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UNIVERSITY OF RUHUNA

Faculty of Engineering

End-Semester 3, Examination in Engineering, July 2017

Module No: EE3204

Module Name: GUI Programming

Part - I

[ONE hour]

Instructions for candidates

- Write your index number on top of every page.
- Question paper contains 50 multiple choice questions.
- For each question, put an X mark on the letter: (a), (b), (c) or (d) which corresponds to the correct answer, by using a black or blue pen.
- Each correct answer carries 0.5 marks.

1. What does Microsoft WPF stand for?

- (a) Windows Presentation Framework
- (b) Windows Presentation Foundation
- (c) Windows Painting Framework
- (d) None of the above

2. What does XAML stands for?

- (a) Extensible Accessible Markup Language
- (b) Extensible Markup Language
- (c) XML and Microsoft Language
- (d) None of the above

3. Which object can be used share the variable across pages in WPF?

- (a) Application
- (b) Session
- (c) Cookies
- (d) Viewstate

4. WPF transformations can be used for

- (a) Only rotation
- (b) Only scaling

- (c) Only skewing
 - (d) Rotation, scaling, and skewing
5. WPF separates the appearance of an user interface from its behavior. The appearance is generally specified in the
- (a) HTML
 - (b) C# .cs file
 - (c) XAML
 - (d) XML
6. Transformations are available in which namespace?
- (a) System.Windows.UIElement
 - (b) System.Windows,FrameWorkElement
 - (c) System.Windows.Media
 - (d) None of above
7. Which tool(s) is/are used to develop WPF applications?
- (a) Visual Studio
 - (b) Expression Blend
 - (c) Both (a) and (b)
 - (d) none of (a) and (b)
8. Which of the following is true regarding XAML?
- (a) Separation of designer code and logic
 - (b) Tools like Expression blend do not support XAML
 - (c) XAML is platform independent
 - (d) All of the above
9. Which property you can use to make the control semi-transparent?
- (a) TranceParent
 - (b) Semi-Tranceparent
 - (c) Opacity
 - (d) Mask
10. For Showing the dialog box modally which method is used?
- (a) Show
 - (b) ShowDialog
 - (c) Show modally
 - (d) OpenDialog

11. Which class is used for data binding in WPF?
 - (a) Data
 - (b) DataReader
 - (c) Binding
 - (d) System.Data
12. For 2-D Transformation WPF supports the following classes?
 - (a) RotateTransform
 - (b) ScaleTransform
 - (c) SkewTransform
 - (d) All of the above
13. What layout panel does not belong to Windows 10 universal application?
 - (a) RelativePanel
 - (b) StackPanel
 - (c) Grid
 - (d) None of the above
14. Which of the following is a layout control in WPF?
 - (a) WrapPanel
 - (b) DockPanel
 - (c) Canvas
 - (d) All of the above
15. Which triggers are available in WPF?
 - (a) Event triggers
 - (b) Data triggers
 - (c) Property triggers
 - (d) All of the above
16. For 2D transformations WPF supports
 - (a) scale transform
 - (b) rotate transform
 - (c) skew transform
 - (d) all of the above
17. What are the different data binding modes available in WPF?
 - 1) OneWay
 - 2) TwoWay
 - 3) OneTime
 - 4) OneWayToSource

- (a) 1 and 2
- (b) 1, 2 and 3
- (c) 2 and 4
- (d) 1,2,3 and 4

18. Which Two types of Logical Resources available in WPF?

- (a)
- (b) StaticResource and Dynamic Resource
- (c) StaticResource and CompileResource
- (d) WPF does not support Logical Resources
- (e) None of the above

19. Which of the following brushes not used in WPF?

- (a) RadialGradientBrush
- (b) ImageBrush
- (c) SolidColorBrush
- (d) GradientBrush

20. Which of the following XAML snippets shows the Image on Button control?

(a)

```
< Button>  
  < Image="speaker.png" Stretch="Uniform"/>  
  < TextBlock Text="Play Sound" />  
</Button>
```

(b)

```
< Button>  
  < ImageFile="speaker.png" Stretch="Uniform"/>  
  < TextBlock Text="Play Sound" /> < /StackPanel>  
< /Button>
```

(c)

```
< Button> < StackPanel Orientation="Horizontal">  
  < ImageSource="speaker" Stretch="Uniform"/>  
  < TextBlock Text="Play Sound" /> < /StackPanel>  
< /Button>
```

(d)

```
< Button> < StackPanel Orientation="Horizontal">  
  < Image Source="speaker.png" Stretch="Uniform"/>  
  < TextBlock Text="Play Sound" /> < /StackPanel>  
< /Button>
```

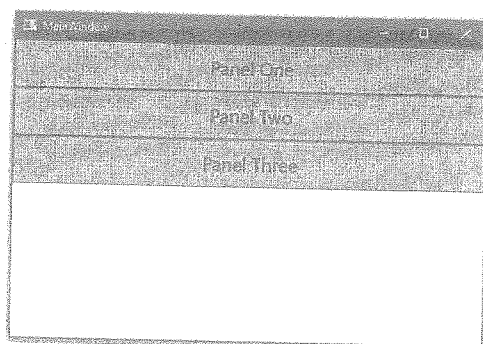


Figure 1: Simple layout example

- 21. What is the best XAML layout for producing the output in Figure 1?
 - (a) GridPanel
 - (b) DockPanel
 - (c) StackPanel
 - (d) Canvas

- 22. What is the best XAML layout for producing the output in Figure 2?

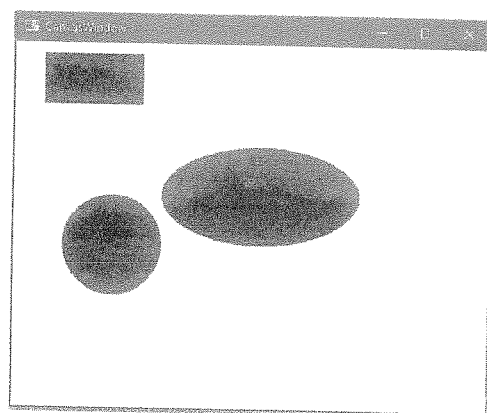


Figure 2: Simple layout example

- (a) Grid
 - (b) DockPanel
 - (c) StackPanel
 - (d) Canvas

- 23. What is the best XAML layout for producing the output in Figure 3?
 - (a) Grid
 - (b) DockPanle
 - (c) StackPanel
 - (d) Canvas

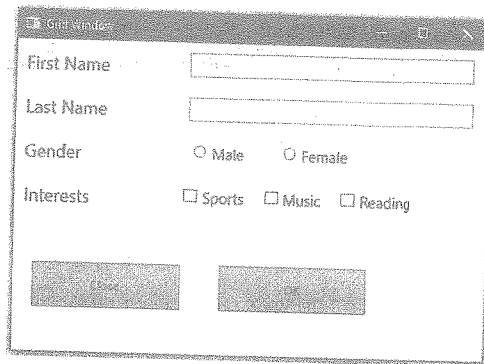


Figure 3: Simple layout example

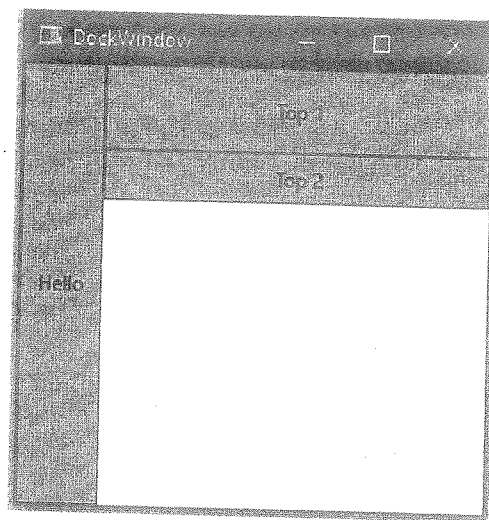


Figure 4: Simple layout example

24. What is the best XAML layout for producing the output in Figure 4?
- (a) Grid
 - (b) DockPanel
 - (c) StackPanel
 - (d) Canvas

25. What is the wrong statement about the following XAML code?

```
<Rectangle Width="150" Height="100" Margin="5">  
  <Rectangle.Fill>  
    <LinearGradientBrush StartPoint="0,0" EndPoint="1,1">  
      <GradientStop Color="Yellow" Offset="0.0" />  
      <GradientStop Color="Blue" Offset="0.5" />  
      <GradientStop Color="Green" Offset="1.0" />  
    </LinearGradientBrush>  
  </Rectangle.Fill>  
</Rectangle>
```

- (a) Draws a rectangle with width of 150 and height of 100.
 - (b) Draws with three color stops with linear gradient starting from the center of the rectangle.
 - (c) Draws with three color stops through the diagonal of the rectangle.
 - (d) Draws with three color stops along the x axis.
26. What is the best way to display a text in WPF?
- (a) `<TextBox>This is a TextBlock</TextBox>`
 - (b) `<TextBlock>This is a TextBlock</TextBlock>`
 - (c) `<Text>This is a TextBlock</Text>`
 - (d) None of the above is suitable.
27. Choose the correct statement about the properties used in C#.NET?
- (a) Each property consists of accessors as get and set
 - (b) A property can be either read or write only
 - (c) Properties can be used to store and retrieve values to and from the data members of a class.
 - (d) None of the above is correct.
28. The following XAML content shows a text block and a slider. What do you need to add to the TextBlock in order to bind slider value to the font size.
- ```
<TextBlock Margin="10" Name="lblSampleText"
 Text="Simple Text">
</TextBlock>
<Slider Name="sliderFontSize" Margin="3"
 Minimum="1" Maximum="40"
 Value="10" TickFrequency="1" >
</Slider>
```
- (a) `FontSize="{Binding ElementName=Slider, Path=Value}"`
  - (b) `FontSize="{Binding ElementName=sliderFontSize, Path=Value}"`
  - (c) `FontSize="{Binding Path=Value}"`
  - (d) `Value="{Binding ElementName=lblSampleText, Path=FontSize}"`
29. What is true about the following XAML code?
- ```
<Storyboard x:Name="myStoryboard">
  <DoubleAnimation
    Storyboard.TargetName="MyRectangle"
    Storyboard.TargetProperty="Opacity"
    From="1.0" To="0.0" Duration="0:0:1"/>
</Storyboard>
```

- (a) Change opacity of all rectangles from 1 to 0 in one micro second.
 - (b) Change opacity of MyRectangle from 1 to 0 in one second.
 - (c) Change opacity of MyRectangle from 1 to 0 in one minute.
 - (d) Change opacity of all rectangles from 1 to 0 in one micro second.
30. What is two way element to element binding in XAML?
- (a) Binding one property of an element to two other properties.
 - (b) Binding one property of an element to another property of the other.
 - (c) Binding one property of an element to another property of the other and vise versa.
 - (d) None of the above
31. Which of the following development approaches are supported in Entity Framework?
- (a) Code First
 - (b) Database First
 - (c) Model First
 - (d) All of the above
32. What is MVVM stands for?
- (a) Model View Controller Pattern.
 - (b) ModelView View Model Pattern.
 - (c) Model View ViewModel Pattern.
 - (d) None of the above is true.
33. What can be the first tag in any HTML document?
- (a) <head>
 - (b) <title>
 - (c) <html>
 - (d) <document>
34. Choose the correct HTML tag for displaying list with numbers.
- (a) <list>
 - (b) <item>
 - (c)
 - (d)
35. Which tag allows you to add a row in a table?
- (a) <td>
 - (b) <th>

- (c) <tr>
 - (d) <row>
36. What is the wrong statement about HTML Attributes?
- (a) All HTML elements can not have attributes.
 - (b) Attributes come in name/value pairs like: name="value".
 - (c) Attributes are always specified in the start tag.
 - (d) Attributes provide additional information about an element.
37. How can you make a list that lists the items with bullets?
- (a)
 - (b) <list>
 - (c)
 - (d) <d1>
38. In HTML5, which element is used to specify a header for a document or section?
- (a) <headings>
 - (b) <header>
 - (c) <hgroup>
 - (d) <head>
39. What is the correct HTML for creating a hyperlink?
- (a) example
 - (b) <a>example
 - (c) example
 - (d) example
40. What is correct about the following CSS rule?
- ```
h1, p {
 text-align: center;
 color: red;
}
```
- (a) Text <p> element within <h1> element become red.
  - (b) Text <h1> element becomes center aligned and <p> element becomes red.
  - (c) Text in <p> and <h1> element becomes center aligned and red.
  - (d) None of the above is correct.
41. Following Style is applied to -

```
h1.main p {
 font-size: 18px;
 margin-top: 0;
}
```

- (a) <p> element and <h1> element with class *main*.
- (b) <p> element within <h1> element of class *main*.
- (c) <p> element within <h1> element with attribute *main*.
- (d) None of the above

42. The ..... property is mostly used to show text in upper case.

- (a) text-effect
- (b) text-transform
- (c) text-decoration
- (d) text-style

43. What is true about following code segment?

```
div > p {
 background-color: yellow;
}
```

- (a) when <p> element is a descendant of <div> element, background color is yellow.
- (b) when <p> element is a immediate child of <div> element, background color is yellow.
- (c) when <p> element is a sibling of <div> element, background color is yellow.
- (d) when <p> element is inside of <div> element, background color is yellow.

44. What is the correct way of applying a top and bottom margins of 10px and left and right margins of 20px to a <p> element?

- (a) margin: 20px 10px;
- (b) margin: 10px 20px;
- (c) margin: 20px 10px 0px 0px;
- (d) margin: 10px 20px 0px 0px;

45. What is the correct statement about following code segment.

```
a.highlight:hover {
 color: #ff0000;
}
```

- (a) when mouse move over an <a> element, the link turns blue.
- (b) when mouse move over an <a> with class highlight element, the link turns blue.

- (c) when mouse move over an <a> element, the link turns red.  
 (d) when mouse move over an <a> with class highlight element, the link turns red.

**Listing 1: HTML5 Document**

```
<!DOCTYPE html>
<html>
<head></head>
<body>
 <header>
 <h1>Welcome to my Web Page</h1>
 </header>
 <nav>

 Home
 Products
 Contact

 </nav>
 <section id="main">
 <h1>Heading</h1>
 <p>Bunch of awesome content</p>
 <p class="red">Red content</p>
 <p id="end">End conent</p>
 </section>
 <footer>
 <p>Created by me.</p>
 </footer>
</body>
</html>
```

46. The following CSS style rules are defined in the HTML document in Listing 1.

```
p { color: blue;}
p { color: green; }
```

Which of the following statements is correct?

- (a) <p> will not show because of the conflicting rules.  
 (b) first <p> will be blue and rest will be green.  
 (c) All <p> paragraphs will be blue.  
 (d) All <p> paragraphs will be green.
47. The following CSS style rules are defined in the HTML document in Listing 1.

```
section p { color: blue;}
p { color: green; }
```

Which of the following statements is correct?

- (a) All `<p>` paragraphs will be blue.
- (b) All `<p>` paragraphs will be green.
- (c) All `<p>` except inside the `<section>` element will be green.
- (d) None of the above is correct.

48. The following css style rules are defined in the html document in Listing 1.

```
footer p { font-size: 1.6em }
p { color: green; }
```

Which of the following statements is correct?

- (a) All `<p>` paragraphs will have font size 1.6em.
- (b) All `<p>` paragraphs will be green.
- (c) All `<p>` except inside the `<footer>` element will be green.
- (d) None of the above is correct.

49. The following CSS style rules are defined in the HTML document in Listing 1.

```
nav ol li:nth-child(2n+1) { background-color: red; }
nav li { background-color: blue }
li {background-color: green}
```

which of the following statements is correct?

- (a) All `<li>` elements will be green.
- (b) All even `<li>` paragraphs will be red.
- (c) All even `<li>` elements will be blue.
- (d) All even `<li>` elements will be green.

50. With the aid of CSS *float* property

- (a) other element can be wrap around an element.
- (b) element can not be pushed to the left from the right.
- (c) element can not be pushed to the right from the left.
- (d) element can be pushed to any direction.