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CIS 112 ONL01

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Lab #1

1. Exercise #43 (Big-O Notation)

a. count = 0;

for (i = 1; i <= N; i++)

count++;

**O(N)**

b. count = 0;

for (i = 1; i <= N; i++)

for (j = 1; j <= N; j++)

count++;

**O(N²)**

c. value = N;

count = 0;

while (value > 1)

{

value = value / 2;

count++;

}

**O(1)**

d. count = 0;

value = N;

value = N \* (N – 1);

count = count + value;

**O(1)**

e. count = 0;

for (i = 1; i <= N; i++)

count++;

for (i = N; i >= 0; i--)

count++;

**O(N²)**

f. count = 0;

for (i = 1; i <=N; i++)

for (j = 1; j <= 5; j++)

count++;

**O(N)**