

Name: Alexandra Flores.

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Inwood Early College for Health and Information Technologies
Career and Technical Education Department

AP Computer Science Principles 1

Pixelated Pic Project

Graphic Organizer

Pixel Color Description: light blue

RGB Values: 198, 197, 222

Red Value: 198

Convert to Binary

$$\begin{aligned} 198 \div 2 &= 99 \text{ R0} \\ 99 \div 2 &= 49 \text{ R1} \\ 49 \div 2 &= 24 \text{ R1} \\ 24 \div 2 &= 12 \text{ R0} \\ 12 \div 2 &= 6 \text{ R0} \\ 6 \div 2 &= 3 \text{ R0} \\ 3 \div 2 &= 1 \text{ R1} \\ 1 \div 2 &= 0 \text{ R1} \end{aligned}$$

Red Value in Binary:

1 1 0 0 0 1 1 0

Green Value: 197

Convert to Binary

$$\begin{aligned} 197 \div 2 &= 98 \text{ R1} \\ 98 \div 2 &= 49 \text{ R0} \\ 49 \div 2 &= 24 \text{ R1} \\ 24 \div 2 &= 12 \text{ R0} \\ 12 \div 2 &= 6 \text{ R0} \\ 6 \div 2 &= 3 \text{ R0} \\ 3 \div 2 &= 1 \text{ R1} \\ 1 \div 2 &= 0 \text{ R1} \end{aligned}$$

Green Value in Binary:

1 1 0 0 0 1 0 1

Blue Value: 222

Convert to Binary

$$\begin{aligned} 222 \div 2 &= 111 \text{ R0} \\ 111 \div 2 &= 55 \text{ R1} \\ 55 \div 2 &= 27 \text{ R1} \\ 27 \div 2 &= 13 \text{ R1} \\ 13 \div 2 &= 6 \text{ R1} \\ 6 \div 2 &= 3 \text{ R0} \\ 3 \div 2 &= 1 \text{ R1} \\ 1 \div 2 &= 0 \text{ R1} \end{aligned}$$

Blue Value in Binary:

1 1 0 1 1 1 1 0

Pixel color bitstring:

1 1 0 0 0 1 1 0 1 1 0 0 0 1 0 1 1 1 0 1 1 1 1 0