Отчет по практической работе №30

Наименование работы: Анимация.

Индивидуальные задания (вариант №9):

1. Создайте программу визуализации движения планет в солнечной системе по 3D траекториям. Вместо сферической модели планет можно использовать упрощенные тела (куб, пирамид).

Ход работы:

1. Разработал программу в соответствии с заданием №1. Были реализованы анимация.

Листинг программы:

<Window x:Class="Lab30.MainWindow"

xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"

xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"

xmlns:d="http://schemas.microsoft.com/expression/blend/2008"

xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"

xmlns:local="clr-namespace:Lab30"

mc:Ignorable="d"

Title="MainWindow" Height="450" Width="800">

<Window.Resources>

<Storyboard x:Key="Storyboard1">

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:10" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan1">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M356.3,5.004 C356.3,107.00878 200.00261,189.7 7.2,189.7 C-185.60261,189.7 -341.9,107.00878 -341.9,5.004 C-341.9,-97.000784 -185.60261,-179.692 7.2,-179.692 C200.00261,-179.692 356.3,-97.000784 356.3,5.004 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:10" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan1">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M356.3,5.004 C356.3,107.00878 200.00261,189.7 7.2,189.7 C-185.60261,189.7 -341.9,107.00878 -341.9,5.004 C-341.9,-97.000784 -185.60261,-179.692 7.2,-179.692 C200.00261,-179.692 356.3,-97.000784 356.3,5.004 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:9" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan2">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M314.7,6.7375 C314.7,97.181031 176.09519,170.5 5.1175,170.5 C-165.86019,170.5 -304.465,97.181031 -304.465,6.7375 C-304.465,-83.706031 -165.86019,-157.025 5.1175,-157.025 C176.09519,-157.025 314.7,-83.706031 314.7,6.7375 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:9" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan2">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M314.7,6.7375 C314.7,97.181031 176.09519,170.5 5.1175,170.5 C-165.86019,170.5 -304.465,97.181031 -304.465,6.7375 C-304.465,-83.706031 -165.86019,-157.025 5.1175,-157.025 C176.09519,-157.025 314.7,-83.706031 314.7,6.7375 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:8" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan3">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M261.5,5.3155 C261.5,80.638579 146.03424,141.7 3.6,141.7 C-138.83424,141.7 -254.3,80.638579 -254.3,5.3155 C-254.3,-70.007579 -138.83424,-131.069 3.6,-131.069 C146.03424,-131.069 261.5,-70.007579 261.5,5.3155 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:8" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan3">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M261.5,5.3155 C261.5,80.638579 146.03424,141.7 3.6,141.7 C-138.83424,141.7 -254.3,80.638579 -254.3,5.3155 C-254.3,-70.007579 -138.83424,-131.069 3.6,-131.069 C146.03424,-131.069 261.5,-70.007579 261.5,5.3155 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:7" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan4">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M208.7,0.767 C208.7,61.81269 115.08274,111.3 -0.4,111.3 C-115.88274,111.3 -209.5,61.81269 -209.5,0.767 C-209.5,-60.27869 -115.88274,-109.766 -0.4,-109.766 C115.08274,-109.766 208.7,-60.27869 208.7,0.767 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:7" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan4">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M208.7,0.767 C208.7,61.81269 115.08274,111.3 -0.4,111.3 C-115.88274,111.3 -209.5,61.81269 -209.5,0.767 C-209.5,-60.27869 -115.88274,-109.766 -0.4,-109.766 C115.08274,-109.766 208.7,-60.27869 208.7,0.767 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:6" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan5">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M168.226,2.8 C168.226,51.898114 92.892089,91.7 -0.037,91.7 C-92.966089,91.7 -168.3,51.898114 -168.3,2.8 C-168.3,-46.298114 -92.966089,-86.1 -0.037,-86.1 C92.892089,-86.1 168.226,-46.298114 168.226,2.8 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:6" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan5">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M168.226,2.8 C168.226,51.898114 92.892089,91.7 -0.037,91.7 C-92.966089,91.7 -168.3,51.898114 -168.3,2.8 C-168.3,-46.298114 -92.966089,-86.1 -0.037,-86.1 C92.892089,-86.1 168.226,-46.298114 168.226,2.8 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:5" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan6">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M124.063,1.2695 C124.063,37.29531 68.733678,66.5 0.4815,66.5 C-67.770678,66.5 -123.1,37.29531 -123.1,1.2695 C-123.1,-34.75631 -67.770678,-63.961 0.4815,-63.961 C68.733678,-63.961 124.063,-34.75631 124.063,1.2695 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:5" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan6">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M124.063,1.2695 C124.063,37.29531 68.733678,66.5 0.4815,66.5 C-67.770678,66.5 -123.1,37.29531 -123.1,1.2695 C-123.1,-34.75631 -67.770678,-63.961 0.4815,-63.961 C68.733678,-63.961 124.063,-34.75631 124.063,1.2695 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:4" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan7">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M84.683,0.435 C84.683,25.434169 46.228066,45.7 -1.2085,45.7 C-48.645066,45.7 -87.1,25.434169 -87.1,0.435 C-87.1,-24.564169 -48.645066,-44.83 -1.2085,-44.83 C46.228066,-44.83 84.683,-24.564169 84.683,0.435 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:4" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan7">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M84.683,0.435 C84.683,25.434169 46.228066,45.7 -1.2085,45.7 C-48.645066,45.7 -87.1,25.434169 -87.1,0.435 C-87.1,-24.564169 -48.645066,-44.83 -1.2085,-44.83 C46.228066,-44.83 84.683,-24.564169 84.683,0.435 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:3" Source="X" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.X)" Storyboard.TargetName="Plan8">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M53.5,-0.6175 C53.5,15.021823 29.368148,27.7 -0.4,27.7 C-30.168148,27.7 -54.3,15.021823 -54.3,-0.6175 C-54.3,-16.256823 -30.168148,-28.935 -0.4,-28.935 C29.368148,-28.935 53.5,-16.256823 53.5,-0.6175 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

<DoubleAnimationUsingPath RepeatBehavior="100" Duration="0:0:3" Source="Y" Storyboard.TargetProperty="(UIElement.RenderTransform).(TransformGroup.Children)[3].(TranslateTransform.Y)" Storyboard.TargetName="Plan8">

<DoubleAnimationUsingPath.PathGeometry>

<PathGeometry Figures="M53.5,-0.6175 C53.5,15.021823 29.368148,27.7 -0.4,27.7 C-30.168148,27.7 -54.3,15.021823 -54.3,-0.6175 C-54.3,-16.256823 -30.168148,-28.935 -0.4,-28.935 C29.368148,-28.935 53.5,-16.256823 53.5,-0.6175 z"/>

</DoubleAnimationUsingPath.PathGeometry>

</DoubleAnimationUsingPath>

</Storyboard>

</Window.Resources>

<Window.Triggers>

<EventTrigger RoutedEvent="FrameworkElement.Loaded">

<BeginStoryboard Storyboard="{StaticResource Storyboard1}"/>

</EventTrigger>

</Window.Triggers>

<Grid>

<Ellipse x:Name="Ell1" Stroke="Red" Margin="40.4,26.008,54,24"></Ellipse>

<Ellipse x:Name="Ell2" Stroke="Red" Margin="77.835,48.675,95.6,43.2"></Ellipse>

<Ellipse x:Name="Ell3" Stroke="Red" Margin="128,74.631,148.8,72"></Ellipse>

<Ellipse x:Name="Ell4" Stroke="Red" Margin="172.8,95.934,201.6,102.4"></Ellipse>

<Ellipse x:Name="Ell5" Stroke="Red" Margin="214,119.6,242.074,122"></Ellipse>

<Ellipse x:Name="Ell6" Stroke="Red" Margin="259.2,141.739,286.237,147.2"></Ellipse>

<Ellipse x:Name="Ell7" Stroke="Red" Margin="295.2,160.87,325.617,168"></Ellipse>

<Ellipse x:Name="Ell8" Stroke="Red" Margin="328,176.765,356.8,186"></Ellipse>

<Ellipse x:Name="Solnz" Height="30" Width="30" Fill="Yellow" Margin="357.8,181.2,385.8,189.2"></Ellipse>

<Ellipse x:Name="Plan1" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

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<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan2" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

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<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan3" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

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<TransformGroup>

<ScaleTransform/>

<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan4" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

<Ellipse.RenderTransform>

<TransformGroup>

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<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan5" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

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<TransformGroup>

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<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan6" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

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<TransformGroup>

<ScaleTransform/>

<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan7" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

<Ellipse.RenderTransform>

<TransformGroup>

<ScaleTransform/>

<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

</Ellipse.RenderTransform>

</Ellipse>

<Ellipse x:Name="Plan8" Height="20" Width="20" Fill="Red" Margin="357.8,181.2,385.8,189.2" RenderTransformOrigin="0.5,0.5">

<Ellipse.RenderTransform>

<TransformGroup>

<ScaleTransform/>

<SkewTransform/>

<RotateTransform/>

<TranslateTransform/>

</TransformGroup>

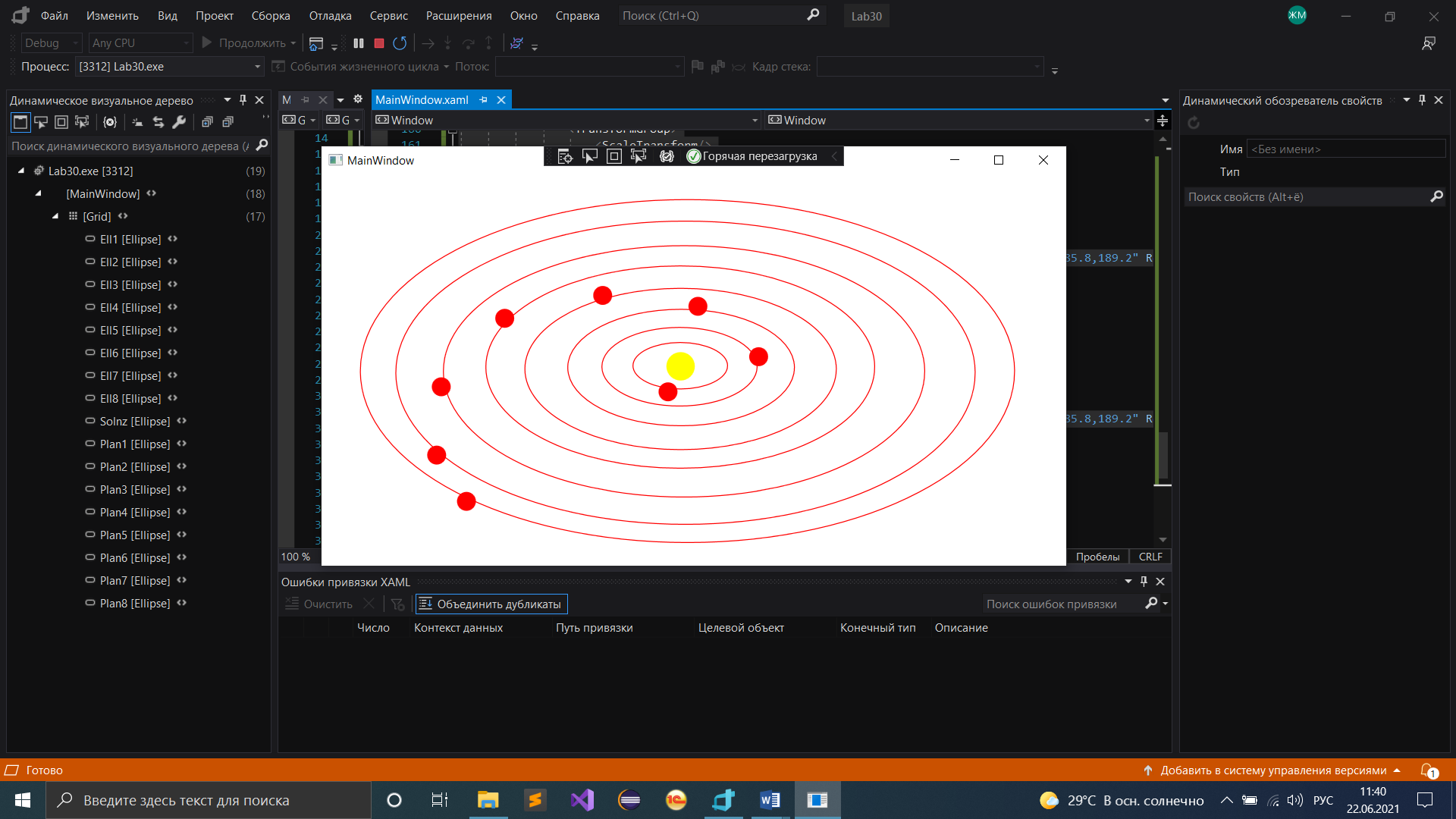
</Ellipse.RenderTransform>

</Ellipse>

</Grid>

</Window>

Результат выполнения программы Рис 1.1.



**Рисунок 1.1 – Пример работы программы WPF**

Отметка\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Подпись преподавателя\_\_\_\_\_\_\_\_\_\_\_\_\_

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