**Coding Convention Guidelines**

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|  | **Rule** | **Should** | **Should not** |
| **Naming Convention** | Rule #1.0: Use meaningful names | int price, tax, total;  void sum(); | int x, y, z;  void f(); |
| Rule #1.1: Use Camel Case for variable, struct, function names | float grade, TotalPriceWithTax;  struct SalePerson { }; | float GRADE, totalpricewithtax;  struct SALEPERSON { }; |
| Rule #1.2: Use All Upper Case with underscores for constant names | const int TAX\_RATE = 10.0; | const int TaxRate = 10.0; |
| **Statement Convention** | Rule #2.0: Write easy-to-read statements | x = a + b – c \* d;  for (int i = 0; i < n; i++); | x=a+b-c\*d; for(int i=0;i<n;i++); |
| Rule #2.1: Write one statement on one line | int a;  float b;  if (a > 10)  b = 5; | int a; float b;  if (a > 10) b = 5; |
| Rule #2.2: Group related statements in paragraph | a = 5;  b = 6;  if (a > b)  max = a; | a = 5;  b = 6;  if (a > b)  max = a; |
| Rule #2.3: Indent statement blocks | if (a[ j ] > a[ i ])  {  int temp = a[ i ];  a[ i ] = a[ j ];  a[ j ] = temp;  } | if (a[ j ] > a[ i ])  {  int temp = a[ i ];  a[ i ] = a[ j ];  a[ j ] = temp;  } |
| Rule #2.4: Split long function (> 10 statements) into smaller ones |  |  |
| **Comment Convention** | Rule #3.0: Explain code with comprehensive comments |  |  |
| Rule #3.1: Explain each function with comments | // This function sum up  // two input integers  int sum(int a, int b) { } | int sum(int a, int b) { } |
| Rule #3.2: Comment to complex if/loops/expressions when possible | // Find max between a and b  max = (a > b) ? a : b;  // Calculate x^n  for (int i = 0; i < n; i++)  s = s \* x; | max = (a > b) ? a : b;  for (int i = 0; i < n; i++)  s = s \* x; |

**Practice**

Find and correct what do not follow the Coding Convention Guidelines in the code below:

01: #include <stdio.h>

02: #define maxarray 100

03:

04: void read\_sort\_array(int a[], int &n)

05: {

06: printf("Enter number of elements = ");

07: scanf("%d", &n);

08: for (int i = 0; i < n; i++)

09: {

10: printf("Enter element [%d] = ", i);

11: scanf("%d", &a[i]);

12: }

13: for(int i = 0;i < n - 1; i++)

14: for(int j = i + 1; j < n; j++)

15: if (a[j] < a[i])

16: {

17: int temp = a[i];

18: a[i] = a[j];

19: a[j] = temp;

20: }

21: }

22:

23: void f(int a[], int n)

24: {

25: printf("Elements of array:\n");

26: for(int i=0;i<n;i++) printf("%d ", a[i]);

27: }

28: void main()

29: {

30: int a[maxarray]; int n;

31: read\_sort\_array(a, n);

32: f(a, n);

33: }