Example 1

Code

```
tetromino t1 {
    type = T1;
    color = 5;
}

tetromino t2 {
    type = T2;
    color = 3;
}

control c1 {
    key = 3;
    action = 8;
}

control c2 {
    key = 2;
    action = 9;
}

gameboard gb1 {
    x_size = 32;
    y_size = 32;
    falling_speed = 2;
}

game g1 {
    board = gb1;
    levels = 15;
    controls = [c1, c2];
    blocks = [t1, t2];
}

main {
    play g1;
}
```

Scanner Debug Output

```
Test Lexer Log: Scanning code from file
/Users/varun/Developer/PycharmProjects/cc/examples/example1.ts
Token(type='TOK_TETROMINO', value='tetromino', lineno=1, index=0)
Token(type='TOK_ID', value='t1', lineno=1, index=10)
Token(type='{', value='{', lineno=1, index=13)
Token(type='TOK_TYPE', value='type', lineno=2, index=19)
Token(type='=', value='=', lineno=2, index=24)
Token(type='TOK_TYPE_OPTION', value='T1', lineno=2, index=26)
Token(type=';', value=';', lineno=2, index=28)
Token(type='TOK_COLOR', value='color', lineno=3, index=34)
Token(type='=', value='=', lineno=3, index=40)
Token(type='TOK_NUMBER', value=5, lineno=3, index=42)
Token(type=';', value=';', lineno=3, index=43)
Token(type='}', value='}', lineno=4, index=45)
Token(type='TOK_TETROMINO', value='tetromino', lineno=6, index=48)
Token(type='TOK_ID', value='t2', lineno=6, index=58)
Token(type='{', value='{', lineno=6, index=61)
Token(type='TOK_TYPE', value='type', lineno=7, index=67)
Token(type='=', value='=', lineno=7, index=72)
Token(type='TOK_TYPE_OPTION', value='T2', lineno=7, index=74)
Token(type=';', value=';', lineno=7, index=76)
Token(type='TOK_COLOR', value='color', lineno=8, index=82)
Token(type='=', value='=', lineno=8, index=88)
Token(type='TOK_NUMBER', value=3, lineno=8, index=90)
Token(type=';', value=';', lineno=8, index=91)
Token(type='}', value='}', lineno=9, index=93)
Token(type='TOK_CONTROL', value='control', lineno=11, index=96)
Token(type='TOK_ID', value='c1', lineno=11, index=104)
Token(type='{', value='{', lineno=11, index=107)
Token(type='TOK_KEY', value='key', lineno=12, index=113)
Token(type='=', value='=', lineno=12, index=117)
Token(type='TOK_NUMBER', value=3, lineno=12, index=119)
Token(type=';', value=';', lineno=12, index=120)
Token(type='TOK_ACTION', value='action', lineno=13, index=126)
Token(type='=', value='=', lineno=13, index=133)
Token(type='TOK_NUMBER', value=8, lineno=13, index=135)
Token(type=';', value=';', lineno=13, index=136)
Token(type='}', value='}', lineno=14, index=138)
Token(type='TOK_CONTROL', value='control', lineno=16, index=141)
Token(type='TOK_ID', value='c2', lineno=16, index=149)
Token(type='{', value='{', lineno=16, index=152)
Token(type='TOK_KEY', value='key', lineno=17, index=158)
Token(type='=', value='=', lineno=17, index=162)
```

```
Token(type='TOK_NUMBER', value=2, lineno=17, index=164)
Token(type=';', value=';', lineno=17, index=165)
Token(type='TOK_ACTION', value='action', lineno=18, index=171)
Token(type='=', value='=', lineno=18, index=178)
Token(type='TOK_NUMBER', value=9, lineno=18, index=180)
Token(type=';', value=';', lineno=18, index=181)
Token(type='}', value='}', lineno=19, index=183)
Token(type='TOK_GAMEBOARD', value='gameboard', lineno=21, index=186)
Token(type='TOK_ID', value='gb1', lineno=21, index=196)
Token(type='{', value='{', lineno=21, index=200)
Token(type='TOK_X_SIZE', value='x_size', lineno=22, index=206)
Token(type='=', value='=', lineno=22, index=213)
Token(type='TOK_NUMBER', value=32, lineno=22, index=215)
Token(type=';', value=';', lineno=22, index=217)
Token(type='TOK_Y_SIZE', value='y_size', lineno=23, index=223)
Token(type='=', value='=', lineno=23, index=230)
Token(type='TOK_NUMBER', value=32, lineno=23, index=232)
Token(type=';', value=';', lineno=23, index=234)
Token(type='FALLING_SPEED', value='falling_speed', lineno=24,
index=240)
Token(type='=', value='=', lineno=24, index=254)
Token(type='TOK_NUMBER', value=2, lineno=24, index=256)
Token(type=';', value=';', lineno=24, index=257)
Token(type='}', value='}', lineno=25, index=259)
Token(type='TOK_GAME', value='game', lineno=27, index=262)
Token(type='TOK_ID', value='g1', lineno=27, index=267)
Token(type='{', value='{', lineno=27, index=270)
Token(type='TOK_BOARD', value='board', lineno=28, index=276)
Token(type='=', value='=', lineno=28, index=282)
Token(type='TOK_ID', value='gb1', lineno=28, index=284)
Token(type=';', value=';', lineno=28, index=287)
Token(type='TOK_LEVELS', value='levels', lineno=29, index=293)
Token(type='=', value='=', lineno=29, index=300)
Token(type='TOK_NUMBER', value=15, lineno=29, index=302)
Token(type=';', value=';', lineno=29, index=304)
Token(type='TOK_CONTROLS', value='controls', lineno=30, index=310)
Token(type='=', value='=', lineno=30, index=319)
Token(type='[', value='[', lineno=30, index=321)
Token(type='TOK_ID', value='c1', lineno=30, index=322)
Token(type=',', value=',', lineno=30, index=324)
Token(type='TOK_ID', value='c2', lineno=30, index=326)
Token(type=']', value=']', lineno=30, index=328)
Token(type=';', value=';', lineno=30, index=329)
Token(type='TOK_BLOCKS', value='blocks', lineno=31, index=335)
Token(type='=', value='=', lineno=31, index=342)
```

```
Token(type='[', value='[', lineno=31, index=344)
Token(type='TOK_ID', value='t1', lineno=31, index=345)
Token(type=',', value=',', lineno=31, index=347)
Token(type='TOK_ID', value='t2', lineno=31, index=349)
Token(type=']', value=']', lineno=31, index=351)
Token(type=';', value=';', lineno=31, index=352)
Token(type='}', value='}', lineno=32, index=354)
Token(type='TOK_MAIN', value='main', lineno=34, index=357)
Token(type='{', value='{', lineno=34, index=362)
Token(type='TOK_PLAY', value='play', lineno=35, index=368)
Token(type='TOK_ID', value='g1', lineno=35, index=373)
Token(type=';', value=';', lineno=35, index=375)
Token(type='}', value='}', lineno=36, index=377)
Test Lexer Log: Finished.
```

Parser Debug Output

```
Test Parser Log: Scanning & parsing code from file
/Users/varun/Developer/PycharmProjects/cc/examples/example1.ts
Test Parser Log: Turning on parser's debug mode
/Users/varun/Developer/PycharmProjects/cc/examples/example1.ts
Debug logger TETROMINO_ATTRIBUTE: type T1
Debug logger TETROMINO_ATTRIBUTE: color 5
Debug logger TETROMINO_ATTRIBUTES Type 1: ('color', 5)
Debug logger TETROMINO_ATTRIBUTES Type 2: ('type', 'T1') [('color',
5)]
Debug logger TETROMINO: tetromino t1 [('type', 'T1'), ('color', 5)]
Debug logger TETROMINO_ATTRIBUTE: type T2
Debug logger TETROMINO_ATTRIBUTE: color 3
Debug logger TETROMINO_ATTRIBUTES Type 1: ('color', 3)
Debug logger TETROMINO_ATTRIBUTES Type 2: ('type', 'T2') [('color',
3)]
Debug logger TETROMINO: tetromino t2 [('type', 'T2'), ('color', 3)]
Debug logger CONTROL_ATTRIBUTE: key 3
Debug logger CONTROL_ATTRIBUTE: action 8
Debug logger CONTROL_ATTRIBUTES Type 1: ('action', 8)
Debug logger CONTROL_ATTRIBUTES Type 2: ('key', 3) [('action', 8)]
Debug logger CONTROL: control c1 [('key', 3), ('action', 8)]
Debug logger CONTROL_ATTRIBUTE: key 2
Debug logger CONTROL_ATTRIBUTE: action 9
Debug logger CONTROL_ATTRIBUTES Type 1: ('action', 9)
Debug logger CONTROL_ATTRIBUTES Type 2: ('key', 2) [('action', 9)]
Debug logger CONTROL: control c2 [('key', 2), ('action', 9)]
Debug logger GAMEBOARD_ATTRIBUTE: x_size 32
Debug logger GAMEBOARD_ATTRIBUTE: y_size 32
Debug logger GAMEBOARD_ATTRIBUTE: falling_speed 2
Debug logger GAMEBOARD_ATTRIBUTES Type 1: ('falling_speed', 2)
Debug logger GAMEBOARD_ATTRIBUTES Type 2: ('y_size', 32)
[('falling_speed', 2)]
Debug logger GAMEBOARD_ATTRIBUTES Type 2: ('x_size', 32) [('y_size',
32), ('falling_speed', 2)]
Debug logger GAMEBOARD: gameboard gb1 [('x_size', 32), ('y_size',
32), ('falling_speed', 2)]
Debug logger GAME_ATTRIBUTE: board gb1
Debug logger GAME_ATTRIBUTE: levels 15
Debug logger IDS Type 1: c2
Debug logger IDS Type 2: c1 , ['c2']
Debug logger ARRAY: ['c1', 'c2']
Debug logger GAME_ATTRIBUTE: controls ['c1', 'c2']
Debug logger IDS Type 1: t2
```

Debug logger IDS Type 2: t1 , ['t2']
Debug logger ARRAY: ['t1', 't2']
Debug logger GAME_ATTRIBUTE: blocks ['t1', 't2']
Debug logger GAME_ATTRIBUTES Type 1: ('blocks', ['t1', 't2'])
Debug logger GAME_ATTRIBUTES Type 2: ('controls', ['c1', 'c2'])
[('blocks', ['t1', 't2'])]
Debug logger GAME_ATTRIBUTES Type 2: ('levels', 15) [('controls',
['c1', 'c2']), ('blocks', ['t1', 't2'])]
Debug logger GAME_ATTRIBUTES Type 2: ('board', 'gb1') [('levels',
15), ('controls', ['c1', 'c2']), ('blocks', ['t1', 't2'])]
Debug logger GAME: game g1 [('board', 'gb1'), ('levels', 15),
('controls', ['c1', 'c2']), ('blocks', ['t1', 't2'])]
Debug logger MAIN_ATTRIBUTE: play ;
Debug logger MAIN_ATTRIBUTES Type 1: ('play', 'g1')
Debug logger MAIN: main [('play', 'g1')]
Parsed Tetrominos: {'t1': [('type', 'T1'), ('color', 5)], 't2':
[('type', 'T2'), ('color', 3)]}
Parsed Gameboards: {'gb1': [('x_size', 32), ('y_size', 32),
('falling_speed', 2)]}
Parsed Controls: {'c1': [('key', 3), ('action', 8)], 'c2': [('key',
2), ('action', 9)]}
Parsed Games: {'g1': [('board', 'gb1'), ('levels', 15), ('controls',
['c1', 'c2']), ('blocks', ['t1', 't2'])]}
Parsed Main: [('play', 'g1')]
None
Test Parser Log: Finished.