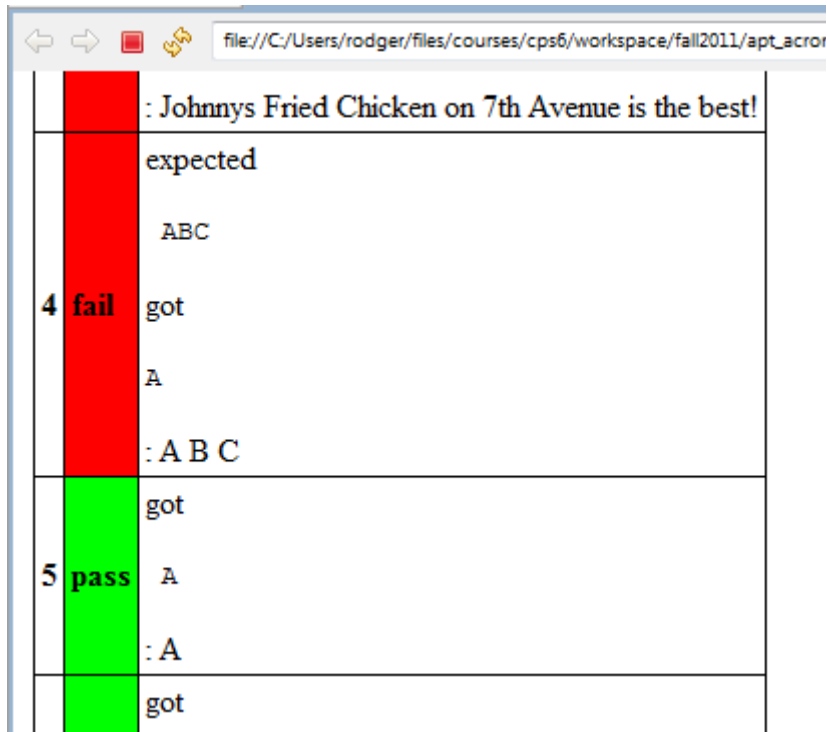


CompSci 6

Introduction to Computer Science



A screenshot of a file explorer window with the address bar showing the path: file:///C:/Users/rodger/files/courses/cps6/workspace/fall2011/apt_acror. The window displays a table with test results. The table has three columns: a status column with red and green background colors, a description column, and a result column. The first row is highlighted in red and contains the text ': Johnnys Fried Chicken on 7th Avenue is the best!'. The second row is highlighted in green and contains the text 'expected'. The third row is highlighted in red and contains the text '4 fail got'. The fourth row is highlighted in green and contains the text '5 pass got'. The fifth row is highlighted in green and contains the text ': A B C'. The sixth row is highlighted in green and contains the text ': A'. The seventh row is highlighted in green and contains the text ': A'. The eighth row is highlighted in green and contains the text 'got'.

	: Johnnys Fried Chicken on 7th Avenue is the best!	
	expected	
	ABC	
4 fail	got	
	A	
	: A B C	
5 pass	got	
	A	
	: A	
	got	

September 13, 2011

Prof. Rodger

Announcements

- Read for next time
 - Chapter 4 (pages 55-61) (note: we will work with images a different way)
 - Chapter 5
- Assignment 2 out - APTs
- Reading Quiz on Blackboard
 - Due before class next time

More on Strings

- Strings are indexed starting at 0
- Example: `'word'`

w	o	r	d
0	1	2	3

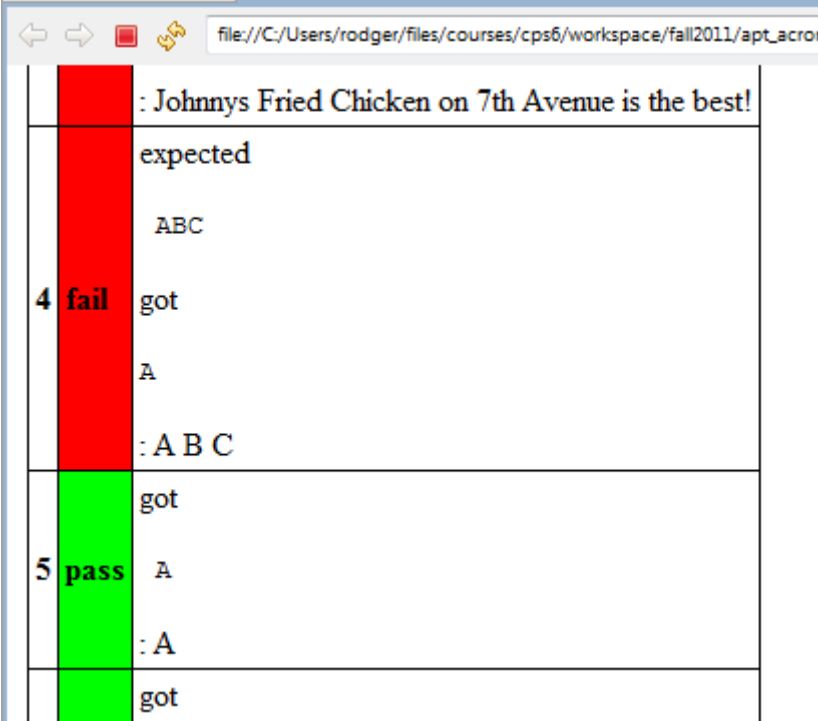
- Use `[num]` – to refer to a particular character in word
- Use `[x:y]` to refer to a slice of the string starting at position x and up to but not including position y. Can leave out x or y.

Examples

```
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()
```

APTs

- An APT is one a system we have setup to let you focus on solving one method.
- Similar to javaBat
- Snarf the APT, test it until you get all green
- Run in Eclipse
- Solve some APTs now



	: Johnnys Fried Chicken on 7th Avenue is the best!
	expected
	ABC
4 fail	got
	A
	: A B C
5 pass	got
	A
	: A
	got

Lists

- A list is a collection of objects

```
scores = [99, 78, 91, 84]
```

```
allAboutMe = ["Mo", 25, "934-1234"]
```

```
club=['Mo', 'Jo', 'Po', 'Flo', 'Bo']
```

- Lists are *mutable* – use [num] to change a value
- Lists are indexed starting at 0, or -1 from the end
- Functions: max, min, len, sum
- Slice lists [:]

List Examples

```
scores = [10, 9, 10, 8]
```

```
print scores
```

```
scores[2] = 5
```

```
print scores
```

```
print max(scores)
```

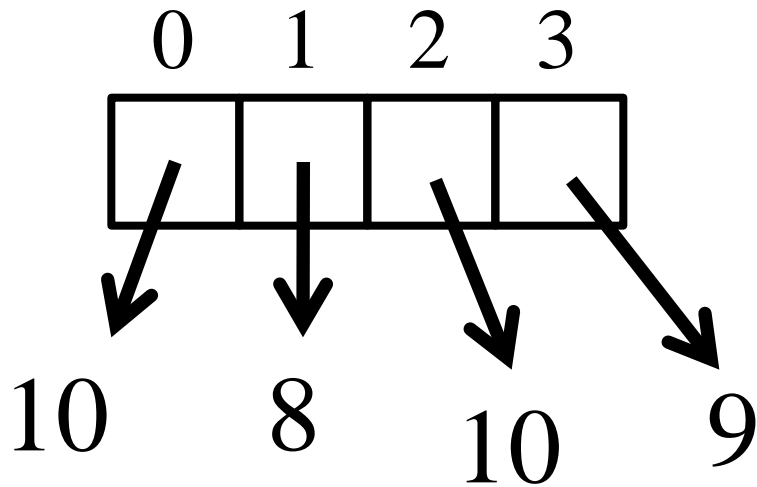
```
print len(scores)
```

```
print sum(scores)
```

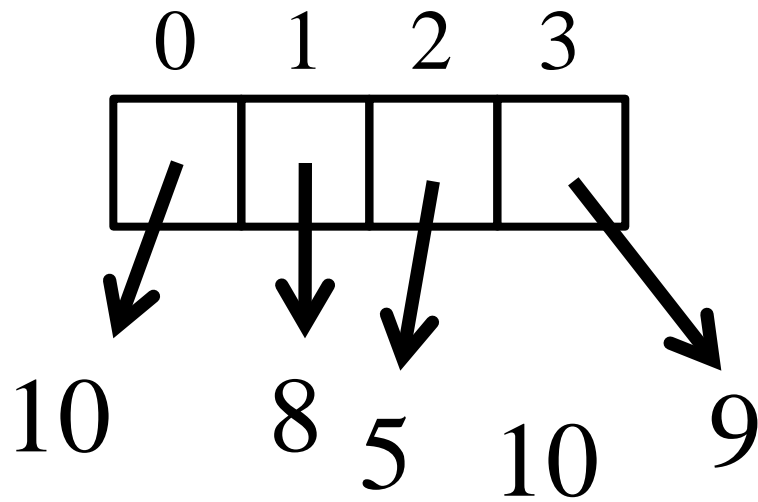
```
print scores[1:]
```

```
print scores[1]
```

List before/after modification



score = [10,8,10,9]



score [2] = 5

Processing List Items

- Process all the items in a list, one item at a time
- Format: `for variable in list:`
 `block`

- Example:

```
sum = 0
```

```
nums = [6, 7, 3, 1, 2]
```

```
for value in nums:
```

```
    sum = sum + value
```

```
print sum
```

Copying vs aliasing

```
names = [ 'jo' , 'mo' , 'bo' ]  
club = names  
team = names[:]  
names[1] = 'flo'  
print names  
print club  
print team
```