

Go's benchmark uses a struct

called "highPrecisionTime" to

measure time duration of a

benchmark.

for non-windows

```
//go:build !windows
package testing

import "time"

// isWindowsRetryable reports whether err is a Windows error code
// that may be fixed by retrying a failed filesystem operation.
func isWindowsRetryable(err error) bool { return false }

// highPrecisionTime represents a single point in time.
// On all systems except Windows, using time.Time is fine.
// Implement interface
type highPrecisionTime struct {
    now time.Time
}

// highPrecisionTimeNow returns high precision time for benchmarking.
func highPrecisionTimeNow() highPrecisionTime {
    return highPrecisionTime{now: time.Now()}
}

// highPrecisionTimeSince returns duration since b.
func highPrecisionTimeSince(b highPrecisionTime) time.Duration {
    return time.Since(b.now)
}
```

On most operating systems
`time::Now()` relies on Os's
wall clock. The wall clocks
are designed for general
time-keeping, hence their granularity
is very coarse.

Historically, Windows system clock
has had a granularity of 10-16 ms,
this means the clock updates
its value 100 to 62 times per
second.

So, calling time::now frequently
will return the same value
multiple times, making it
impossible to accurately
measure sub-millisecond latency.

Eg; If a benchmark function
takes 50 microseconds, & the
system wall clock updates its
value every 10-16 ms, the
measurement will likely
show 0 ms or 10-16 ms which

is inaccurate. Hence, Go

creates `highPrecisionTime` which

on Windows relies on

"QueryPerformanceCounter"



provides high

resolution time.

```
// TODO: If Windows runtime implements high resolution timing then highPrecisionTime  
// can be removed.
```

↳ Implement interface

```
type highPrecisionTime struct {  
    now int64  
}
```

```
// highPrecisionTimeNow returns high precision time for benchmarking.
```

```
func highPrecisionTimeNow() highPrecisionTime {  
    var t highPrecisionTime  
    // This should always succeed for Windows XP and above.  
    t.now = windows.QueryPerformanceCounter()  
    return t  
}
```

