

TypeStabilityExperiment

October 23, 2016

```
In [ ]: const N = 100000
function typeunstable(x::Number)
    for i=1:N
        x += rand()
    end
    x
end
x = 1
@time typeunstable(x)
x = 1.0
@time typeunstable(x)

function typeunstable2(x::Number)
    float(x)
    function wrapped()
        for i=1:N
            x += rand()
        end
        x
    end
    wrapped()
end
x=1
@time typeunstable2(x)
x = 1.0
@time typeunstable2(x)

function typestable(x::Number)
    function wrapped(x::Float64)
        for i=1:N
            x += rand()
        end
        x
    end
    wrapped(x::Int) = wrapped(float(x))
    wrapped(x)
```

```

end
x=1
@time typestable(x)
x = 1.0
@time typestable(x)

function wrapped2(x::Float64)
    for i=1:N
        x += rand()
    end
    x
end
wrapped2(x::Int) = wrapped2(float(x))
function typestable2(x::Number)
    wrapped2(x)
end

x=1
@time typestable2(x)
x = 1.0
@time typestable2(x)

```