To implement the function $f(x) = \sqrt{x^2+1} - 1$ we will need to address two issues:

1. Overflow: $\sqrt{x^2+1} \approx |x|$ when $|x|$ is large, but the intermediate value x^2 may overflow. To prevent this, we can express $f(x)$ as

   $$f(x) = |x|\sqrt{1 + x^{-2}} - 1.$$

2. Cancellation: $\sqrt{x^2+1} \approx 1$ when $|x|$ is close to zero, and this can lead to catastrophic cancellation. To prevent this, we can express $f(x)$ as

   $$f(x) = (\sqrt{x^2+1} - 1)\frac{\sqrt{x^2+1}+1}{\sqrt{x^2+1}+1} = \frac{x^2}{\sqrt{x^2+1}+1}.$$

   We will use this expression when x is small.

Combining the above observations, we arrive at the following implementation:

```
double feval(double x) {
    double t = fabs(x);
    if (t > 2.0)
        // avoid overflow
        return t*sqrt(1.0+1.0/(t*t))-1.0;
    else {
        // avoid cancellation
        t = x*x;
        return t/(sqrt(t+1.0)+1.0);
    }
}
```