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Inwood Early College for Health and Information Technologies
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AP Computer Science Principles 1

Pixelated Pic Project

Graphic Organizer

Pixel Color Description: Purpleish White.

RGB Values: 240, 240, 247

Red Value: 240

Convert to Binary

$$\begin{aligned} 240 \div 2 &= 120 \text{ R0} \\ 120 \div 2 &= 60 \text{ R0} \\ 60 \div 2 &= 30 \text{ R0} \\ 30 \div 2 &= 15 \text{ R0} \\ 15 \div 2 &= 7 \text{ R1} \\ 7 \div 2 &= 3 \text{ R1} \\ 3 \div 2 &= 1 \text{ R1} \\ 1 \div 2 &= 0 \text{ R1} \end{aligned}$$

Red Value in Binary:

1 1 1 1 0 0 0 0

Green Value: 240

Convert to Binary

← same calculations.

Green Value in Binary:

1 1 1 1 0 0 0 0

Blue Value: 247

Convert to Binary

$$\begin{aligned} 247 \div 2 &= 123 \text{ R1} \\ 123 \div 2 &= 61 \text{ R1} \\ 61 \div 2 &= 30 \text{ R1} \\ 30 \div 2 &= 15 \text{ R0} \\ 15 \div 2 &= 7 \text{ R1} \\ 7 \div 2 &= 3 \text{ R1} \\ 3 \div 2 &= 1 \text{ R1} \\ 1 \div 2 &= 0 \text{ R1} \end{aligned}$$

Blue Value in Binary:

1 1 1 1 0 1 1 1

Pixel color bitstring:

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