent.
    d. A small alpha value means the color is transparent.

7. Write the missing code (with as few spaces as possible) to create a canvas for the bitmap.
    ```
    Bitmap b = Bitmap.create(48,48,Bitmap.Config.ARGB_8888);
    Canvas c = _____;
    ```

8. The reason to create a Canvas object for a bitmap object is:
    a. To modify (paint onto) a bitmap
    b. To display a bitmap
    c. To display a scrollable portion of the bitmap

9. Write the missing code to create a new image view object.
```
new _____(this);
```

10. Write the missing code to connect the bitmap to the image object.
```
bm = Bitmap.create(48,48,Bitmap.Config.ARGB_8888)
ImageView view = new ImageView(this);
view._____(bm);
setContentView(view);
```

11. When used as an ARGB color, the hexadecimal value 0xffff6600 is:
    a. orange
    b. blue

12. To set the entire bitmap to a single color, use the canvas method named:
    a. setcolor
    b. drawcolor
    c. drawColor
    d. erase

13. Check all that apply. Which of the following are true?
    a. Hexadecimal values are useful when specifying colors because exactly two hex digits are used per A, R, G, B component.
    b. For an alpha-supported bitmap, canvas.drawColor(0xccffcc) would have no effect because the alpha value of 0xffccff is zero.
    c. canvas.drawColor takes a String parameter.
    d. An integer value 0xff?????? (where ? is a valid hex digit 0-9a-f) represents a fully opaque (non-transparent) color.

14. For a bitmap of width 480 and height 600:
    a. (0,0) is at the top-left and (479,599) is bottom-right.
    b. (0,0) is at the top-right and (479,599) is bottom-left.
    c. (0,0) is at the bottom-left and (479,599) is top-right.
    d. (0,0) is at the bottom-right and (479,599) is top-left.

15. Check all that apply. By using the canvas methods:
    a. You can load pictures from the Internet.
    b. You can draw lines, rectangles, ovals, shapes, text, bitmaps and other shapes.
    c. You can include paint settings to control text, stroke(line) and fill and other settings.

16. To set the width of lines drawn:
    a. Use canvas.setLineWidth
    b. Use canvas.setLine
    c. Use canvas.setWidth
    d. Use canvas.setStrokeWidth

17. To load a bitmap resource from res/drawables directories as a Bitmap object:
    a. Use BitmapFactory.decodeResource(…) and pass in getResources() and a value from R.drawable
    b. Use loadBitmap(…) and pass in the filename
    c. Use getBitmap(…) and pass in an integer value from R.drawable

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ANSWER KEY:

1. Bitmap.createBitmap
2. a
3. a, b, c
4. c
5. b
6. a, b, d
7. new Canvas(b)
8. a
9. ImageView
10. setImageBitmap
11. a
12. c
13. a, b, d
14. a
15. b, c
16. d
17. a