**Concept of Validation**

In this tutorial, let’s implement the following angular 2 inbuilt validations using angular 2 validate interface

1. **Required** - The form field is mandatroy
2. **Maxlength** - Maximum number of characters in the field.
3. **Minlength** - Minimum number of characters in the field.
4. **Pattern** - Regular expression to match the input values and validate.

**Example:--**

### First Name Validation:--

**Requirement** - Required and only alphabets allowed in the name field.

* required attribute on input tag ensures that the filed value is mandatory.
* pattern="[a-zA-Z][a-zA-Z ]+" attribute take a regex to check for only characters in the field.
* [a-zA-Z][a-zA-Z ]+ is the regular expression to check for only alphabets.
* name.valid is a boolean value to check if the field has any error on the validation attributes.
* name.hasError('required')" returns true if the value is not entered.
* name.hasError('pattern')" return true if the entered value does not match with the regular expression.

### Email Address Validation

**Requirement** - Validate the email format som@gmail.com. Entered email should be having valid email with @, .co or.com.

* required attribute on input tag ensures that the filed value is mandatory.
* pattern="^\w+([\.-]?\w+)\*@\w+([\.-]?\w+)\*(\.\w{2,3})+$" takes regular expression ^\w+([\.-]?\w+)\*@\w+([\.-]?\w+)\*(\.\w{2,3})+$ to check for valid email.

### Mobile Number Validation

**Requirement** - Should be only numbers and should have 10 digits only.

* required attribute on input tag ensures that the filed value is mandatory.
* pattern="[0-9]\*" take regular expression [0-9]\* to allow only numbers.
* minlength="10" minlength of the input value should be 10.
* maxlength="10" max length of the input value should be 10. Based on the type of error in each of the attributes above,

### Using Angular 2 Validation Classes

Angular 2 automatically attached classes to the input elements depending on the state of the control. The following class names are used:

* ng-touched: Control has been visited
* ng-untouched: Control has not been visited
* ng-dirty: Control's value has been changed
* ng-pristine: Control's value hasn't been changed
* ng-valid: Control's value is valid
* ng-invalid: Control's value isn't valid