Announcements

• Reading, RQ 06 next time
• Assign 2 due today, Assign 3 out
• APT 2 is due on Thursday
• Lab 3 this week
• Finish working on APT Pancakes

APT Pancakes….*(cont)*

Turtles

• Run in eclipse
• Make square with different sizes?
• Make a rectangle?
• Where is the repetition?
• New commands:
  • up(), down(), position(), goto()
Assignment 3
• Draw a picture

More Computer Science Duke Alums

More on Strings
• Strings are indexed starting at 0
• Example: ‘word’

<table>
<thead>
<tr>
<th>word</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

• Use [num] – to refer to a particular character in word
• Use [x:y] to refer to a slice of the string starting at position x and up to but not including position y. Can leave out x or y.
Examples

```python
phrase = "Duke Blue Devils"
print phrase[0]
print phrase[-3]
print phrase[1:3]
print phrase[5:10] + phrase[:4]
print (phrase[phrase.find('ev'):]).upper()
```

Loop over all characters in a String

```python
def mystery(word):
    answer = ""
    for ch in word:
        if ch.lower() != 'e':
            answer = answer + ch
    return answer
```

Loop over string


```python
def mystery2(word):
count = 0
for ch in word:
count = count + 1
return count

def mystery3(word):
answer = 0
for ch in word:
    if ch.lower() != 'e':
        answer = answer + 1
return answer
```

Loop over all words in a list

```python
def mysteryList(phrase):
    for word in phrase.split():
        print word
```
Loop over words

  
  ```python
  def mystery4(phrase):
      count = 0
      for word in phrase.split():
          count = count + 1
      return count
  
  def mystery5(phrase):
      hold = phrase.split()
      answer = hold[0]
      for word in hold[1:]:
          if word[0].lower() != 'b':
              answer = answer + " " + word
      return answer
  ```

APT Emphasize