This question paper consists of 3 printed pages each of which is identified by the Code Number (COMP202101)

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School of Computing

May/June 2018

COMP202101

Mobile and Social Web Application Development

Answer all 3 questions

Time allowed: 2 hours

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Question 1

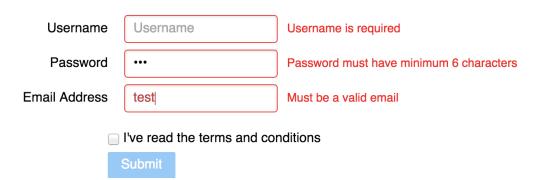
- (a) Describe using example applications **four** advantages of using the AngularJS framework for developing mobile websites. **[8 marks]**
- (b) Explain the type of data binding used in AngularJS. How does it relate to the Model View Controller architecture? [4 marks]
- (c) Explain, using an example, the role of a service in AngularJS and how services can be used to share data between controllers.Program code is not required.[5 marks]
- (d) Explain what \$scope is in AngularJS.

[3 marks]

[Question 1 total: 20 marks]

Question 2

- (a) Explain what directives are used for in AngularJS and provide an example of a directive and what it would be used. [3 marks]
- (b) Below is an example of a form for user creation. It does the following:
 - provides inline messages while the user is typing in a field
 - checks all fields are valid types and completed
 - checks password is at least 6 characters long
 - disables the submit button until all the needed data is available and the terms and conditions checkbox is checked



Explain using snippets of code how you would use built-in AngularJS directives to implement the required form validation functionality. [14 marks]

(c) One of the features of AngularJS is supporting the development of custom directives. Explain, using an example, why this feature is useful. [3 marks]

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[Question 2 total: 20 marks]

Question 3

OAuth is an open-standard authorization protocol.

(a) Explain, using an example, the purpose of OAuth.

[4 marks]

- (b) Explain, using relevant snippets of code, how you would implement the typical workflow for OAuth 2.0 requests using AngularJS. [10 marks]
- (c) Given the following factory that can access images from an Instagram endpoint, explain using relevant snippets of code, how you would create a controller that uses the factory to display the images retrieved. [6 marks]

```
myApp.factory('api',function($resource) {
    accessToken =
    JSON.parse(window.localStorage.getItem("instagram")).oauth.access_token;
    var photos =
    $resource('https://api.instagram.com/v1/users/self/media/recent/?access_t
    oken='+accessToken);
    return {
        get_photos: function(success, error){
            return photos.get();
        },
    };
});
```

[Question 3 total: 20 marks]

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