KEYWORDS

- Keywords Part of Language
- Can’t Shouldn’t Change Keywords
- Example Keywords
  - if
  - else
  - def
FROM RUR-PLE, NOT KEYWORDS

- **Actions**
  - move()
  - turn_left()
  - pick_beeper()
  - put_beeper()
  - turn_off()

- **Special**
  - repeat(func, times)

- **Tests**
  - front_is_clear()
  - left_is_clear()
  - right_is_clear()
  - facing_north()
  - carries_beeper()
  - on_beeper()
def turn_right():
    repeat(turn_left,3)

def turn_around():
    repeat(turn_left,2)
### Python Keywords

<table>
<thead>
<tr>
<th>and</th>
<th>elif</th>
<th>if</th>
<th>print</th>
</tr>
</thead>
<tbody>
<tr>
<td>as</td>
<td>else</td>
<td>import</td>
<td>raise</td>
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<td>assert</td>
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<td>in</td>
<td>return</td>
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<tr>
<td>break</td>
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<td>is</td>
<td>try</td>
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<td>class</td>
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<td>lambda</td>
<td>while</td>
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<tr>
<td>continue</td>
<td>for</td>
<td>not</td>
<td>with</td>
</tr>
<tr>
<td>def</td>
<td>from</td>
<td>or</td>
<td>yield</td>
</tr>
<tr>
<td>del</td>
<td>global</td>
<td>pass</td>
<td></td>
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</tbody>
</table>

*We use with rur-ple*
def jump_hurdle():
    turn_left()
    move()
    turn_right()
    move()
    turn_right()
    move()
    turn_left()
    move()
    jump_hurdle()
    move()
    jump_hurdle()
    move()
    jump_hurdle()
    move()
    jump_hurdle()
    move()
    pick_beeper()
    turn_off()
def move_jump_or_pick():
    if on_beeper():
        pick_beeper()
        turn_off()
    else:
        if front_is_clear():
            move()
        else:
            jump_hurdle()

repeat(move_jump_or_pick,9)
TWO OPTIONS THEN TWO MORE

IF TEST 1

IF TEST 2

ELSE

ELSE

ELSE

Thursday, September 16, 2010
THREE OPTIONS

IF TEST 1

ELIF TEST 2

ELSE
def move_jump_or_pick():
    if on_beeper():
        pick_beeper()
        turn_off()
    elif front_is_clear():
        move()
    else:
        jump_hurdle()

repeat(move_jump_or_pick,9)
def put_beeper_and_move():
    put_beeper()
    move()

repeat(put_beeper_and_move,9)
turn_off()
**TAKE A PASS**

PASS = FORGET-ABOUT-IT

= DO NOTHING

```python
def put_if_no_beeper_and_move():
    if on_beeper():
        pass
    else:
        put_beeper()
        move()

repeat(put_if_no_beeper_and_move, 9)
turn_off()
```
NOT AN ISSUE

NOT NEGATES

TRUE <--- FALSE

def put_if_no_beeper_and_move():
    if not on_beeper():
        put_beeper()
    move()

repeat(put_if_no_beeper_and_move,9)
turn_off()}
KEEP DOING TILL DONE

☐ REPEAT HAS LIMITS ... LITERALLY

☐ NEED TO KNOW HOW MANY TIMES

☐ DEFINITE LOOPS WHEN YOU KNOW HOW MANY YOU NEED

HOW MANY BULLETS WILL NEO NEED?

☐ NEED INDEFINITE LOOP
WHILE WE ARE AT IT

- DROP A BEEPER AT THE END AND COME BACK

```python
def turn_around():
    repeat(turn_left,2)

while front_is_clear():
    move()
put_beeper()
turn_around()
while front_is_clear():
    move()
turn_around()
turn_off()
```
def turn_around():
    repeat(turn_left,2)

while front_is_clear() and not on_beeper():
    move()
move()
while front_is_clear() and not on_beeper():
    put_beeper()
    move()
put_beeper()
turn_around()
while front_is_clear():
    move()
    move()
turn_around()
OR ANOTHER KEYWORD

- MOVE FORWARD AND TURN LEFT ON ANY OBSTACLE

```python
def move_around():
    while front_is_clear() or left_is_clear():
        if front_is_clear():
            move()
        else:
            turn_left()

move_around()
turn_off()

SHUTS OFF ON TWO OR MORE LEFTS
```
PYTHON KEYWORDS

and  elif  if
as   else  import
assert except in
break exec is
class finally lambda
continue for not
def from or
del global pass

"OR" JUST LIKE "AND"
THANKS