Vishath R Shetty
4A2MCS109

C Program to find HCF & LCM of two numbers

Algorithm

1. Start.

2. Input x,y

3. a=x

4. b=y

5. while (b!=0)
   {
      t=b;
      b=a%b;
      a=t;
   }

6. hcf = 0

7. lcm = (x*y)/hcf

8. output hcf, lcm

9. Stop

Flow chart

```
        ┌─────────┐
        │  Start  │
        └────┬────┘
             ↓
      ┌──────────────┐
     /   Read  x,y   /
    └───────┬────────┘
            ↓
      ┌──────────────┐
      │   a = x      │
      │   b = y      │
      └──────┬───────┘
             ↓
         ╱───────╲
        ╱ while   ╲──────────────┐
        ╲ (b!=0)  ╱               │
         ╲───────╱                ↓
             │            ┌──────────────────┐
             ↓            │  hcf = a         │
      ┌──────────────┐    │  Lcm=(x*y)/hcf   │
      │   t = b      │    └────────┬─────────┘
      │   b = a%b    │             │
      │   a = t      │             │
      └──────┬───────┘             │
             │                     │
             └──────────┬──────────┘
                        ↓
              ┌──────────────────────┐
             /   Output  hcf, lcm    /
            └──────────┬─────────────┘
                       ↓
                  ┌─────────┐
                  │  Stop   │
                  └─────────┘
```

$a = x$

$b = y$

while $(b \neq 0)$

$t = b$

$b = a \% b$

$a = t$

$hcf = a$

$Lcm = (x \times y) / hcf$

Output hcf, lcm