

Northern Michigan University (Marquette Co, MI)

CS201-01-22F: Programming In C++ (Andrew A. Poe)

Practice Quiz 4

Wednesday 28 September 2022 11:00 A.M. EDT

Time: 15 minutes.

Write the following method (not a whole program):

```
int Mode (int *A, int Alen);
```

This method returns the integer that appears most frequently in array A (of size Alen). If there is a tie for most frequently occurring number, I don't care which you return. All of the integers in the array will be between 0 and 99. You may use this fact or not use it; the problem is doable either way.

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```
int Mode (int *A, int Alen) {
    int *C = new int[100];
    for (int i=0; i < 100; i++) C[i] = 0;
    for (int i=0; i < Alen; i++) C[A[i]]++;
    int maxct = C[0], maxvalue = 0;
    for (int i = 1; i < 100; i++)
        if (C[i] > maxct) {
            maxct = C[i];
            maxvalue = i;
        }
    delete[] C;
    return maxvalue;
}
```

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```
int Mode (int *A, int Alen) {  
    int maxct = 0, maxvalue = 0;  
    for (int i=0; i < Alen; i++) {  
        int ct = 0;  
        for (int j=0; j < Alen; j++)  
            if (A[i]==A[j]) ct++;  
        if (ct > maxct) {  
            maxct = ct;  
            maxvalue = i;  
        }  
    }  
    return maxvalue;  
}
```