tcl for synopsys

这个tcl是只用于snps的tcl环境，其它家可能不能用。

1. filter expression

1.1 表达式匹配 expression

```
get_cells * -filter "full_name =~ *abc*"
#这个例子是获取full_name与*abc*相匹配的cells
```

filter可以使用如下的表达式

Syntax	Operator description	Supported types
a<b	1 if a is less than b, 0 otherwise	float, integer, string
a>b	1 if a is greater than b, 0 otherwise	float, integer, string
a<=b	1 if a is less than or equal to b, 0 otherwise	float, integer, string
a>=b	1 if a is greater than or equal to b, 0 otherwise	float, integer, string
a==b	1 if a is equal to b, 0 otherwise	float, integer, string, Boolean
a!=b	1 if a is not equal to b, 0 otherwise	float, integer, string, Boolean
a=~b	1 if a pattern-matches b, 0 otherwise[1]	string
a!~b	1 if a does not pattern-match b, 0 otherwise[1]	string

1. Pattern is anchored at both ends of "a". Glob-style pattern matching is used by default; use the `-regexp` option of the command to use regular-expression pattern matching instead.

1.2 attribute function match

```
get_cells * -filter "defined(full_name)"
#这个例子是获取所有define了full_name属性的cells
```

Function syntax	Result description	Return type
defined(*attribute*)	`true` if *attribute* is defined, `false` otherwise	Boolean
undefined(*attribute*)	`true` if *attribute* is not defined, `false` otherwise	Boolean
sizeof(*attribute*)	The number of objects in the collection returned by *attribute* (requires that *attribute* returns a collection)	integer

2. lsc

```
set fp [open "abc.log" w];

foreach_in_collection tmp [get_pins -hierarchical *Q] {
    set tt [get_attribute [get_pins $tmp] FULL_NAME];
    puts $fp $tt;
}

close $fp;
```

3. cc

```
list get_attribute
    object_list
    attribute_name
    [-bus]
    [-quiet]
    [-return_null_values]
```

```
proc cc {coll} { foreach_in_collection item $coll { puts [get_attribute
$item full_name] } }

#用于将coll list打印为行形式。
cc [get_cells]
```