

# Python Lists

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## Instructions

1. Read each code snippet
2. Predict what it will output --> write your prediction
3. Type out the code and run it --> write the actual output
4. If your prediction was wrong, try to figure out why

Once you're finished, answer the questions at the end.

## Snippet 1

```
teams = ["cubs", "brewers", "reds"]
print(teams)
```

*Prediction*

*Actual*

## Snippet 2

```
teams = ["cubs", "brewers", "reds"]
print(teams[1])
```

*Prediction*

*Actual*

## Snippet 3

```
teams = ["cubs", "brewers", "reds"]
print(teams[2])
```

*Prediction*

*Actual*

## Snippet 4

```
teams = ["cubs", "brewers", "reds"]
print(teams[0])
```

*Prediction*

*Actual*

## Snippet 5

```
teams = ["cubs", "brewers", "reds"]
print(teams[3])
```

*Prediction*

*Actual*

## Snippet 6

```
teams = ["cubs", "brewers", "reds"]
print(teams[-1])
```

*Prediction*

*Actual*

## Snippet 7

```
teams = ["cubs", "brewers", "reds"]
print(teams[-1])
```

*Prediction*

*Actual*

## Snippet 8

```
teams = ["cubs", "brewers", "reds"]
print(teams)
print(len(teams))
teams.append("cardinals")
print(len(teams))
```

*Prediction*

*Actual*

## Snippet 9

```
teams = ["cubs", "brewers", "reds"]
teams.append("cardinals")
print(teams[0])
print(teams[-1])
```

*Prediction*

*Actual*

## Snippet 10

```
teams = ["cubs", "brewers", "reds", "cardinals"]
teams.insert(0, "pirates")
print(teams)
print(len(teams))
print(teams[0])
print(teams[-1])
```

*Prediction*

*Actual*

## Snippet 11

```
teams = ["cubs", "brewers", "reds", "cardinals"]
teams.insert(2, "pirates")
print(teams[1])
print(teams[2])
print(teams[3])
```

*Prediction*

*Actual*

## Questions

1. Show how to create a list of numbers and assign it to a variable called `numbers`.
2. The number inside of brackets following a variable that holds a list is called an **index**, for example, `teams[1]`. What do indexes do when the number inside the bracket is:
  - the number is positive?
  - the number is zero?
  - the number is negative?
3. What does the `len` function do when you pass it a list?
4. What happens if you try to use an index that is greater than or equal to the length of the list?
5. What does the `append` method do when you call it on a list?
6. The `insert` method takes two arguments, a number and a value. What does it do when you call it on a list?