

Bahan Ajar

Chapter 11



Materi Pembelajaran

Matakuliah :

# INTERFACING PERIPHERAL

Kode Matakuliah : SKO 20416

Prodi : SISTEM KOMPUTER

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## Tugas Mandiri

# Python Arrays

Arrays are used to store multiple values in one single variable:

## Example

Create an array containing car names:

```
cars = ["Ford", "Volvo", "BMW"]
```

An array is a special variable, which can hold more than one value at a time.

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

```
car1 = "Ford"  
car2 = "Volvo"  
car3 = "BMW"
```

# Access the Elements of an Array

You refer to an array element by referring to the index number.

## Example

Get the value of the first array item:

```
x = cars[0]
```

## Example

Modify the value of the first array item:

```
cars[0] = "Toyota"
```

# The Length of an Array

Use the `len()` method to return the length of an array (the number of elements in an array).

## Example

Return the number of elements in the `cars` array:

```
x = len(cars)
```

# Looping Array Elements

You can use the for in loop to loop through all the elements of an array.

## Example

Print each item in the `cars` array:

```
for x in cars:  
    print(x)
```

## Adding Array Elements

You can use the `append()` method to add an element to an array.

### Example

Add one more element to the `cars` array:

```
cars.append("Honda")
```

## Removing Array Elements

You can use the `pop()` method to remove an element from the array.

### Example

Delete the second element of the `cars` array:

```
cars.pop(1)
```

# Array Methods

<b>Method</b>	<b>Description</b>
<u>append()</u>	Adds an element at the end of the list
<u>clear()</u>	Removes all the elements from the list
<u>copy()</u>	Returns a copy of the list
<u>count()</u>	Returns the number of elements with the specified value
<u>extend()</u>	Add the elements of a list (or any iterable), to the end of the current list
<u>index()</u>	Returns the index of the first element with the specified value
<u>insert()</u>	Adds an element at the specified position
<u>pop()</u>	Removes the element at the specified position
<u>remove()</u>	Removes the first item with the specified value
<u>reverse()</u>	Reverses the order of the list
<u>sort()</u>	Sorts the list

## **Tugas Mandiri (teori):**

1. Most programming languages support associative arrays, matching a key to a value in an array. Do lists or tuples support this feature?
2. You can change a data value in a tuple, but not in a list. True or False? Explained

## **Tugas Mandiri (prakt):**

Tuliskan script program python dengan fungsi **Array** untuk menhidupkan 6 buah LED di Raspberry Pi.

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