## The Compendium, v0.1 Texas A&M University

Jack Graham

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### Chapter 1

#### 1.1 The Skeleton

#### The Mother Program

Every C++ program should begin with this. The #include statement will bring in the entire C++11 STL when compiled with g++, and the strange I/O statements will prevent standard IO from syncing with each other. This will speed up a program that reads from stdout/stdin substantially, at the cost of making scanf and printf completely unusable, so use only if you plan on using purely cin and cout.

```
#include <bits/stdc++.h>
using namespace std;
int main() {
   ios::sync_with_stdio(false);
    cin.tie(0);

   // code goes here
   return 0;
}
```

#### Makefile

To compile programs, use the following makefile, which incorporates the exact command used by the judges:

```
main: main.cpp\\
   g++ -g -lm -lcrypt -02 -std=c++11 main.cpp -o main\\
clean:\\
   rm main
```

#### 1.1.1 Defines

The following #defines are assumed to be present for every code snippet in this entire notebook, but not all must be typed out for every problem.

```
#define LSB(i) ((i) & (-i))
#define mid(a,b) ((a) + ((b)-(a))/2)
```