

## Task 1 - Accessing and changing elements

Enter the code below into a new Python source file, save it as `arraysTask1` and run it.

```
carsForSale=['Kia', 'Nissan', 'Ford', 'VW']  
  
print(carsForSale[0])
```

- Change the code so it prints the last car not the first one
- Add another car at the beginning of the array
- When you run the program what is printed?
- Why has it changed?

## Task 2 - Print the whole array on one line

Enter the following into a new Python source file, save it as `arraysTask2` and run it.

```
carsForSale=['Kia', 'Nissan', 'Ford', 'VW']  
  
print(carsForSale) # Note this prints the whole array not just one element
```

- Add a line at the end of the program that changes the VW to a BMW
- Print the array again at the end of the program
- Add another line at the end to change the Kia to a Toyota
- Add another line at the end to print the array

Your final program if correct should have printed the array 3 times with different contents each time

```
['Kia', 'Nissan', 'Ford', 'VW']  
  
['Kia', 'Nissan', 'Ford', 'BMW']  
  
['Toyota', 'Nissan', 'Ford', 'BMW']
```

## Task 3 - Iterating through an array

Create a new Python source file, save it as `arraysTask3`.

- Create an array containing your five favourite movies
- Use a for loop to print each item in the array on a new line
- Add code that will print the number 1,2,3,4,5 ahead of each movie title

```
1 Wall-E  
2 Up  
3 Coco  
4 Cars  
5 Inside Out
```

Extension: Print the array in reverse order



## Task 4 - Linear search

Save the program your created for Task 3 with the name `arraysTask4` as a starting point for this task.

- Ask the user to input a movie to search for (the target for the search)
- Perform a linear search which prints "Found" if the movie entered is found
- Print the position it was found at, if found
- Add code to print "Not Found" if the whole array has been searched and the target has not been found

```
Enter a movie to search for: Inside Out
Found at position 4
```

```
Enter a movie to search for: Star Wars
Not Found
```

HINT: you will need a for loop or a while loop and a flag variable. If you use the for loop, avoid using break or continue. If you managed to get it working with a for loop, try again using a while loop.

## Task 5 - Iterate through two arrays at once

Save the program your created for Task 3 with the name `arraysTask5`.

- Add another array to the program that holds the worldwide sales for each movie in your list (use IMDB.com, and look for cumulative worldwide gross). Both arrays must be in the same order, e.g. if the first element of the movie array is Wall-E, the first element of the sales array should be 521311860 because that is the amount of worldwide sales for Wall-E.
- Modify your program so that it prints each movie and its worldwide sales.
- Put brackets around the sales figure, and a dollar sign inside the brackets.

```
1 Wall-E ($ 521311860 )
2 Up ($ 735099082 )
3 Coco ($ 807082196 )
4 Cars ($ 461983149 )
5 Inside Out ($ 857611174 )
```

## Task 6 - Iterate through three arrays at once

Save the program your created for Task 5 with the name `arraysTask6`.

- Add another array to the program that holds the year of release for each movie in your list (use IMDB.com). All three arrays must be in the same order.
- Modify your program so that it prints each movie, its worldwide sales and release date.

```
1 Wall-E 2008 ($ 521311860 )
2 Up 2009 ($ 735099082 )
3 Coco 2017 ($ 807082196 )
4 Cars 2006 ($ 461983149 )
5 Inside Out 2015 ($ 857611174 )
```

Extension: Modify the program so that the user is asked to enter the year of release of a movie, and the program only displays movies released in that year.

