

Docfinal Documentation

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operations.h File Reference

This header file includes all the prototypes of the functions. [More...](#)

```
#include "stdbool.h"
```

Go to the source code of this file.

Functions

int **findReverse** (int n)

This function reverses the input number. [More...](#)

int **Get_Integral** (char s_value[])

This function is used by the main feature functions for Conversions.

int **Get_Fractional** (char s_value[])

This function is used by the main feature functions for Conversions.

bool **checkIsBinaryIntegral** (int bin)

This function is used by the main feature functions for Conversions. [More...](#)

double **Binary_to_Decimal** (char input[])

This function returns the Decimal output for the Binary input. [More...](#)

void **Binary_to_Octal** (char inp[])

This function prints the Octal value for the Binary input. [More...](#)

void **Binary_To_Hexadecimal** (char input[])

This function prints the Hexadecimal value for the Binary input. [More...](#)

Detailed Description

This header file includes all the prototypes of the functions.

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Date

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Function Documentation

◆ Binary_to_Decimal()

```
double Binary_to_Decimal ( char input[] )
```

This function returns the Decimal output for the Binary input.

Parameters

input string is a valid Binary value.

Returns

Output is a Decimal value in Double type.

◆ Binary_To_Hexadecimal()

```
void Binary_To_Hexadecimal ( char input[] )
```

This function prints the Hexadecimal value for the Binary input.

Parameters

input string is a valid Binary value.

◆ Binary_to_Octal()

```
void Binary_to_Octal ( char inp[] )
```

This function prints the Octal value for the Binary input.

Parameters

input string is a valid Binary value.

◆ checkIsBinaryIntegral()

```
bool checkIsBinaryIntegral ( int bin )
```

This function is used by the main feature functions for Conversions.

Parameters

bin Binary Input is validated in this function.

Returns

true returns TRUE for the Valid Binary input.

false returns FALSE for the Valid Binary input.

◆ **findReverse()**

```
int findReverse ( int n )
```

This function reverses the input number.

This function is used by the main feature functions for Conversions.

Parameters

n input is an Integer number to be reversed.

Returns

int Output is a reversed input.

Here is a list of all documented functions, variables, defines, enums, and typedefs with links to the documentation:

- Binary_to_Decimal() : [operations.h](#)
- Binary_To_Hexadecimal() : [operations.h](#)
- Binary_to_Octal() : [operations.h](#)
- checkIsBinaryIntegral() : [operations.h](#)
- findReverse() : [operations.h](#)
- Get_Fractional() : [operations.h](#)
- Get_Integral() : [operations.h](#)

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UNITY_STORAGE_T Struct Reference

Data Fields

const char *	TestFile
const char *	CurrentTestName
const char *	CurrentDetail1
const char *	CurrentDetail2
UNITY_LINE_TYPE	CurrentTestLineNumber
UNITY_COUNTER_TYPE	NumberOfTests
UNITY_COUNTER_TYPE	TestFailures
UNITY_COUNTER_TYPE	TestIgnores
UNITY_COUNTER_TYPE	CurrentTestFailed
UNITY_COUNTER_TYPE	CurrentTestIgnored
jmp_buf	AbortFrame

The documentation for this struct was generated from the following file:

- [unity_internals.h](#)
-

unity_internals.h

```

1  /* =====
2   Unity Project - A Test Framework for C
3   Copyright (c) 2007-21 Mike Karlesky, Mark VanderVoord, Greg Williams
4   [Released under MIT License. Please refer to license.txt for details]
5   ===== */
6
7 #ifndef UNITY_INTERNALS_H
8 #define UNITY_INTERNALS_H
9
10 #ifdef UNITY_INCLUDE_CONFIG_H
11 #include "unity_config.h"
12#endif
13
14 #ifndef UNITY_EXCLUDE_SETJMP_H
15 #include <setjmp.h>
16#endif
17
18 #ifndef UNITY_EXCLUDE_MATH_H
19 #include <math.h>
20#endif
21
22 #ifndef UNITY_EXCLUDE_STDDEF_H
23 #include <stddef.h>
24#endif
25
26 #ifdef UNITY_INCLUDE_PRINT_FORMATTED
27 #include <stdarg.h>
28#endif
29
30 /* Unity Attempts to Auto-Detect Integer Types
31 * Attempt 1: UINT_MAX, ULONG_MAX in <limits.h>, or default to 32 bits
32 * Attempt 2: UINTPTR_MAX in <stdint.h>, or default to same size as long
33 * The user may override any of these derived constants:
34 * UNITY_INT_WIDTH, UNITY_LONG_WIDTH, UNITY_POINTER_WIDTH */
35 #ifndef UNITY_EXCLUDE_STDINT_H
36 #include <stdint.h>
37#endif
38
39 #ifndef UNITY_EXCLUDE_LIMITS_H
40 #include <limits.h>
41#endif
42
43 #if defined(__GNUC__) || defined(__clang__)
44 #define UNITY_FUNCTION_ATTR(a) __attribute__((a))
45#else
46 #define UNITY_FUNCTION_ATTR(a) /* ignore */
47#endif
48
49 #ifndef UNITY_NORETURN
50 #if defined(__cplusplus)
51     #if __cplusplus >= 201103L
52         #define UNITY_NORETURN [[ noreturn ]]
53     #endif
54     #elif defined(__STDC_VERSION__) && __STDC_VERSION__ >= 201112L
55         #include <stdnoreturn.h>
56         #define UNITY_NORETURN noreturn
57     #endif
58 #endif
59 #ifndef UNITY_NORETURN
60     #define UNITY_NORETURN UNITY_FUNCTION_ATTR(noreturn)
61#endif
62
63 /*-----
64 * Guess Widths If Not Specified
65 -----*/
66
67 /* Determine the size of an int, if not already specified.
68 * We cannot use sizeof(int), because it is not yet defined
69 * at this stage in the translation of the C program.
70 * Also sizeof(int) does return the size in addressable units on all platforms,

```

```

71 * which may not necessarily be the size in bytes.
72 * Therefore, infer it from UINT_MAX if possible. */
73 #ifndef UNITY_INT_WIDTH
74 #ifdef UINT_MAX
75     #if (UINT_MAX == 0xFFFF)
76         #define UNITY_INT_WIDTH (16)
77     #elif (UINT_MAX == 0xFFFFFFFF)
78         #define UNITY_INT_WIDTH (32)
79     #elif (UINT_MAX == 0xFFFFFFFFFFFFFFFF)
80         #define UNITY_INT_WIDTH (64)
81     #endif
82 #else /* Set to default */
83     #define UNITY_INT_WIDTH (32)
84 #endif /* UINT_MAX */
85#endif
86
87 /* Determine the size of a long, if not already specified. */
88 #ifndef UNITY_LONG_WIDTH
89 #ifdef ULONG_MAX
90     #if (ULONG_MAX == 0xFFFF)
91         #define UNITY_LONG_WIDTH (16)
92     #elif (ULONG_MAX == 0xFFFFFFFF)
93         #define UNITY_LONG_WIDTH (32)
94     #elif (ULONG_MAX == 0xFFFFFFFFFFFFFFFF)
95         #define UNITY_LONG_WIDTH (64)
96     #endif
97 #else /* Set to default */
98     #define UNITY_LONG_WIDTH (32)
99 #endif /* ULONG_MAX */
100#endif
101
102 /* Determine the size of a pointer, if not already specified. */
103 #ifndef UNITY_POINTER_WIDTH
104 #ifdef UINTPTR_MAX
105     #if (UINTPTR_MAX <= 0xFFFF)
106         #define UNITY_POINTER_WIDTH (16)
107     #elif (UINTPTR_MAX <= 0xFFFFFFFF)
108         #define UNITY_POINTER_WIDTH (32)
109     #elif (UINTPTR_MAX <= 0xFFFFFFFFFFFFFFFF)
110         #define UNITY_POINTER_WIDTH (64)
111     #endif
112 #else /* Set to default */
113     #define UNITY_POINTER_WIDTH UNITY_LONG_WIDTH
114 #endif /* UINTPTR_MAX */
115#endif
116
117 /-----
118 * Int Support (Define types based on detected sizes)
119 *-----*/
120
121 #if (UNITY_INT_WIDTH == 32)
122     typedef unsigned char    UNITY_UINT8;
123     typedef unsigned short   UNITY_UINT16;
124     typedef unsigned int     UNITY_UINT32;
125     typedef signed char     UNITY_INT8;
126     typedef signed short    UNITY_INT16;
127     typedef signed int      UNITY_INT32;
128 #elif (UNITY_INT_WIDTH == 16)
129     typedef unsigned char    UNITY_UINT8;
130     typedef unsigned int     UNITY_UINT16;
131     typedef unsigned long    UNITY_UINT32;
132     typedef signed char     UNITY_INT8;
133     typedef signed int      UNITY_INT16;
134     typedef signed long     UNITY_INT32;
135 #else
136     #error Invalid UNITY_INT_WIDTH specified! (16 or 32 are supported)
137 #endif
138
139 /-----
140 * 64-bit Support
141 *-----*/
142
143 /* Auto-detect 64 Bit Support */
144 #ifndef UNITY_SUPPORT_64
145     #if UNITY_LONG_WIDTH == 64 || UNITY_POINTER_WIDTH == 64

```

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146     #define UNITY_SUPPORT_64
147     #endif
148 #endif
149
150 /* 64-Bit Support Dependent Configuration */
151 #ifndef UNITY_SUPPORT_64
152     /* No 64-bit Support */
153     typedef UNITY_UINT32 UNITY_UINT;
154     typedef UNITY_INT32 UNITY_INT;
155     #define UNITY_MAX_NIBBLES (8) /* Maximum number of nibbles in a UNITY_(U)INT */
156 #else
157     /* 64-bit Support */
158     #if (UNITY_LONG_WIDTH == 32)
159         typedef unsigned long long UNITY_UINT64;
160         typedef signed long long UNITY_INT64;
161     #elif (UNITY_LONG_WIDTH == 64)
162         typedef unsigned long      UNITY_UINT64;
163         typedef signed long      UNITY_INT64;
164     #else
165         #error Invalid UNITY_LONG_WIDTH specified! (32 or 64 are supported)
166     #endif
167     typedef UNITY_UINT64 UNITY_UINT;
168     typedef UNITY_INT64  UNITY_INT;
169     #define UNITY_MAX_NIBBLES (16) /* Maximum number of nibbles in a UNITY_(U)INT */
170 #endif
171
172 /**
173 * Pointer Support
174 */
175
176 #if (UNITY_POINTER_WIDTH == 32)
177     #define UNITY_PTR_TO_INT UNITY_INT32
178     #define UNITY_DISPLAY_STYLE_POINTER UNITY_DISPLAY_STYLE_HEX32
179 #elif (UNITY_POINTER_WIDTH == 64)
180     #define UNITY_PTR_TO_INT UNITY_INT64
181     #define UNITY_DISPLAY_STYLE_POINTER UNITY_DISPLAY_STYLE_HEX64
182 #elif (UNITY_POINTER_WIDTH == 16)
183     #define UNITY_PTR_TO_INT UNITY_INT16
184     #define UNITY_DISPLAY_STYLE_POINTER UNITY_DISPLAY_STYLE_HEX16
185 #else
186     #error Invalid UNITY_POINTER_WIDTH specified! (16, 32 or 64 are supported)
187 #endif
188
189 #ifndef UNITY_PTR_ATTRIBUTE
190     #define UNITY_PTR_ATTRIBUTE
191 #endif
192
193 #ifndef UNITY_INTERNAL_PTR
194     #define UNITY_INTERNAL_PTR UNITY_PTR_ATTRIBUTE const void*
195 #endif
196
197 /**
198 * Float Support
199 */
200
201 #ifdef UNITY_EXCLUDE_FLOAT
202
203 /* No Floating Point Support */
204 #ifndef UNITY_EXCLUDE_DOUBLE
205 #define UNITY_EXCLUDE_DOUBLE /* Remove double when excluding float support */
206 #endif
207 #ifndef UNITY_EXCLUDE_FLOAT_PRINT
208 #define UNITY_EXCLUDE_FLOAT_PRINT
209 #endif
210
211 #else
212
213 /* Floating Point Support */
214 #ifndef UNITY_FLOAT_PRECISION
215 #define UNITY_FLOAT_PRECISION (0.00001f)
216 #endif
217 #ifndef UNITY_FLOAT_TYPE
218 #define UNITY_FLOAT_TYPE float
219 #endif
220 #typedef UNITY_FLOAT_TYPE UNITY_FLOAT;

```

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221  /* isinf & isnan macros should be provided by math.h */
222  #ifndef isinf
223  /* The value of Inf - Inf is NaN */
224  #define isinf(n) (isnan((n) - (n)) && !isnan(n))
225  #endif
226
227  #ifndef isnan
228  /* NaN is the only floating point value that does NOT equal itself.
229   * Therefore if n != n, then it is NaN. */
230  #define isnan(n) ((n != n) ? 1 : 0)
231  #endif
232
233  #endif
234
235
236  /*-----
237  * Double Float Support
238  *-----*/
239
240  /* unlike float, we DON'T include by default */
241  #if defined(UNITY_EXCLUDE_DOUBLE) || !defined(UNITY_INCLUDE_DOUBLE)
242
243  /* No Floating Point Support */
244  #ifndef UNITY_EXCLUDE_DOUBLE
245  #define UNITY_EXCLUDE_DOUBLE
246  #else
247  #undef UNITY_INCLUDE_DOUBLE
248  #endif
249
250  #ifndef UNITY_EXCLUDE_FLOAT
251  #ifndef UNITY_DOUBLE_TYPE
252  #define UNITY_DOUBLE_TYPE double
253  #endif
254  typedef UNITY_FLOAT UNITY_DOUBLE;
255  /* For parameter in UnityPrintFloat(UNITY_DOUBLE), which aliases to double or float */
256  #endif
257
258  #else
259
260  /* Double Floating Point Support */
261  #ifndef UNITY_DOUBLE_PRECISION
262  #define UNITY_DOUBLE_PRECISION (1e-12)
263  #endif
264
265  #ifndef UNITY_DOUBLE_TYPE
266  #define UNITY_DOUBLE_TYPE double
267  #endif
268  typedef UNITY_DOUBLE_TYPE UNITY_DOUBLE;
269
270 #endif
271
272  /*-----
273  * Output Method: stdout (DEFAULT)
274  *-----*/
275  #ifndef UNITY_OUTPUT_CHAR
276  /* Default to using putchar, which is defined in stdio.h */
277  #include <stdio.h>
278  #define UNITY_OUTPUT_CHAR(a) (void)putchar(a)
279  #else
280  /* If defined as something else, make sure we declare it here so it's ready for use */
281  #ifdef UNITY_OUTPUT_CHAR_HEADER_DECLARATION
282  extern void UNITY_OUTPUT_CHAR_HEADER_DECLARATION;
283  #endif
284  #endif
285
286  #ifndef UNITY_OUTPUT_FLUSH
287  #ifdef UNITY_USE_FLUSH_STDOUT
288  /* We want to use the stdout flush utility */
289  #include <stdio.h>
290  #define UNITY_OUTPUT_FLUSH() (void)fflush(stdout)
291  #else
292  /* We've specified nothing, therefore flush should just be ignored */
293  #define UNITY_OUTPUT_FLUSH()
294  #endif
295  #else

```

```

296     /* If defined as something else, make sure we declare it here so it's ready for use */
297     #ifndef UNITY_OUTPUT_FLUSH_HEADER_DECLARATION
298         extern void UNITY_OUTPUT_FLUSH_HEADER_DECLARATION;
299     #endif
300 #endif
301
302 #ifndef UNITY_OUTPUT_FLUSH
303 #define UNITY_FLUSH_CALL()
304 #else
305 #define UNITY_FLUSH_CALL() UNITY_OUTPUT_FLUSH()
306 #endif
307
308 #ifndef UNITY_PRINT_EOL
309 #define UNITY_PRINT_EOL()    UNITY_OUTPUT_CHAR('\n')
310 #endif
311
312 #ifndef UNITY_OUTPUT_START
313 #define UNITY_OUTPUT_START()
314 #endif
315
316 #ifndef UNITY_OUTPUT_COMPLETE
317 #define UNITY_OUTPUT_COMPLETE()
318 #endif
319
320 #ifdef UNITY_INCLUDE_EXEC_TIME
321     #if !defined(UNITY_EXEC_TIME_START) && \
322         !defined(UNITY_EXEC_TIME_STOP) && \
323         !defined(UNITY_PRINT_EXEC_TIME) && \
324         !defined(UNITY_TIME_TYPE)
325         /* If none any of these macros are defined then try to provide a default
326            implementation */
327
328     #if defined(UNITY_CLOCK_MS)
329         /* This is a simple way to get a default implementation on platforms that support
330            getting a millisecond counter */
331         #define UNITY_TIME_TYPE UNITY_UINT
332         #define UNITY_EXEC_TIME_START() Unity.CurrentTestStartTime = UNITY_CLOCK_MS()
333         #define UNITY_EXEC_TIME_STOP() Unity.CurrentTestStopTime = UNITY_CLOCK_MS()
334         #define UNITY_PRINT_EXEC_TIME() { \
335             UNITY_UINT execTimeMs = (Unity.CurrentTestStopTime - Unity.CurrentTestStartTime); \
336             UnityPrint(" ("); \
337             UnityPrintNumberUnsigned(execTimeMs); \
338             UnityPrint(" ms")); \
339         }
340     #elif defined(_WIN32)
341         #include <time.h>
342         #define UNITY_TIME_TYPE clock_t
343         #define UNITY_GET_TIME(t) t = (clock_t)((clock() * 1000) / CLOCKS_PER_SEC)
344         #define UNITY_EXEC_TIME_START() UNITY_GET_TIME(Unity.CurrentTestStartTime)
345         #define UNITY_EXEC_TIME_STOP() UNITY_GET_TIME(Unity.CurrentTestStopTime)
346         #define UNITY_PRINT_EXEC_TIME() { \
347             UNITY_UINT execTimeMs = (Unity.CurrentTestStopTime - Unity.CurrentTestStartTime); \
348             UnityPrint(" ("); \
349             UnityPrintNumberUnsigned(execTimeMs); \
350         }
351     #elif defined(__unix__) || defined(__APPLE__)
352         #include <time.h>
353         #define UNITY_TIME_TYPE struct timespec
354         #define UNITY_GET_TIME(t) clock_gettime(CLOCK_MONOTONIC, &t)
355         #define UNITY_EXEC_TIME_START() UNITY_GET_TIME(Unity.CurrentTestStartTime)
356         #define UNITY_EXEC_TIME_STOP() UNITY_GET_TIME(Unity.CurrentTestStopTime)
357         #define UNITY_PRINT_EXEC_TIME() { \
358             UNITY_UINT execTimeMs = ((Unity.CurrentTestStopTime.tv_sec - \
359             Unity.CurrentTestStartTime.tv_sec) * 1000L); \
360             execTimeMs += ((Unity.CurrentTestStopTime.tv_nsec - \
361             Unity.CurrentTestStartTime.tv_nsec) / 1000000L); \
362             UnityPrint(" ("); \
363             UnityPrintNumberUnsigned(execTimeMs); \
364             UnityPrint(" ms")); \
365         }
366     #endif
367 #endif
368 #endif
369

```

```

367 #ifndef UNITY_EXEC_TIME_START
368 #define UNITY_EXEC_TIME_START() do{}while(0)
369 #endif
370
371 #ifndef UNITY_EXEC_TIME_STOP
372 #define UNITY_EXEC_TIME_STOP() do{}while(0)
373 #endif
374
375 #ifndef UNITY_TIME_TYPE
376 #define UNITY_TIME_TYPE UNITY_UINT
377 #endif
378
379 #ifndef UNITY_PRINT_EXEC_TIME
380 #define UNITY_PRINT_EXEC_TIME() do{}while(0)
381 #endif
382
383 /*-----*
384 * Footprint
385 *-----*/
386
387 #ifndef UNITY_LINE_TYPE
388 #define UNITY_LINE_TYPE UNITY_UINT
389 #endif
390
391 #ifndef UNITY_COUNTER_TYPE
392 #define UNITY_COUNTER_TYPE UNITY_UINT
393 #endif
394
395 /*-----*
396 * Internal Structs Needed
397 *-----*/
398
399 typedef void (*UnityTestFunction)(void);
400
401 #define UNITY_DISPLAY_RANGE_INT (0x10)
402 #define UNITY_DISPLAY_RANGE_UINT (0x20)
403 #define UNITY_DISPLAY_RANGE_HEX (0x40)
404 #define UNITY_DISPLAY_RANGE_CHAR (0x80)
405
406 typedef enum
407 {
408     UNITY_DISPLAY_STYLE_INT      = (UNITY_INT_WIDTH / 8) + UNITY_DISPLAY_RANGE_INT,
409     UNITY_DISPLAY_STYLE_INT8     = 1 + UNITY_DISPLAY_RANGE_INT,
410     UNITY_DISPLAY_STYLE_INT16    = 2 + UNITY_DISPLAY_RANGE_INT,
411     UNITY_DISPLAY_STYLE_INT32    = 4 + UNITY_DISPLAY_RANGE_INT,
412     #ifdef UNITY_SUPPORT_64
413         UNITY_DISPLAY_STYLE_INT64 = 8 + UNITY_DISPLAY_RANGE_INT,
414     #endif
415
416     UNITY_DISPLAY_STYLE_UINT     = (UNITY_INT_WIDTH / 8) + UNITY_DISPLAY_RANGE_UINT,
417     UNITY_DISPLAY_STYLE_UINT8    = 1 + UNITY_DISPLAY_RANGE_UINT,
418     UNITY_DISPLAY_STYLE_UINT16   = 2 + UNITY_DISPLAY_RANGE_UINT,
419     UNITY_DISPLAY_STYLE_UINT32   = 4 + UNITY_DISPLAY_RANGE_UINT,
420     #ifdef UNITY_SUPPORT_64
421         UNITY_DISPLAY_STYLE_UINT64 = 8 + UNITY_DISPLAY_RANGE_UINT,
422     #endif
423
424     UNITY_DISPLAY_STYLE_HEX8     = 1 + UNITY_DISPLAY_RANGE_HEX,
425     UNITY_DISPLAY_STYLE_HEX16    = 2 + UNITY_DISPLAY_RANGE_HEX,
426     UNITY_DISPLAY_STYLE_HEX32    = 4 + UNITY_DISPLAY_RANGE_HEX,
427     #ifdef UNITY_SUPPORT_64
428         UNITY_DISPLAY_STYLE_HEX64 = 8 + UNITY_DISPLAY_RANGE_HEX,
429     #endif
430
431     UNITY_DISPLAY_STYLE_CHAR     = 1 + UNITY_DISPLAY_RANGE_CHAR + UNITY_DISPLAY_RANGE_INT,
432
433     UNITY_DISPLAY_STYLE_UNKNOWN
434 } UNITY_DISPLAY_STYLE_T;
435
436 typedef enum
437 {
438     UNITY_WITHIN      = 0x0,
439     UNITY_EQUAL_TO    = 0x1,
440     UNITY_GREATER_THAN = 0x2,
441     UNITY_GREATER_OR_EQUAL = 0x2 + UNITY_EQUAL_TO,

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442     UNITY_SMALLER_THAN      = 0x4,
443     UNITY_SMALLER_OR_EQUAL = 0x4 + UNITY_EQUAL_TO,
444     UNITY_NOT_EQUAL        = 0x0,
445     UNITY_UNKNOWN           =
446 } UNITY_COMPARISON_T;
447
448 #ifndef UNITY_EXCLUDE_FLOAT
449 typedef enum UNITY_FLOAT_TRAIT
450 {
451     UNITY_FLOAT_IS_NOT_INF      = 0,
452     UNITY_FLOAT_IS_INF,
453     UNITY_FLOAT_IS_NOT_NEG_INF,
454     UNITY_FLOAT_IS_NEG_INF,
455     UNITY_FLOAT_IS_NOT_NAN,
456     UNITY_FLOAT_IS_NAN,
457     UNITY_FLOAT_IS_NOT_DET,
458     UNITY_FLOAT_IS_DET,
459     UNITY_FLOAT_INVALID_TRAIT
460 } UNITY_FLOAT_TRAIT_T;
461 #endif
462
463 typedef enum
464 {
465     UNITY_ARRAY_TO_VAL = 0,
466     UNITY_ARRAY_TO_ARRAY,
467     UNITY_ARRAY_UNKNOWN
468 } UNITY_FLAGS_T;
469
470 struct UNITY_STORAGE_T
471 {
472     const char* TestFile;
473     const char* CurrentTestName;
474 #ifndef UNITY_EXCLUDE_DETAILS
475     const char* CurrentDetail1;
476     const char* CurrentDetail2;
477 #endif
478     UNITY_LINE_TYPE CurrentTestLineNumber;
479     UNITY_COUNTER_TYPE NumberOfTests;
480     UNITY_COUNTER_TYPE TestFailures;
481     UNITY_COUNTER_TYPE TestIgnores;
482     UNITY_COUNTER_TYPE CurrentTestFailed;
483     UNITY_COUNTER_TYPE CurrentTestIgnored;
484 #ifdef UNITY_INCLUDE_EXEC_TIME
485     UNITY_TIME_TYPE CurrentTestStartTime;
486     UNITY_TIME_TYPE CurrentTestStopTime;
487 #endif
488 #ifndef UNITY_EXCLUDE_SETJMP_H
489     jmp_buf AbortFrame;
490 #endif
491 };
492
493 extern struct UNITY_STORAGE_T Unity;
494
495 /*-----
496 * Test Suite Management
497 *-----*/
498
499 void UnityBegin(const char* filename);
500 int UnityEnd(void);
501 void UnitySetTestFile(const char* filename);
502 void UnityConcludeTest(void);
503
504 #ifndef RUN_TEST
505 void UnityDefaultTestRun(UnityTestFunction Func, const char* FuncName, const int FuncLineNum
506 #else
507 #define UNITY_SKIP_DEFAULT_RUNNER
508#endif
509
510 /*-----
511 * Details Support
512 *-----*/
513
514 #ifdef UNITY_EXCLUDE_DETAILS
515 #define UNITY_CLR_DETAILS()
516 #define UNITY_SET_DETAIL(d1)

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```
517 #define UNITY_SET_DETAILS(d1,d2)
518 #else
519 #define UNITY_CLR_DETAILS()      { Unity.CurrentDetail1 = 0;  Unity.CurrentDetail2 = 0; }
520 #define UNITY_SET_DETAIL(d1)     { Unity.CurrentDetail1 = (d1);  Unity.CurrentDetail2 = 0; }
521 #define UNITY_SET_DETAILS(d1,d2) { Unity.CurrentDetail1 = (d1);  Unity.CurrentDetail2 = (d2); }
522
523 #ifndef UNITY_DETAIL1_NAME
524 #define UNITY_DETAIL1_NAME "Function"
525 #endif
526
527 #ifndef UNITY_DETAIL2_NAME
528 #define UNITY_DETAIL2_NAME "Argument"
529 #endif
530 #endif
531
532 #ifdef UNITY_PRINT_TEST_CONTEXT
533 void UNITY_PRINT_TEST_CONTEXT(void);
534 #endif
535
536 /**
537 * Test Output
538 */
539
540 void UnityPrint(const char* string);
541
542 #ifdef UNITY_INCLUDE_PRINT_FORMATTED
543 void UnityPrintF(const UNITY_LINE_TYPE line, const char* format, ...);
544 #endif
545
546 void UnityPrintLen(const char* string, const UNITY_UINT32 length);
547 void UnityPrintMask(const UNITY_UINT mask, const UNITY_UINT number);
548 void UnityPrintNumberByStyle(const UNITY_INT number, const UNITY_DISPLAY_STYLE_T style);
549 void UnityPrintNumber(const UNITY_INT number_to_print);
550 void UnityPrintNumberUnsigned(const UNITY_UINT number);
551 void UnityPrintNumberHex(const UNITY_UINT number, const char nibbles_to_print);
552
553 #ifndef UNITY_EXCLUDE_FLOAT_PRINT
554 void UnityPrintFloat(const UNITY_DOUBLE input_number);
555 #endif
556
557 /**
558 * Test Assertion Functions
559 */
560 * Use the macros below this section instead of calling
561 * these directly. The macros have a consistent naming
562 * convention and will pull in file and line information
563 * for you. */
564
565 void UnityAssertEqualNumber(const UNITY_INT expected,
566                             const UNITY_INT actual,
567                             const char* msg,
568                             const UNITY_LINE_TYPE lineNumber,
569                             const UNITY_DISPLAY_STYLE_T style);
570
571 void UnityAssertGreaterOrLessOrEqualNumber(const UNITY_INT threshold,
572                                            const UNITY_INT actual,
573                                            const UNITY_COMPARISON_T compare,
574                                            const char *msg,
575                                            const UNITY_LINE_TYPE lineNumber,
576                                            const UNITY_DISPLAY_STYLE_T style);
577
578 void UnityAssertEqualIntArray(UNITY_INTERNAL_PTR expected,
579                             UNITY_INTERNAL_PTR actual,
580                             const UNITY_UINT32 num_elements,
581                             const char* msg,
582                             const UNITY_LINE_TYPE lineNumber,
583                             const UNITY_DISPLAY_STYLE_T style,
584                             const UNITY_FLAGS_T flags);
585
586 void UnityAssertBits(const UNITY_INT mask,
587                      const UNITY_INT expected,
588                      const UNITY_INT actual,
589                      const char* msg,
```

```

590     const UNITY_LINE_TYPE lineNumber);
591
592 void UnityAssertEqualString(const char* expected,
593                             const char* actual,
594                             const char* msg,
595                             const UNITY_LINE_TYPE lineNumber);
596
597 void UnityAssertEqualStringLen(const char* expected,
598                               const char* actual,
599                               const UNITY_UINT32 length,
600                               const char* msg,
601                               const UNITY_LINE_TYPE lineNumber);
602
603 void UnityAssertEqualStringArray(UNITY_INTERNAL_PTR expected,
604                                 const char** actual,
605                                 const UNITY_UINT32 num_elements,
606                                 const char* msg,
607                                 const UNITY_LINE_TYPE lineNumber,
608                                 const UNITY_FLAGS_T flags);
609
610 void UnityAssertEqualMemory(UNITY_INTERNAL_PTR expected,
611                            UNITY_INTERNAL_PTR actual,
612                            const UNITY_UINT32 length,
613                            const UNITY_UINT32 num_elements,
614                            const char* msg,
615                            const UNITY_LINE_TYPE lineNumber,
616                            const UNITY_FLAGS_T flags);
617
618 void UnityAssertNumbersWithin(const UNITY_UINT delta,
619                               const UNITY_INT expected,
620                               const UNITY_INT actual,
621                               const char* msg,
622                               const UNITY_LINE_TYPE lineNumber,
623                               const UNITY_DISPLAY_STYLE_T style);
624
625 void UnityAssertNumbersArrayWithin(const UNITY_UINT delta,
626                                   UNITY_INTERNAL_PTR expected,
627                                   UNITY_INTERNAL_PTR actual,
628                                   const UNITY_UINT32 num_elements,
629                                   const char* msg,
630                                   const UNITY_LINE_TYPE lineNumber,
631                                   const UNITY_DISPLAY_STYLE_T style,
632                                   const UNITY_FLAGS_T flags);
633
634 #ifndef UNITY_EXCLUDE_SETJMP_H
635 UNITY_NORETURN void UnityFail(const char* message, const UNITY_LINE_TYPE line);
636 UNITY_NORETURN void UnityIgnore(const char* message, const UNITY_LINE_TYPE line);
637 #else
638 void UnityFail(const char* message, const UNITY_LINE_TYPE line);
639 void UnityIgnore(const char* message, const UNITY_LINE_TYPE line);
640 #endif
641
642 void UnityMessage(const char* message, const UNITY_LINE_TYPE line);
643
644 #ifndef UNITY_EXCLUDE_FLOAT
645 void UnityAssertFloatsWithin(const UNITY_FLOAT delta,
646                             const UNITY_FLOAT expected,
647                             const UNITY_FLOAT actual,
648                             const char* msg,
649                             const UNITY_LINE_TYPE lineNumber);
650
651 void UnityAssertEqualFloatArray(UNITY_PTR_ATTRIBUTE const UNITY_FLOAT* expected,
652                                UNITY_PTR_ATTRIBUTE const UNITY_FLOAT* actual,
653                                const UNITY_UINT32 num_elements,
654                                const char* msg,
655                                const UNITY_LINE_TYPE lineNumber,
656                                const UNITY_FLAGS_T flags);
657
658 void UnityAssertFloatSpecial(const UNITY_FLOAT actual,
659                             const char* msg,
660                             const UNITY_LINE_TYPE lineNumber,
661                             const UNITY_FLOAT_TRAIT_T style);
662 #endif
663
664 #ifndef UNITY_EXCLUDE_DOUBLE

```

```

665 void UnityAssertDoublesWithin(const UNITY_DOUBLE delta,
666 const UNITY_DOUBLE expected,
667 const UNITY_DOUBLE actual,
668 const char* msg,
669 const UNITY_LINE_TYPE lineNumber);
670
671 void UnityAssertEqualDoubleArray(UNITY_PTR_ATTRIBUTE const UNITY_DOUBLE* expected,
672                                     UNITY_PTR_ATTRIBUTE const UNITY_DOUBLE* actual,
673                                     const UNITY_UINT32 num_elements,
674                                     const char* msg,
675                                     const UNITY_LINE_TYPE lineNumber,
676                                     const UNITY_FLAGS_T flags);
677
678 void UnityAssertDoubleSpecial(const UNITY_DOUBLE actual,
679                               const char* msg,
680                               const UNITY_LINE_TYPE lineNumber,
681                               const UNITY_FLOAT_TRAIT_T style);
682 #endif
683
684 /**
685 * Helpers
686 */
687
688 UNITY_INTERNAL_PTR UnityNumToPtr(const UNITY_INT num, const UNITY_UINT8 size);
689 #ifndef UNITY_EXCLUDE_FLOAT
690 UNITY_INTERNAL_PTR UnityFloatToPtr(const float num);
691 #endif
692 #ifndef UNITY_EXCLUDE_DOUBLE
693 UNITY_INTERNAL_PTR UnityDoubleToPtr(const double num);
694 #endif
695
696 /**
697 * Error Strings We Might Need
698 */
699
700 extern const char UnityStrOk[];
701 extern const char UnityStrPass[];
702 extern const char UnityStrFail[];
703 extern const char UnityStrIgnore[];
704
705 extern const char UnityStrErrFloat[];
706 extern const char UnityStrErrDouble[];
707 extern const char UnityStrErr64[];
708 extern const char UnityStrErrShorthand[];
709
710 /**
711 * Test Running Macros
712 */
713
714 #ifndef UNITY_EXCLUDE_SETJMP_H
715 #define TEST_PROTECT() (setjmp(Unity.AbortFrame) == 0)
716 #define TEST_ABORT() longjmp(Unity.AbortFrame, 1)
717 #else
718 #define TEST_PROTECT() 1
719 #define TEST_ABORT() return
720 #endif
721
722 /* This tricky series of macros gives us an optional line argument to treat it as
723 RUN_TEST(func, num=__LINE__)
724 #ifndef RUN_TEST
725 #ifdef __STDC_VERSION__
726 #if __STDC_VERSION__ >= 199901L
727 #define UNITY_SUPPORT_VARIADIC_MACROS
728 #endif
729 #endif
730 #define RUN_TEST(...) RUN_TEST_AT_LINE(__VA_ARGS__, __LINE__, throwaway)
731 #define RUN_TEST_AT_LINE(func, line, ...) UnityDefaultTestRun(func, #func, line)
732 #endif
733 #endif
734
735 /* If we can't do the tricky version, we'll just have to require them to always include the
736 line number */
737 #ifndef RUN_TEST
738 #ifdef CMOCK

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738 #define RUN_TEST(func, num) UnityDefaultTestRun(func, #func, num)
739 #else
740 #define RUN_TEST(func) UnityDefaultTestRun(func, #func, __LINE__)
741 #endif
742 #endif
743
744 #define TEST_LINE_NUM (Unity.CurrentTestLineNumber)
745 #define TEST_IS_IGNORED (Unity.CurrentTestIgnored)
746 #define UNITY_NEW_TEST(a) \
747     Unity.CurrentTestName = (a); \
748     Unity.CurrentTestLineNumber = (UNITY_LINE_TYPE)(__LINE__); \
749     Unity.NumberOfTests++;
750
751 #ifndef UNITY_BEGIN
752 #define UNITY_BEGIN() UnityBegin(__FILE__)
753 #endif
754
755 #ifndef UNITY_END
756 #define UNITY_END() UnityEnd()
757 #endif
758
759 #ifndef UNITY_SHORTHAND_AS_INT
760 #ifndef UNITY_SHORTHAND_AS_MEM
761 #ifndef UNITY_SHORTHAND_AS_NONE
762 #ifndef UNITY_SHORTHAND_AS_RAW
763 #define UNITY_SHORTHAND_AS_OLD
764 #endif
765 #endif
766 #endif
767 #endif
768
769 /*-----*
770 * Command Line Argument Support
771 *-----*/
772
773 #ifdef UNITY_USE_COMMAND_LINE_ARGS
774 int UnityParseOptions(int argc, char** argv);
775 int UnityTestMatches(void);
776#endif
777
778 /*-----*
779 * Basic Fail and Ignore
780 *-----*/
781
782 #define UNITY_TEST_FAIL(line, message) UnityFail( (message), (UNITY_LINE_TYPE)(line))
783 #define UNITY_TEST_IGNORE(line, message) UnityIgnore( (message), (UNITY_LINE_TYPE)(line))
784
785 /*-----*
786 * Test Asserts
787 *-----*/
788
789 #define UNITY_TEST_ASSERT(condition, line, message)
790 do {if (condition) {} else {UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), (message));}} while(0)
791 #define UNITY_TEST_ASSERT_NULL(pointer, line, message)
792 UNITY_TEST_ASSERT((pointer) == NULL, (UNITY_LINE_TYPE)(line), (message))
793 #define UNITY_TEST_ASSERT_NOT_NULL(pointer, line, message)
794 UNITY_TEST_ASSERT((pointer) != NULL, (UNITY_LINE_TYPE)(line), (message))
795 #define UNITY_TEST_ASSERT_EMPTY(pointer, line, message)
796 UNITY_TEST_ASSERT((pointer[0]) == 0, (UNITY_LINE_TYPE)(line), (message))
797 #define UNITY_TEST_ASSERT_NOT_EMPTY(pointer, line, message)
798 UNITY_TEST_ASSERT((pointer[0]) != 0, (UNITY_LINE_TYPE)(line), (message))
799
800 #define UNITY_TEST_ASSERT_EQUAL_INT(expected, actual, line, message)
801 UnityAssertEqualNumber((UNITY_INT)(expected), (UNITY_INT)(actual), (message),
802 (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT)
803 #define UNITY_TEST_ASSERT_EQUAL_INT8(expected, actual, line, message)
804 UnityAssertEqualNumber((UNITY_INT)(UNITY_INT8 )(expected), (UNITY_INT)(UNITY_INT8 )
805 (actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT8)
806 #define UNITY_TEST_ASSERT_EQUAL_INT16(expected, actual, line, message)
807 UnityAssertEqualNumber((UNITY_INT)(UNITY_INT16)(expected), (UNITY_INT)(UNITY_INT16)
808 (actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT16)
809 #define UNITY_TEST_ASSERT_EQUAL_INT32(expected, actual, line, message)
810 UnityAssertEqualNumber((UNITY_INT)(UNITY_INT32)(expected), (UNITY_INT)(UNITY_INT32)
811 (actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT32)

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799 #define UNITY_TEST_ASSERT_EQUAL_UINT(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT)
800 #define UNITY_TEST_ASSERT_EQUAL_UINT8(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_UINT8 )(expected), (UNITY_INT)(UNITY_UINT8 )
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT8)
801 #define UNITY_TEST_ASSERT_EQUAL_UINT16(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_UINT16)(expected), (UNITY_INT)(UNITY_UINT16)
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT16)
802 #define UNITY_TEST_ASSERT_EQUAL_UINT32(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_UINT32)(expected), (UNITY_INT)(UNITY_UINT32)
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT32)
803 #define UNITY_TEST_ASSERT_EQUAL_HEX8(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_INT8 )(expected), (UNITY_INT)(UNITY_INT8 )
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX8)
804 #define UNITY_TEST_ASSERT_EQUAL_HEX16(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_INT16)(expected), (UNITY_INT)(UNITY_INT16)
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX16)
805 #define UNITY_TEST_ASSERT_EQUAL_HEX32(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_INT32)(expected), (UNITY_INT)(UNITY_INT32)
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX32)
806 #define UNITY_TEST_ASSERT_EQUAL_CHAR(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(UNITY_INT8 )(expected), (UNITY_INT)(UNITY_INT8 )
(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_CHAR)
807 #define UNITY_TEST_ASSERT_BITS(mask, expected, actual, line, message)
UnityAssertBits((UNITY_INT)(mask), (UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line))
808
809 #define UNITY_TEST_ASSERT_NOT_EQUAL_INT(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold),
(UNITY_INT)
(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
810 #define UNITY_TEST_ASSERT_NOT_EQUAL_INT8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold),
(UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
811 #define UNITY_TEST_ASSERT_NOT_EQUAL_INT16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold),
(UNITY_INT)
(UNITY_UINT16)(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
812 #define UNITY_TEST_ASSERT_NOT_EQUAL_INT32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold),
(UNITY_INT)
(UNITY_UINT32)(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
813 #define UNITY_TEST_ASSERT_NOT_EQUAL_UINT(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold),
(UNITY_INT)
(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
814 #define UNITY_TEST_ASSERT_NOT_EQUAL_UINT8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold),
(UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
815 #define UNITY_TEST_ASSERT_NOT_EQUAL_UINT16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold),
(UNITY_INT)
(UNITY_UINT16)(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
816 #define UNITY_TEST_ASSERT_NOT_EQUAL_UINT32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold),
(UNITY_INT)
(UNITY_UINT32)(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
817 #define UNITY_TEST_ASSERT_NOT_EQUAL_HEX8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold),
(UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
818 #define UNITY_TEST_ASSERT_NOT_EQUAL_HEX16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold),
(UNITY_INT)
(UNITY_UINT16)(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
819 #define UNITY_TEST_ASSERT_NOT_EQUAL_HEX32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold),
(UNITY_INT)
(UNITY_UINT32)(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
820 #define UNITY_TEST_ASSERT_NOT_EQUAL_CHAR(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold),
(UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_S
821
822 #define UNITY_TEST_ASSERT_GREATER_THAN_INT(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold),
(UNITY_INT)
(actual), UNITY_GREATER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY
823 #define UNITY_TEST_ASSERT_GREATER_THAN_INT8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold),
(UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_GREATER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY
824 #define UNITY_TEST_ASSERT_GREATER_THAN_INT16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold),
(UNITY_INT)
(UNITY_UINT16)(actual), UNITY_GREATER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY

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851 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_INT32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_INT32)(threshold), (UNITY_INT)
(UNITY_INT32)(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
852 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_UINT(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT) (threshold), (UNITY_INT)
(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UI
853 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_UINT8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold), (UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
854 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_UINT16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold), (UNITY_INT)
(UNITY_UINT16)(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
855 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_UINT32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold), (UNITY_INT)
(UNITY_UINT32)(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
856 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_HEX8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold), (UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
857 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_HEX16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold), (UNITY_INT)
(UNITY_UINT16)(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
858 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_HEX32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold), (UNITY_INT)
(UNITY_UINT32)(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
859 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_CHAR(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_INT8 )(threshold), (UNITY_INT)
(UNITY_INT8 )(actual), UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
860
861 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_INT(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT) (threshold), (UNITY_INT)
(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_IN
862 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_INT8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_INT8 )(threshold), (UNITY_INT)
(UNITY_INT8 )(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
863 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_INT16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_INT16)(threshold), (UNITY_INT)
(UNITY_INT16)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
864 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_INT32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_INT32)(threshold), (UNITY_INT)
(UNITY_INT32)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
865 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_UINT(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT) (threshold), (UNITY_INT)
(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UI
866 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_UINT8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold), (UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
867 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_UINT16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold), (UNITY_INT)
(UNITY_UINT16)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
868 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_UINT32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold), (UNITY_INT)
(UNITY_UINT32)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
869 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_HEX8(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT8 )(threshold), (UNITY_INT)
(UNITY_UINT8 )(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
870 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_HEX16(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT16)(threshold), (UNITY_INT)
(UNITY_UINT16)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
871 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_HEX32(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_UINT32)(threshold), (UNITY_INT)
(UNITY_UINT32)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
872 #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_CHAR(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(UNITY_INT8 )(threshold), (UNITY_INT)
(UNITY_INT8 )(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DI
873
874 #define UNITY_TEST_ASSERT_INT_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin( (delta), (UNITY_INT)
(expected), (UNITY_INT) (actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT)
875 #define UNITY_TEST_ASSERT_INT8_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT8 )(delta), (UNITY_INT)(UNITY_INT8 )
(expected), (UNITY_INT)(UNITY_INT8 ) (actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT8)
876 #define UNITY_TEST_ASSERT_INT16_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT16)(delta), (UNITY_INT)(UNITY_INT16)

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(expected), (UNITY_INT)(UNITY_INT16)           (actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT16)
877 #define UNITY_TEST_ASSERT_INT32_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT32)(delta), (UNITY_INT)(UNITY_INT32)
(expected), (UNITY_INT)(UNITY_INT32)           (actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT32)
878 #define UNITY_TEST_ASSERT_UINT_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((delta), (UNITY_INT)
(expected), (UNITY_INT)           (actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT)
879 #define UNITY_TEST_ASSERT_UINT8_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT8 )(delta), (UNITY_INT)(UNITY_UINT)(UNITY_UINT8 )
(expected), (UNITY_INT)(UNITY_UINT)(UNITY_UINT8 )(actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT8)
880 #define UNITY_TEST_ASSERT_UINT16_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT16)(delta), (UNITY_INT)(UNITY_UINT)(UNITY_UINT16)
(expected), (UNITY_INT)(UNITY_UINT)(UNITY_UINT16)(actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT16)
881 #define UNITY_TEST_ASSERT_UINT32_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT32)(delta), (UNITY_INT)(UNITY_UINT)(UNITY_UINT32)
(expected), (UNITY_INT)(UNITY_UINT)(UNITY_UINT32)(actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT32)
882 #define UNITY_TEST_ASSERT_HEX8_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT8 )(delta), (UNITY_INT)(UNITY_UINT)(UNITY_UINT8 )
(expected), (UNITY_INT)(UNITY_UINT)(UNITY_UINT8 )(actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX8)
883 #define UNITY_TEST_ASSERT_HEX16_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT16)(delta), (UNITY_INT)(UNITY_UINT)(UNITY_UINT16)
(expected), (UNITY_INT)(UNITY_UINT)(UNITY_UINT16)(actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX16)
884 #define UNITY_TEST_ASSERT_HEX32_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT32)(delta), (UNITY_INT)(UNITY_UINT)(UNITY_UINT32)
(expected), (UNITY_INT)(UNITY_UINT)(UNITY_UINT32)(actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX32)
885 #define UNITY_TEST_ASSERT_CHAR_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((UNITY_UINT8 )(delta), (UNITY_INT)(UNITY_INT8 )
(expected), (UNITY_INT)(UNITY_INT8 )           (actual), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_CHAR)

886
887 #define UNITY_TEST_ASSERT_INT_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)   UnityAssertNumbersArrayWithin(           (delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT, UNITY_ARRAY_TO_ARRAY)
888 #define UNITY_TEST_ASSERT_INT8_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT8 )(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT8, UNITY_ARRAY_TO_ARRAY)
889 #define UNITY_TEST_ASSERT_INT16_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT16)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT16, UNITY_ARRAY_TO_ARRAY)
890 #define UNITY_TEST_ASSERT_INT32_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT32)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT32, UNITY_ARRAY_TO_ARRAY)
891 #define UNITY_TEST_ASSERT_UINT_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin(           (delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT, UNITY_ARRAY_TO_ARRAY)
892 #define UNITY_TEST_ASSERT_UINT8_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT16)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT8, UNITY_ARRAY_TO_ARRAY)
893 #define UNITY_TEST_ASSERT_UINT16_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT16)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT16, UNITY_ARRAY_TO_ARRAY)
894 #define UNITY_TEST_ASSERT_UINT32_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT32)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT32, UNITY_ARRAY_TO_ARRAY)
895 #define UNITY_TEST_ASSERT_HEX8_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message)  UnityAssertNumbersArrayWithin((UNITY_UINT8 )(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX8, UNITY_ARRAY_TO_ARRAY)

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896 #define UNITY_TEST_ASSERT_HEX16_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message) UnityAssertNumbersArrayWithin((UNITY_UINT16)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX16, UNITY_ARRAY_TO_ARRAY)
897 #define UNITY_TEST_ASSERT_HEX32_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message) UnityAssertNumbersArrayWithin((UNITY_UINT32)(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX32, UNITY_ARRAY_TO_ARRAY)
898 #define UNITY_TEST_ASSERT_CHAR_ARRAY_WITHIN(delta, expected, actual, num_elements, line,
message) UnityAssertNumbersArrayWithin((UNITY_UINT8 )(delta), (UNITY_INTERNAL_PTR)
(expected), (UNITY_INTERNAL_PTR)(actual), ((UNITY_UINT32)(num_elements)), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_CHAR, UNITY_ARRAY_TO_ARRAY)
899
900
901 #define UNITY_TEST_ASSERT_EQUAL_PTR(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_PTR_TO_INT)(expected), (UNITY_PTR_TO_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_POINTER)
902 #define UNITY_TEST_ASSERT_EQUAL_STRING(expected, actual, line, message)
UnityAssertEqualString((const char*)(expected), (const char*)(actual), (message),
(UNITY_LINE_TYPE)(line))
903 #define UNITY_TEST_ASSERT_EQUAL_STRING_LEN(expected, actual, len, line, message)
UnityAssertEqualStringLen((const char*)(expected), (const char*)(actual), (UNITY_UINT32)
(len), (message), (UNITY_LINE_TYPE)(line))
904 #define UNITY_TEST_ASSERT_EQUAL_MEMORY(expected, actual, len, line, message)
UnityAssertEqualMemory((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(len), 1, (message), (UNITY_LINE_TYPE)(line), UNITY_ARRAY_TO_ARRAY)
905
906 #define UNITY_TEST_ASSERT_EQUAL_INT_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT,
UNITY_ARRAY_TO_ARRAY)
907 #define UNITY_TEST_ASSERT_EQUAL_INT8_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT8,
UNITY_ARRAY_TO_ARRAY)
908 #define UNITY_TEST_ASSERT_EQUAL_INT16_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_INT16, UNITY_ARRAY_TO_ARRAY)
909 #define UNITY_TEST_ASSERT_EQUAL_INT32_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_INT32, UNITY_ARRAY_TO_ARRAY)
910 #define UNITY_TEST_ASSERT_EQUAL_UINT_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT,
UNITY_ARRAY_TO_ARRAY)
911 #define UNITY_TEST_ASSERT_EQUAL_UINT8_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_UINT8, UNITY_ARRAY_TO_ARRAY)
912 #define UNITY_TEST_ASSERT_EQUAL_UINT16_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_UINT16, UNITY_ARRAY_TO_ARRAY)
913 #define UNITY_TEST_ASSERT_EQUAL_UINT32_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_UINT32, UNITY_ARRAY_TO_ARRAY)
914 #define UNITY_TEST_ASSERT_EQUAL_HEX8_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX8,
UNITY_ARRAY_TO_ARRAY)
915 #define UNITY_TEST_ASSERT_EQUAL_HEX16_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_HEX16, UNITY_ARRAY_TO_ARRAY)
916 #define UNITY_TEST_ASSERT_EQUAL_HEX32_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_HEX32, UNITY_ARRAY_TO_ARRAY)
917 #define UNITY_TEST_ASSERT_EQUAL_PTR_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_POINTER, UNITY_ARRAY_TO_ARRAY)

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918 #define UNITY_TEST_ASSERT_EQUAL_STRING_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualStringArray((UNITY_INTERNAL_PTR)(expected), (const char**)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_ARRAY_TO_ARRAY)
919 #define UNITY_TEST_ASSERT_EQUAL_MEMORY_ARRAY(expected, actual, len, num_elements, line,
message) UnityAssertEqualMemory((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)
(actual), (UNITY_UINT32)(len), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_ARRAY_TO_ARRAY)
920 #define UNITY_TEST_ASSERT_EQUAL_CHAR_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_CHAR,
UNITY_ARRAY_TO_ARRAY)
921
922 #define UNITY_TEST_ASSERT_EACH_EQUAL_INT(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT) (expected),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)
(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT,
UNITY_ARRAY_TO_VAL))
923 #define UNITY_TEST_ASSERT_EACH_EQUAL_INT8(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT8 ) (expected), 1),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT8, UNITY_ARRAY_TO_VAL)
924 #define UNITY_TEST_ASSERT_EACH_EQUAL_INT16(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT16 ) (expected), 2),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT16, UNITY_ARRAY_TO_VAL)
925 #define UNITY_TEST_ASSERT_EACH_EQUAL_INT32(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT32 ) (expected), 4),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT32, UNITY_ARRAY_TO_VAL)
926 #define UNITY_TEST_ASSERT_EACH_EQUAL_UINT(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT) (expected),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)
(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT,
UNITY_ARRAY_TO_VAL))
927 #define UNITY_TEST_ASSERT_EACH_EQUAL_UINT8(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_UINT8 ) (expected), 1),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT8, UNITY_ARRAY_TO_VAL)
928 #define UNITY_TEST_ASSERT_EACH_EQUAL_UINT16(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_UINT16) (expected), 2),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT16, UNITY_ARRAY_TO_VAL)
929 #define UNITY_TEST_ASSERT_EACH_EQUAL_UINT32(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_UINT32) (expected), 4),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT32, UNITY_ARRAY_TO_VAL)
930 #define UNITY_TEST_ASSERT_EACH_EQUAL_HEX8(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT8 ) (expected), 1),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX8, UNITY_ARRAY_TO_VAL)
931 #define UNITY_TEST_ASSERT_EACH_EQUAL_HEX16(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT16 ) (expected), 2),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX16, UNITY_ARRAY_TO_VAL)
932 #define UNITY_TEST_ASSERT_EACH_EQUAL_HEX32(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT32 ) (expected), 4),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX32, UNITY_ARRAY_TO_VAL)
933 #define UNITY_TEST_ASSERT_EACH_EQUAL_PTR(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_PTR_TO_INT) (expected),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)
(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_POINTER,
UNITY_ARRAY_TO_VAL))
934 #define UNITY_TEST_ASSERT_EACH_EQUAL_STRING(expected, actual, num_elements, line, message)
UnityAssertEqualStringArray((UNITY_INTERNAL_PTR)(expected), (const char**)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_ARRAY_TO_VAL)
935 #define UNITY_TEST_ASSERT_EACH_EQUAL_MEMORY(expected, actual, len, num_elements, line,
message) UnityAssertEqualMemory((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)
(actual), (UNITY_UINT32)(len), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_ARRAY_TO_VAL)
936 #define UNITY_TEST_ASSERT_EACH_EQUAL_CHAR(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT8 ) (expected), 1),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_CHAR, UNITY_ARRAY_TO_VAL)
937
938 #ifdef UNITY_SUPPORT_64
939 #define UNITY_TEST_ASSERT_EQUAL_INT64(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(expected), (UNITY_INT)(actual), (message),

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(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
940 #define UNITY_TEST_ASSERT_EQUAL_UINT64(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
941 #define UNITY_TEST_ASSERT_EQUAL_HEX64(expected, actual, line, message)
UnityAssertEqualNumber((UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64)
942 #define UNITY_TEST_ASSERT_EQUAL_INT64_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_INT64, UNITY_ARRAY_TO_ARRAY)
943 #define UNITY_TEST_ASSERT_EQUAL_UINT64_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_UINT64, UNITY_ARRAY_TO_ARRAY)
944 #define UNITY_TEST_ASSERT_EQUAL_HEX64_ARRAY(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray((UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual),
(UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line),
UNITY_DISPLAY_STYLE_HEX64, UNITY_ARRAY_TO_ARRAY)
945 #define UNITY_TEST_ASSERT_EACH_EQUAL_INT64(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT64)(expected), 8),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_INT64, UNITY_ARRAY_TO_VAL)
946 #define UNITY_TEST_ASSERT_EACH_EQUAL_UINT64(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_UINT64)(expected), 8),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_UINT64, UNITY_ARRAY_TO_VAL)
947 #define UNITY_TEST_ASSERT_EACH_EQUAL_HEX64(expected, actual, num_elements, line, message)
UnityAssertEqualIntArray(UnityNumToPtr((UNITY_INT)(UNITY_INT64)(expected), 8),
(UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)
(line), UNITY_DISPLAY_STYLE_HEX64, UNITY_ARRAY_TO_VAL)
948 #define UNITY_TEST_ASSERT_INT64_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((delta), (UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64)
949 #define UNITY_TEST_ASSERT_UINT64_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((delta), (UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
950 #define UNITY_TEST_ASSERT_HEX64_WITHIN(delta, expected, actual, line, message)
UnityAssertNumbersWithin((delta), (UNITY_INT)(expected), (UNITY_INT)(actual), (message),
(UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64)
951 #define UNITY_TEST_ASSERT_NOT_EQUAL_INT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64)
952 #define UNITY_TEST_ASSERT_NOT_EQUAL_UINT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
953 #define UNITY_TEST_ASSERT_NOT_EQUAL_HEX64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_NOT_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64)
954 #define UNITY_TEST_ASSERT_GREATER_THAN_INT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_GREATER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64)
955 #define UNITY_TEST_ASSERT_GREATER_THAN_UINT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_GREATER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
956 #define UNITY_TEST_ASSERT_GREATER_THAN_HEX64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_GREATER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64)
957 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_INT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64)
958 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_UINT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
959 #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_HEX64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_GREATER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64)
960 #define UNITY_TEST_ASSERT_SMALLER_THAN_INT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_SMALLER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64)
961 #define UNITY_TEST_ASSERT_SMALLER_THAN_UINT64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),
UNITY_SMALLER_THAN, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
962 #define UNITY_TEST_ASSERT_SMALLER_THAN_HEX64(threshold, actual, line, message)
UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual),

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963 | #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_INT64(threshold, actual, line, message) UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64)
964 | #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_UINT64(threshold, actual, line, message) UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64)
965 | #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_HEX64(threshold, actual, line, message) UnityAssertGreaterOrLessOrEqualNumber((UNITY_INT)(threshold), (UNITY_INT)(actual), UNITY_SMALLER_OR_EQUAL, (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64)
966 | #define UNITY_TEST_ASSERT_INT64_ARRAY_WITHIN(delta, expected, actual, num_elements, line, message) UnityAssertNumbersArrayWithin((UNITY_UINT64)(delta), (UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_INT64, UNITY_ARRAY_TO_ARRAY)
967 | #define UNITY_TEST_ASSERT_UINT64_ARRAY_WITHIN(delta, expected, actual, num_elements, line, message) UnityAssertNumbersArrayWithin((UNITY_UINT64)(delta), (UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_UINT64, UNITY_ARRAY_TO_ARRAY)
968 | #define UNITY_TEST_ASSERT_HEX64_ARRAY_WITHIN(delta, expected, actual, num_elements, line, message) UnityAssertNumbersArrayWithin((UNITY_UINT64)(delta), (UNITY_INTERNAL_PTR)(expected), (UNITY_INTERNAL_PTR)(actual), (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_DISPLAY_STYLE_HEX64, UNITY_ARRAY_TO_ARRAY)
969 | #else
970 | #define UNITY_TEST_ASSERT_EQUAL_INT64(expected, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
971 | #define UNITY_TEST_ASSERT_EQUAL_UINT64(expected, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
972 | #define UNITY_TEST_ASSERT_EQUAL_HEX64(expected, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
973 | #define UNITY_TEST_ASSERT_EQUAL_INT64_ARRAY(expected, actual, num_elements, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
974 | #define UNITY_TEST_ASSERT_EQUAL_UINT64_ARRAY(expected, actual, num_elements, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
975 | #define UNITY_TEST_ASSERT_EQUAL_HEX64_ARRAY(expected, actual, num_elements, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
976 | #define UNITY_TEST_ASSERT_INT64_WITHIN(delta, expected, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
977 | #define UNITY_TEST_ASSERT_UINT64_WITHIN(delta, expected, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
978 | #define UNITY_TEST_ASSERT_HEX64_WITHIN(delta, expected, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
979 | #define UNITY_TEST_ASSERT_GREATER_THAN_INT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
980 | #define UNITY_TEST_ASSERT_GREATER_THAN_UINT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
981 | #define UNITY_TEST_ASSERT_GREATER_THAN_HEX64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
982 | #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_INT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
983 | #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_UINT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
984 | #define UNITY_TEST_ASSERT_GREATER_OR_EQUAL_HEX64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
985 | #define UNITY_TEST_ASSERT_SMALLER_THAN_INT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
986 | #define UNITY_TEST_ASSERT_SMALLER_THAN_UINT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
987 | #define UNITY_TEST_ASSERT_SMALLER_THAN_HEX64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
988 | #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_INT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
989 | #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_UINT64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
990 | #define UNITY_TEST_ASSERT_SMALLER_OR_EQUAL_HEX64(threshold, actual, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
991 | #define UNITY_TEST_ASSERT_INT64_ARRAY_WITHIN(delta, expected, actual, num_elements, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
992 | #define UNITY_TEST_ASSERT_UINT64_ARRAY_WITHIN(delta, expected, actual, num_elements, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
993 | #define UNITY_TEST_ASSERT_HEX64_ARRAY_WITHIN(delta, expected, actual, num_elements, line, message) UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErr64)
994 | #endif
995
996 #ifdef UNITY_EXCLUDE_FLOAT

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997 #define UNITY_TEST_ASSERT_FLOAT_WITHIN(delta, expected, actual, line, message)
998 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
999 #define UNITY_TEST_ASSERT_EQUAL_FLOAT(expected, actual, line, message)
1000 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1000 #define UNITY_TEST_ASSERT_EQUAL_FLOAT_ARRAY(expected, actual, num_elements, line, message)
1001 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1001 #define UNITY_TEST_ASSERT_FLOAT_IS_INF(actual, line, message)
1002 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1002 #define UNITY_TEST_ASSERT_FLOAT_IS_NEG_INF(actual, line, message)
1003 #define UNITY_TEST_ASSERT_FLOAT_IS_NAN(actual, line, message)
1004 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1004 #define UNITY_TEST_ASSERT_FLOAT_IS_DETERMINATE(actual, line, message)
1005 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1005 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_INF(actual, line, message)
1006 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1006 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_NEG_INF(actual, line, message)
1007 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1007 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_NAN(actual, line, message)
1008 #define UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrFloat)
1008 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_DETERMINATE(actual, line, message)
1009 #else
1010 #define UNITY_TEST_ASSERT_FLOAT_WITHIN(delta, expected, actual, line, message)
1010 UnityAssertFloatsWithin((UNITY_FLOAT)(delta), (UNITY_FLOAT)(expected), (UNITY_FLOAT)
1011 #define UNITY_TEST_ASSERT_EQUAL_FLOAT(expected, actual, line, message)
1011 UNITY_TEST_ASSERT_FLOAT_WITHIN((UNITY_FLOAT)(expected) *
1011 (UNITY_FLOAT)UNITY_FLOAT_PRECISION, (UNITY_FLOAT)(expected), (UNITY_FLOAT)(actual),
1012 #define UNITY_TEST_ASSERT_EQUAL_FLOAT_ARRAY(expected, actual, num_elements, line, message)
1012 UnityAssertEqualFloatArray((UNITY_FLOAT*)(expected), (UNITY_FLOAT*)(actual), (UNITY_UINT32)
1013 #define UNITY_TEST_ASSERT_EACH_EQUAL_FLOAT(expected, actual, num_elements, line, message)
1013 UnityAssertEqualFloatArray(UnityFloatToPtr(expected), (UNITY_FLOAT*)(actual),
1014 #define UNITY_TEST_ASSERT_FLOAT_IS_INF(actual, line, message)
1014 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1015 #define UNITY_TEST_ASSERT_FLOAT_IS_NEG_INF(actual, line, message)
1015 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1016 #define UNITY_TEST_ASSERT_FLOAT_IS_NAN(actual, line, message)
1016 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1017 #define UNITY_TEST_ASSERT_FLOAT_IS_DETERMINATE(actual, line, message)
1017 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1018 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_INF(actual, line, message)
1018 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1019 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_NEG_INF(actual, line, message)
1019 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1020 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_NAN(actual, line, message)
1020 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1021 #define UNITY_TEST_ASSERT_FLOAT_IS_NOT_DETERMINATE(actual, line, message)
1021 UnityAssertFloatSpecial((UNITY_FLOAT)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_FLOAT)
1022 #endif
1023
1024 #ifdef UNITY_EXCLUDE_DOUBLE
1025 #define UNITY_TEST_ASSERT_DOUBLE_WITHIN(delta, expected, actual, line, message)
1025 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1026 #define UNITY_TEST_ASSERT_EQUAL_DOUBLE(expected, actual, line, message)
1026 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1027 #define UNITY_TEST_ASSERT_EQUAL_DOUBLE_ARRAY(expected, actual, num_elements, line, message)
1027 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1028 #define UNITY_TEST_ASSERT_EACH_EQUAL_DOUBLE(expected, actual, num_elements, line, message)
1028 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1029 #define UNITY_TEST_ASSERT_DOUBLE_IS_INF(actual, line, message)
1029 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1030 #define UNITY_TEST_ASSERT_DOUBLE_IS_NEG_INF(actual, line, message)
1030 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1031 #define UNITY_TEST_ASSERT_DOUBLE_IS_NAN(actual, line, message)
1031 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1032 #define UNITY_TEST_ASSERT_DOUBLE_IS_DETERMINATE(actual, line, message)
1032 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1033 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_INF(actual, line, message)
1033 UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)

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1034 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_NEG_INF(actual, line, message)
    UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1035 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_NAN(actual, line, message)
    UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1036 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_DETERMINATE(actual, line, message)
    UNITY_TEST_FAIL((UNITY_LINE_TYPE)(line), UnityStrErrDouble)
1037 #else
1038 #define UNITY_TEST_ASSERT_DOUBLE_WITHIN(delta, expected, actual, line, message)
    UnityAssertDoublesWithin((UNITY_DOUBLE)(delta), (UNITY_DOUBLE)(expected), (UNITY_DOUBLE)
        (actual), (message), (UNITY_LINE_TYPE)(line))
1039 #define UNITY_TEST_ASSERT_EQUAL_DOUBLE(expected, actual, line, message)
    UNITY_TEST_ASSERT_DOUBLE_WITHIN((UNITY_DOUBLE)(expected) *
        (UNITY_DOUBLE)UNITY_DOUBLE_PRECISION, (UNITY_DOUBLE)(expected), (UNITY_DOUBLE)(actual),
        (UNITY_LINE_TYPE)(line), (message))
1040 #define UNITY_TEST_ASSERT_EQUAL_DOUBLE_ARRAY(expected, actual, num_elements, line, message)
    UnityAssertEqualDoubleArray((UNITY_DOUBLE*)(expected), (UNITY_DOUBLE*)(actual),
        (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_ARRAY_TO_ARRAY)
1041 #define UNITY_TEST_ASSERT_EACH_EQUAL_DOUBLE(expected, actual, num_elements, line, message)
    UnityAssertEqualDoubleArray(UnityDoubleToPtr(expected), (UNITY_DOUBLE*)(actual),
        (UNITY_UINT32)(num_elements), (message), (UNITY_LINE_TYPE)(line), UNITY_ARRAY_TO_VAL)
1042 #define UNITY_TEST_ASSERT_DOUBLE_IS_INF(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1043 #define UNITY_TEST_ASSERT_DOUBLE_IS_NEG_INF(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1044 #define UNITY_TEST_ASSERT_DOUBLE_IS_NAN(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1045 #define UNITY_TEST_ASSERT_DOUBLE_IS_DETERMINATE(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1046 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_INF(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1047 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_NEG_INF(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1048 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_NAN(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1049 #define UNITY_TEST_ASSERT_DOUBLE_IS_NOT_DETERMINATE(actual, line, message)
    UnityAssertDoubleSpecial((UNITY_DOUBLE)(actual), (message), (UNITY_LINE_TYPE)(line), UNITY_F)
1050 #endif
1051
1052 /* End of UNITY_INTERNALS_H */
1053 #endif

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