Y9 Python Help Sheet - String Manipulation

You can select part of a string in Python by using square brackets [ ] after the variable name and the position of the characters that you want.

Remember, we count from 0 (zero) when referring to their position so if I entered:

```
words = "I Love Python"
```

it would store it like this

words	0	1	2	3	4	5	6	7	8	9	10	11	12
	I		L	o	v	e		P	y	t	h	o	n

Selecting single characters

If I entered:

```
print(words[8])
```

it would print `y` as it is the letter in position 8.

Selecting groups of characters

You can select groups by using the colon : but there are a couple of things to remember. If you entered

```
print(words[2:5])
```

it will print `Lov` because it prints the characters in positions 2 to 5 **but not including position 5**.

```
print(words[4:9])
```

would print `ve Py` , the characters from 4 to 9 but **not including position 9**.

Selecting characters from the end of the word

If you use a negative number in the square brackets it will return characters counting from the end of the string so

```
print(words[-3])
```

would print `h` as it is the third letter from the end of the word

Selecting characters up to or after a certain point

If you wanted to print everything after a certain position you can do this by choosing a position and then a colon so

```
print(words[2:])
```

would print `Love Python` as that is what is in position 2 onwards

If you wanted to print everything up to a certain position you put the colon first so

```
print(words[:8])
```

would print `I Love P` as they are the characters up to but **not including position 8.**

Joining strings together (concatenating strings)

You can join selections together using the + sign so

```
print(words[0]+words[7]+words[10:13]+words[5])
```

would print `IPhone`

Finding the length of a string

You can find how many characters (including spaces) are in a string by using `len`, so

```
print(len(words)
```

would print `13`

Questions

Complete the table

```
string = "Exam practice"
```

Code	Output
`print(string[5])`	`p`
`print(string[5:8])`	`pra`
`print(string[7:11])`	`acti`
`print(string[-5])`	`c`
`print(string[-3:])`	`ice`
`print(string[:7])`	`Exam pr`
`print(string)`	`Exam practice`
`print(string[6]+[-3:])`	`rice`
`print(len(string))`	`13`