Lab 1

Data Structures
C++ for C Coders

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C vs C++
const
cout
new & delete
reference

Lab 1: Convert a C program to C++

```
#include <stdio.h>
#define N 40
void sum(int d[], int n, int* p) {
  *p = 0;
  for(int i = 0; i < n; ++i)
    *p = *p + d[i];
}

int main() {
  int total = 0;
  int data[N];
  for(int i = 0; i < N; ++i) data[i] = i;
  sum(data, N, &total);
  printf("total is %d\n", total);
  return 0;
}
```

```
Use a reference operator, but not a pointer.
Use const, but not #define.
Use new and delete operators.
Use cout instead of printf().
Use namespace std.
```

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