3D City

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Block Diagram

- Input Block
- Rendering Block
- Display Block
- RAM Block
- Sound Block

Inputs:
- Button in
- SD card in

Outputs:
- VGA out
- Audio out
Input Block
Rendering Block
Display Block

Sync

SRAM

Frame Buffer 1

Frame Buffer 2

VGA

65 MHz clk

8, data

36, addr

11, hcount

10, vcount

reset

65 MHz clk
Sound Block

- play_sound
- sound_ID
- data
- AC97
- Headphones
Stretch Goals

- Replace wireframes with polygons
- Implement z-buffer
- Add shading to buildings
- Implement acceleration and velocity control
- Add more sounds to city landscape
Modifications

- Nexys 4 vs. labkit
- SD card
- Joystick

http://www.trenz-electronic.de/download/d0/Digilent/d1/NEXYS4.html
<table>
<thead>
<tr>
<th>Task Description</th>
<th>Week of 11/2</th>
<th>Week of 11/9</th>
<th>Week of 11/16</th>
<th>Week of 11/23</th>
<th>Week of 11/30</th>
<th>Week of 12/7</th>
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<tbody>
<tr>
<td>1) Finalize project ideas</td>
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<td>2a) Rendering module, input module</td>
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<td>2b) Display module</td>
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<td>3a) Writing to RAM module</td>
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<td>3b) Reading from RAM module</td>
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<td>4) Testing</td>
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<td>5a) Sound module</td>
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<td>5b) Replace wireframes with polygons</td>
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<td>6a) Integration of modules and testing</td>
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<td>6b) Stretch goals</td>
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<td>7) Demo and final checkoff</td>
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