

Team Notebook

ntTas

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# 1 Setup

## 1.1 C++Template

```
#pragma GCC optimize ("O3")
#pragma GCC target ("sse4")
```

```
#include <bits/stdc++.h>
using namespace std;
```

```
#define fi first
#define se second
#define pb push_back
```

```
typedef long long LL;
typedef vector<int> vi;
typedef pair<int,int> ii;
```

```
const int MOD = 1e9 + 7;
const LL INF = 1e18;
```

```
void fastscan(int &number) {
    //variable to indicate sign of input number
    bool negative = false;
    register int c;
```

```
    number = 0;
```

```
    // extract current character from buffer
```

```
    c = getchar();
```

```
    if (c=='-')
```

```
    {
        // number is negative
        negative = true;
```

```
        // extract the next character from the buffer
        c = getchar();
    }
```

```
    // Keep on extracting characters if they are integers
    // i.e ASCII Value lies from '0'(48) to '9' (57)
    for (; (c>47 && c<58); c=getchar())
```

```
        number = number *10 + c - 48;

        // if scanned input has a negative sign, negate the
        // value of the input number
        if (negative)
            number *= -1;
    }

    int main(){
        //cin / cout user
        //ios_base::sync_with_stdio(0); cin.tie(0); cout.tie(0)

        return 0;
    }
```

## 1.2 FastScanner

```
class FastScanner {
    private InputStream stream;
    private byte[] buf = new byte[1024];
    private int curChar;
    private int numChars;

    public FastScanner(InputStream stream) {
        this.stream = stream;
    }

    int read() {
        if (numChars == -1)
            throw new InputMismatchException();
        if (curChar >= numChars) {
            curChar = 0;
            try {
                numChars = stream.read(buf);
            } catch (IOException e) {
                throw new InputMismatchException();
            }
            if (numChars <= 0) return -1;
        }
        return buf[curChar++];
    }
```

```
    }

    boolean isSpaceChar(int c) {
        return c == '\n' || c == '\r' || c == '\t' || c == -1;
    }

    public int nextInt() {
        return Integer.parseInt(next());
    }

    public long nextLong() {
        return Long.parseLong(next());
    }

    public double nextDouble() {
        return Double.parseDouble(next());
    }

    public String next() {
        int c = read();
        while (isSpaceChar(c)) c = read();
        StringBuilder res = new StringBuilder();
        do {
            res.appendCodePoint(c);
            c = read();
        } while (!isSpaceChar(c));
        return res.toString();
    }

    public String nextLine() {
        int c = read();
        while (isEndline(c))
            c = read();
        StringBuilder res = new StringBuilder();
        do {
            res.appendCodePoint(c);
            c = read();
        } while (!isEndline(c));
        return res.toString();
    }
}
```