Write a procedure

```c
void factor (int n, int& f, int& q);
```

to store in $f$ the most frequent factor of $n$, and store in $q$ how many times it appears. If there is a tie, choose the smallest factor. For instance, if called with $n = 450 = 2^1 \cdot 3^2 \cdot 5^2$, the values after the call must be $f = 3$ and $q = 2$.

**Precondition**

$n \geq 2$

**Observation**

You only need to submit the required procedure; your main program will be ignored.