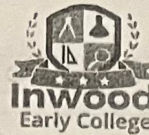


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Date: Sept 26, 2024



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: Dark blue

RGB Values: 146, 145, 168

Red Value: 146

Convert to Binary

$$\begin{aligned} 146 \div 2 &= 73 \text{ R}0 \\ 73 \div 2 &= 36 \text{ R}1 \\ 36 \div 2 &= 18 \text{ R}0 \\ 18 \div 2 &= 9 \text{ R}0 \\ 9 \div 2 &= 4 \text{ R}1 \\ 4 \div 2 &= 2 \text{ R}0 \\ 2 \div 2 &= 1 \text{ R}0 \\ 1 \div 2 &= 0 \text{ R}1 \end{aligned}$$

Red Value in Binary:

1 0 0 1 0 0 1 0

Green Value: 145

Convert to Binary

$$\begin{aligned} 145 \div 2 &= 72 \text{ R}1 \\ 72 \div 2 &= 36 \text{ R}0 \\ 36 \div 2 &= 18 \text{ R}0 \\ 18 \div 2 &= 9 \text{ R}0 \\ 9 \div 2 &= 4 \text{ R}1 \\ 4 \div 2 &= 2 \text{ R}0 \\ 2 \div 2 &= 1 \text{ R}0 \\ 1 \div 2 &= 0 \text{ R}1 \end{aligned}$$

Green Value in Binary:

1 0 0 1 0 0 0 1

Blue Value: 168

Convert to Binary

$$\begin{aligned} 168 \div 2 &= 84 \text{ R}0 \\ 84 \div 2 &= 42 \text{ R}0 \\ 42 \div 2 &= 21 \text{ R}0 \\ 21 \div 2 &= 10 \text{ R}1 \\ 10 \div 2 &= 5 \text{ R}0 \\ 5 \div 2 &= 2 \text{ R}1 \\ 2 \div 2 &= 1 \text{ R}0 \\ 1 \div 2 &= 0 \text{ R}1 \end{aligned}$$

Blue Value in Binary:

1 0 1 0 1 0 0 0

Pixel color bitstring:

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