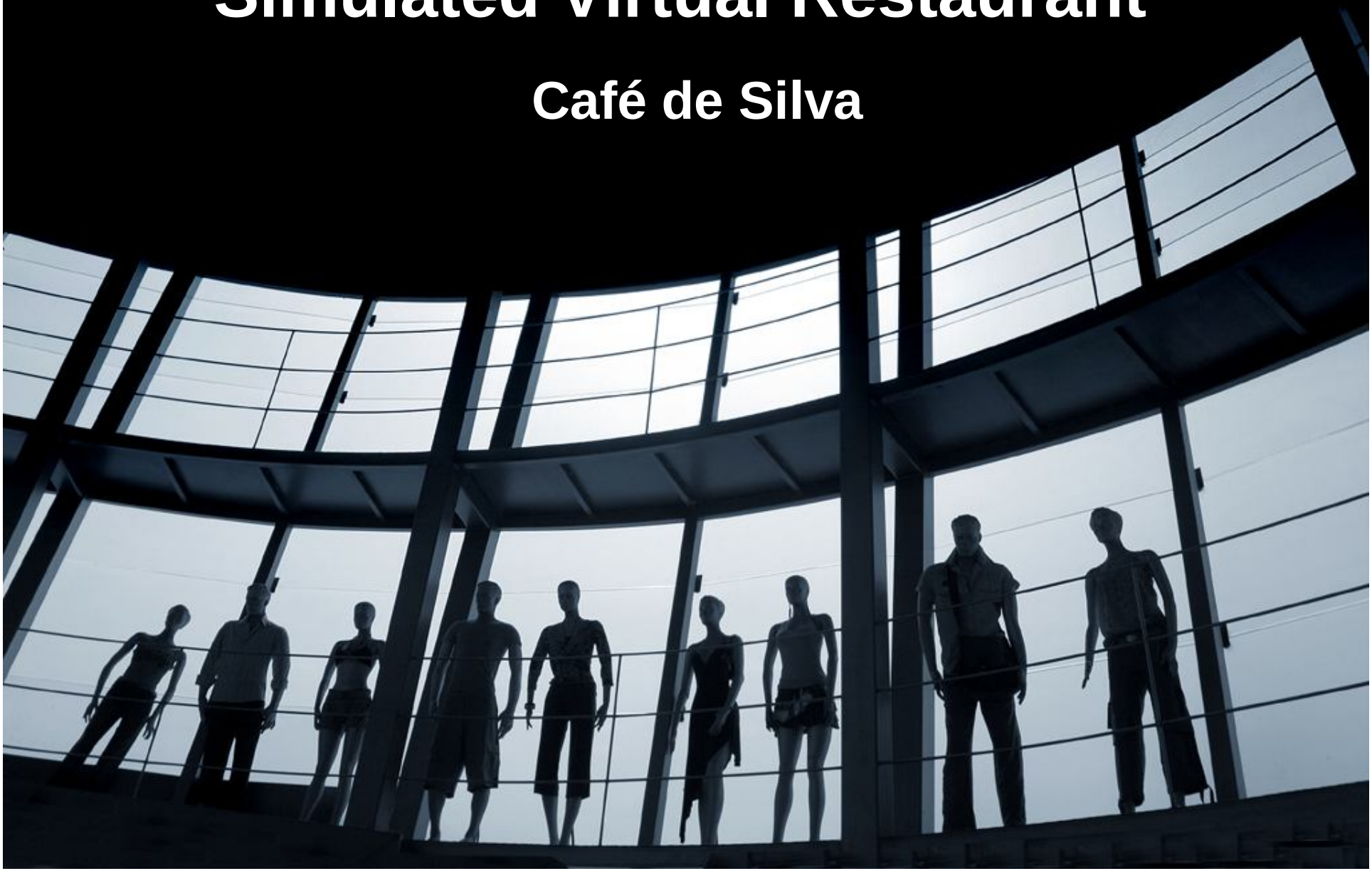
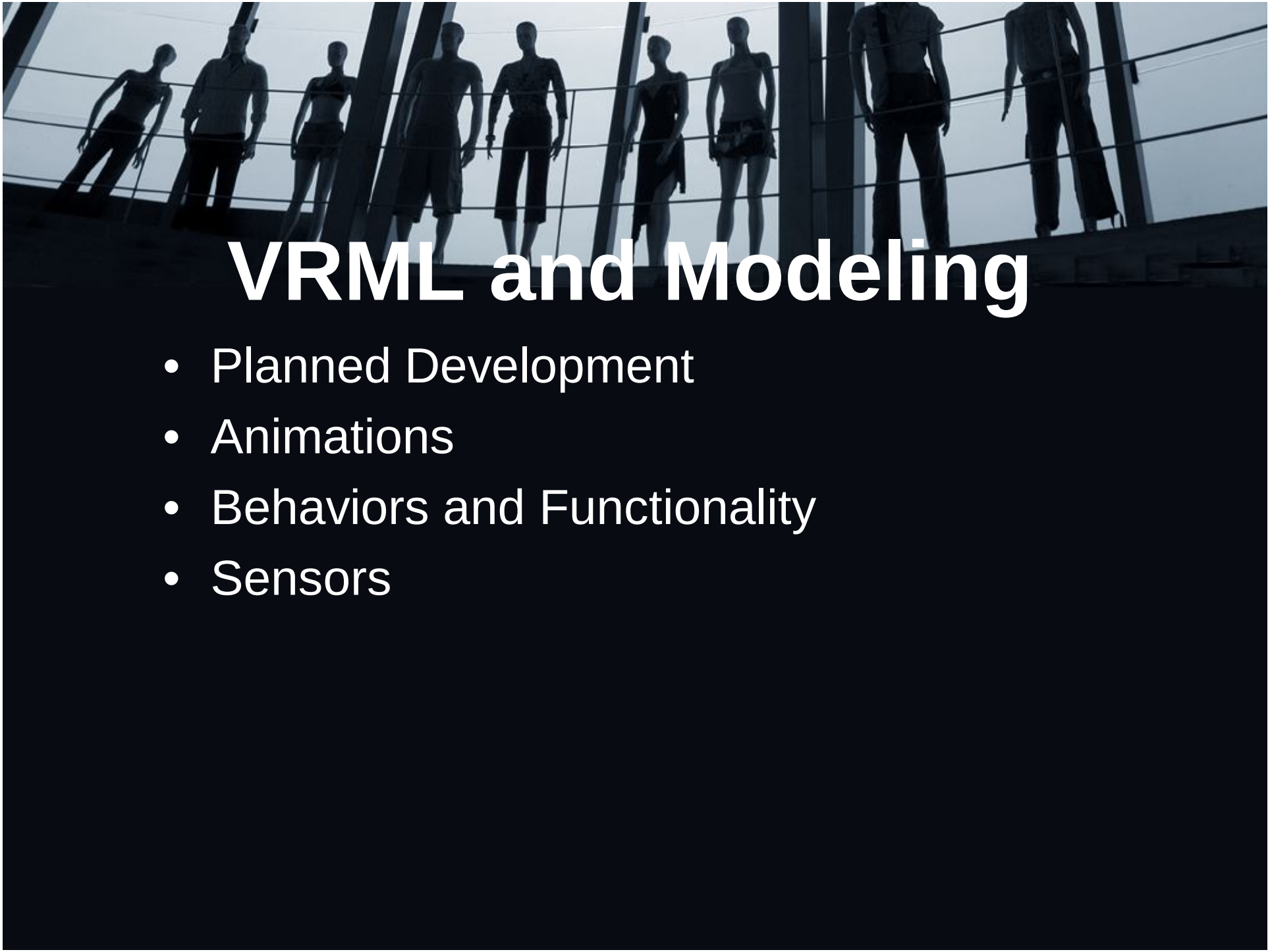
Simulated Virtual Restaurant

Café de Silva



Goals and Objectives

- Explore how three-dimensional computer modeling is being utilized to aid restaurant creation and development.
- Identify the advantages and barriers associated with virtual restaurant modeling and simulation
- Develop a pilot project to examine modeling and simulation through a VRE (Virtual Restaurant Environment)

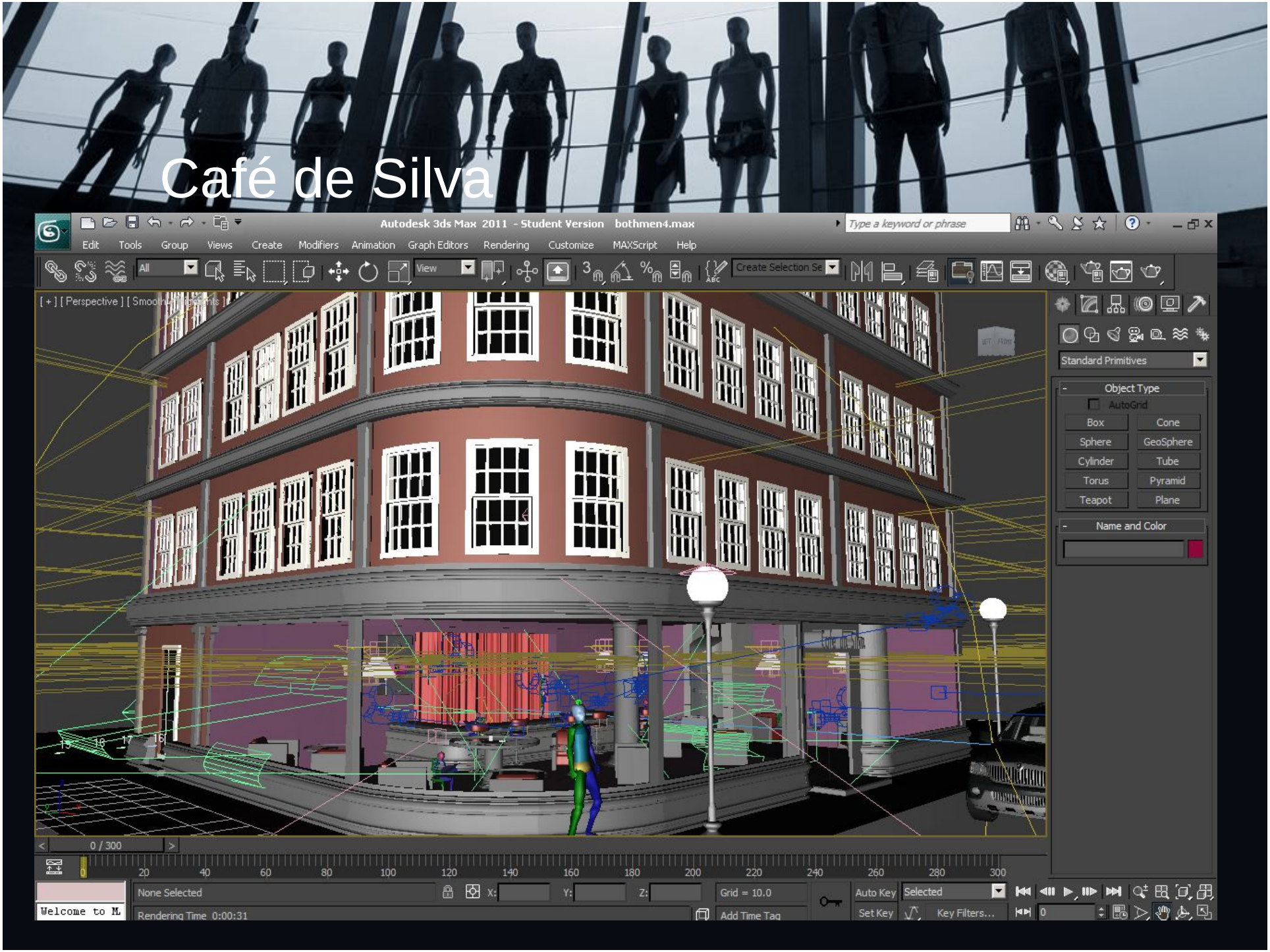


VRML and Modeling

- Planned Development
- Animations
- Behaviors and Functionality
- Sensors

Planned Development

- A restaurant displayed within a night setting modeled to encompass a complete interior and exterior scene with four floors.
- A detailed building (textures, lighting, etc.) with a café lounge at the entrance floor.
- Incorporate VRML behaviors and functionalities through 3Ds Max.


Café de Silva
Autodesk 3ds Max 2011 - Student Version bothmen4.max
Edit Tools Group Views Create Modifiers Animation Graph Editors Rendering Customize MAXScript Help
Standard Primitives
Object Type
AutoGrid
Box Cone
Sphere GeoSphere
Cylinder Tube
Torus Pyramid
Teapot Plane
Name and Color
0 / 300
None Selected
Rendering Time 0:00:31
Grid = 10.0
Add Time Tag
Auto Key
Selected
Set Key
Key Filters...
Welcome to M

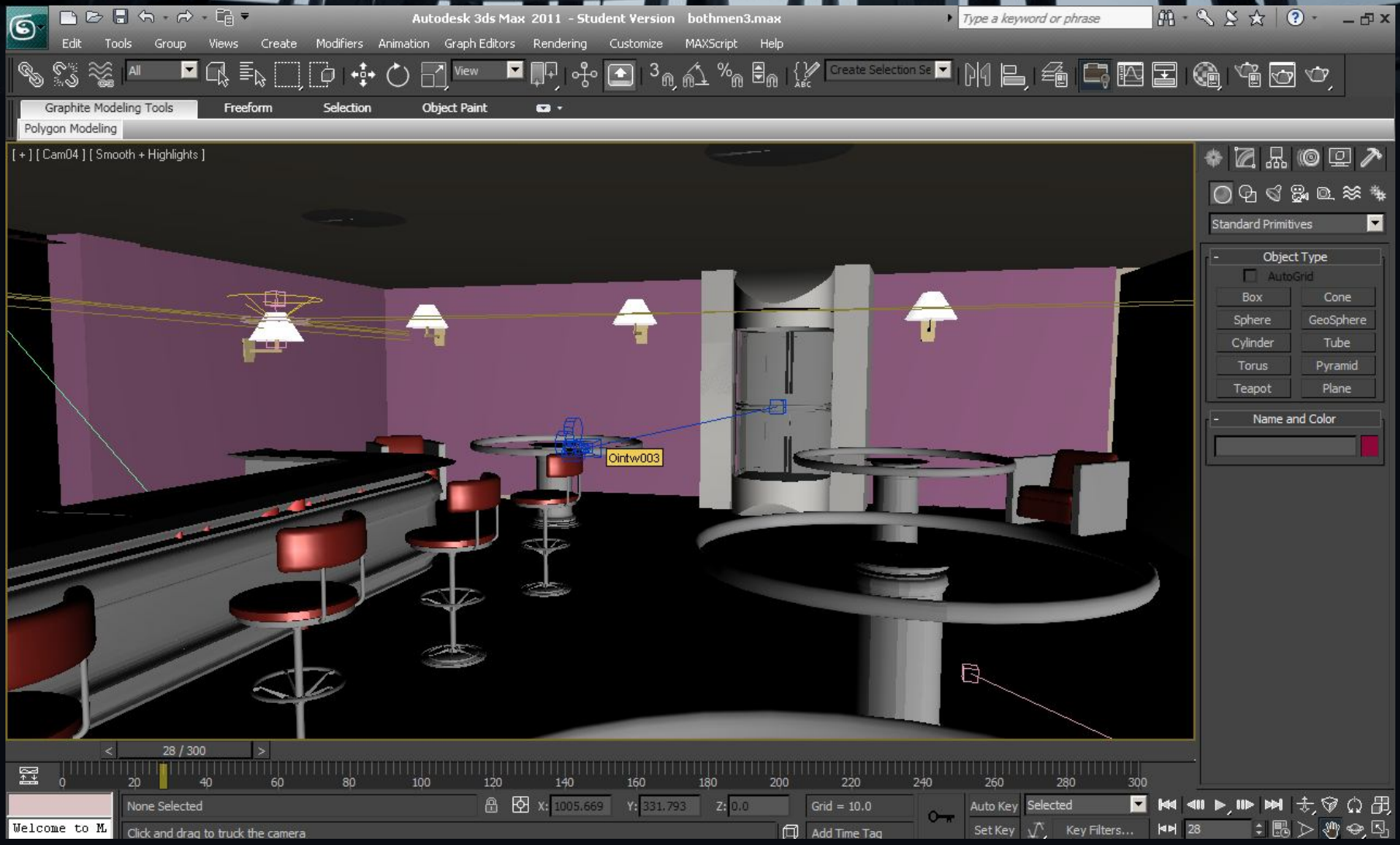
Café de Silva

First Floor


Autodesk 3ds Max 2011 - Student Version bothmen4.max
Type a keyword or phrase
Edit Tools Group Views Create Modifiers Animation Graph Editors Rendering Customize MAXScript Help
[+] [Perspective] [Smooth + Highlights]
Standard Primitives
Object Type
AutoGrid
Box Cone
Sphere GeoSphere
Cylinder Tube
Torus Pyramid
Teapot Plane
Name and Color
0 / 300
None Selected
Rendering Time 0:00:31
Grid = 10.0
Add Time Tag
Auto Key
Selected
Set Key
Key Filters...
Welcome to M

First Floor

Second Floor



Third Floor


Autodesk 3ds Max 2011 - Student Version bothmen3.max
Type a keyword or phrase
Edit Tools Group Views Create Modifiers Animation Graph Editors Rendering Customize MAXScript Help
Graphite Modeling Tools
Freeform
Selection
Object Paint
Polygon Modeling
[+] [Perspective] [Smooth + Highlights]
Ztab018
Standard Primitives
Object Type
AutoGrid
Box
Cone
Sphere
GeoSphere
Cylinder
Tube
Torus
Pyramid
Teapot
Plane
Name and Color
Group002
28 / 300
1 Group Selected
X: 885.422
Y: 372.717
Z: 0.0
Grid = 10.0
Auto Key
Selected
Set Key
Key Filters...
Welcome to M
Click and drag to rotate the view. Clicking in the tabs constrains the rotation
Add Time Tag

Third Floor

Fourth Floor

Fourth Floor

Animation

- Biped
- Speaker
- Vehicle
- Elevator
- Furniture

Biped

Biped

Biped

Vehicle

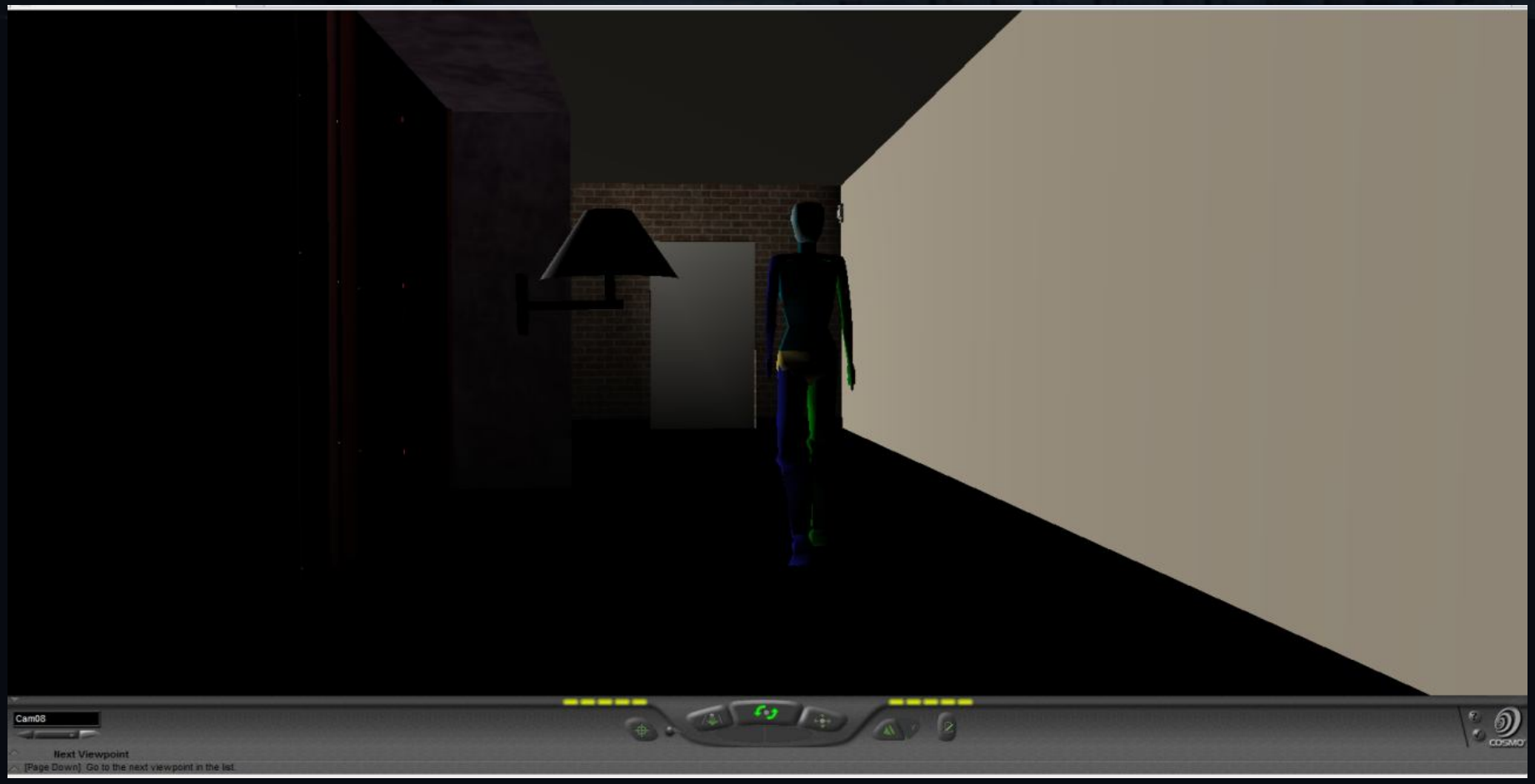

Cafe da Silva
Cam02
Viewpoint List
Display a list of interesting places in the world (viewpoints).
COSMO

Speaker

Elevator with VRML Touch Sensor

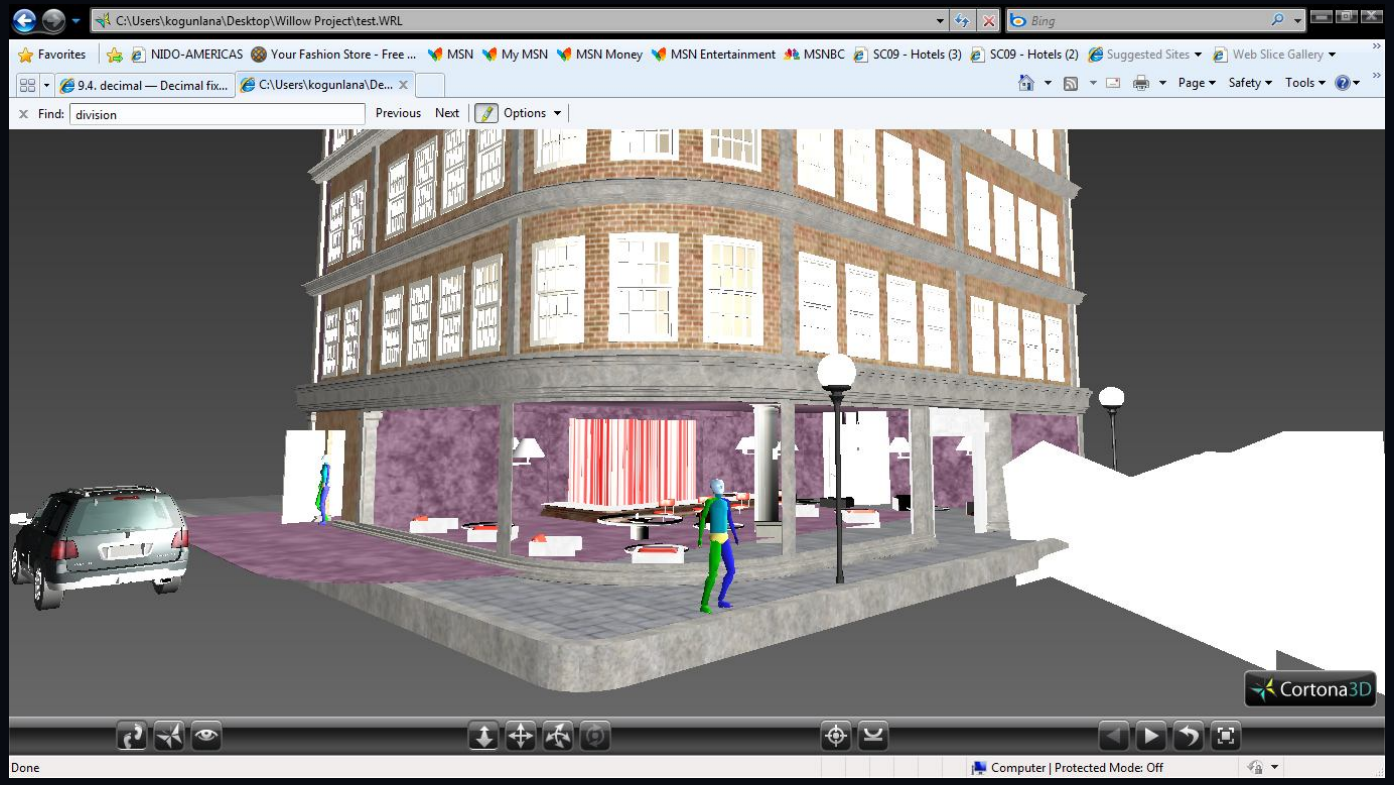
Curtain with VRML Touch Sensor

Door with VRML Touch Sensor

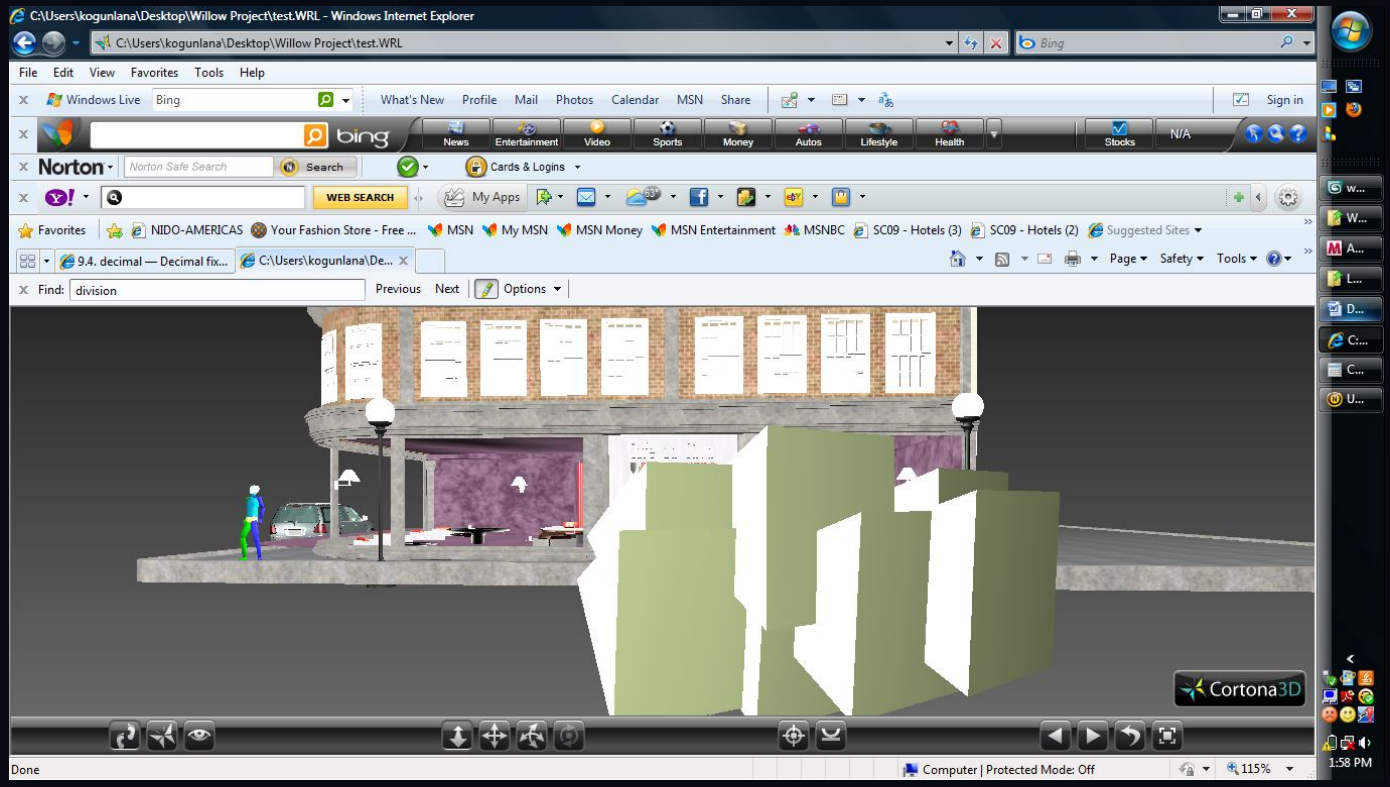


Door with VRML Touch Sensor

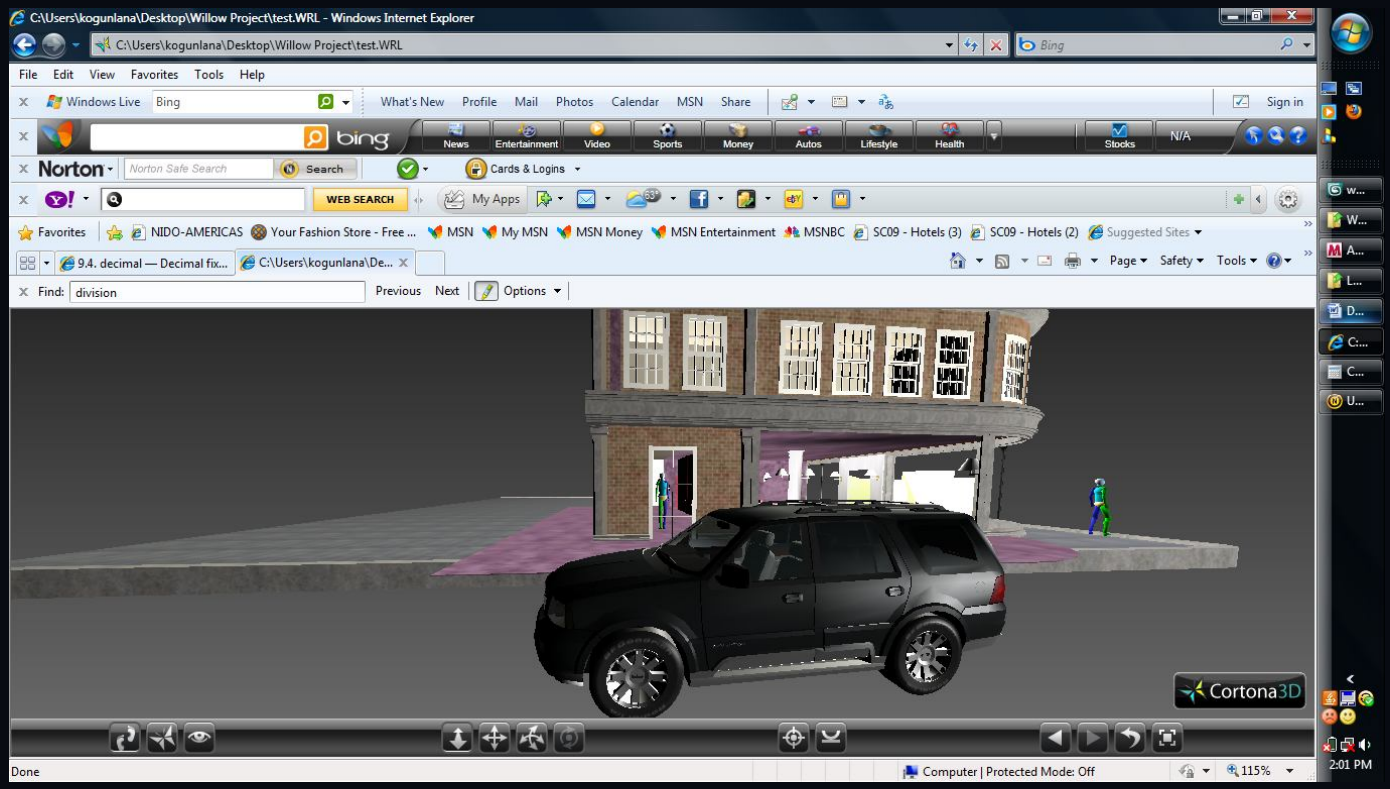
Crowd Behavior outside restaurant



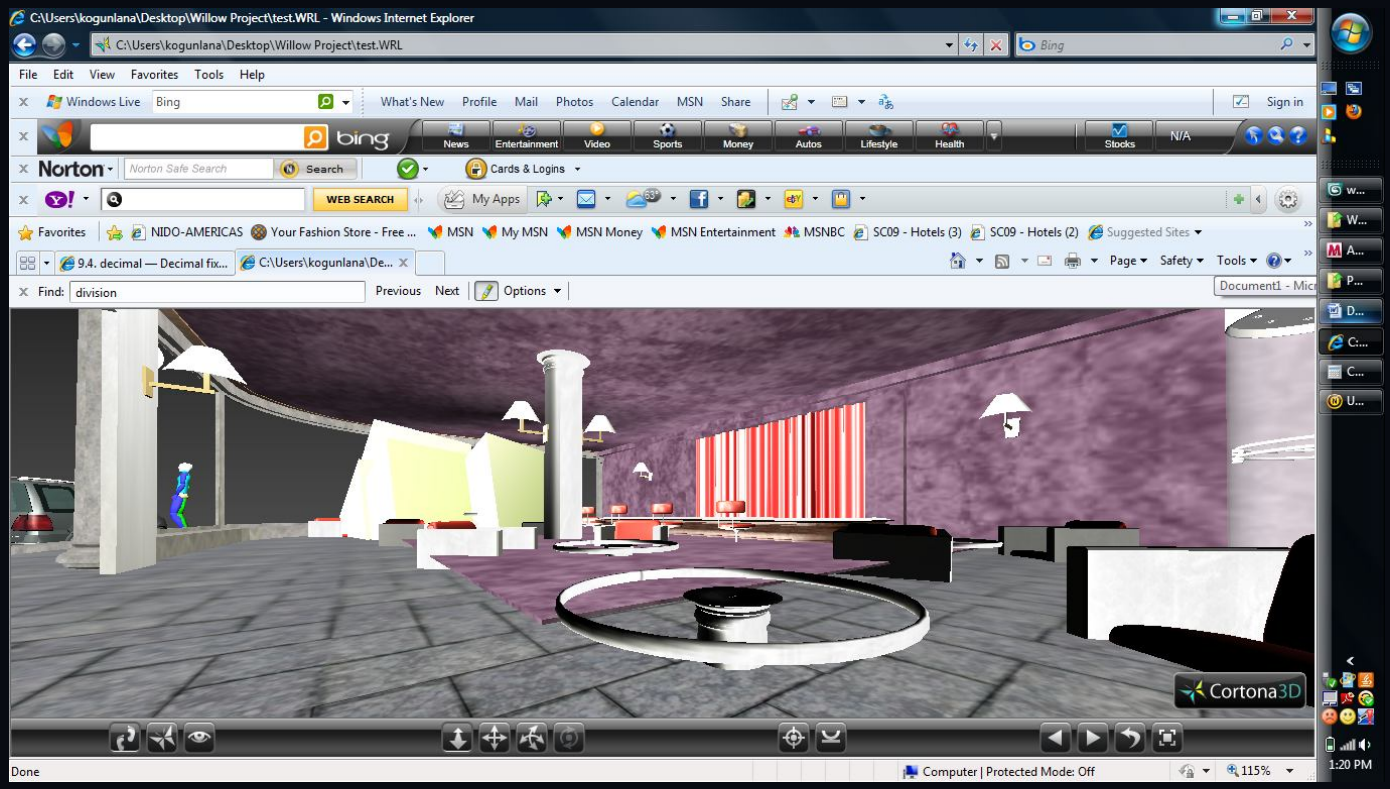
Crowd Behavior outside restaurant



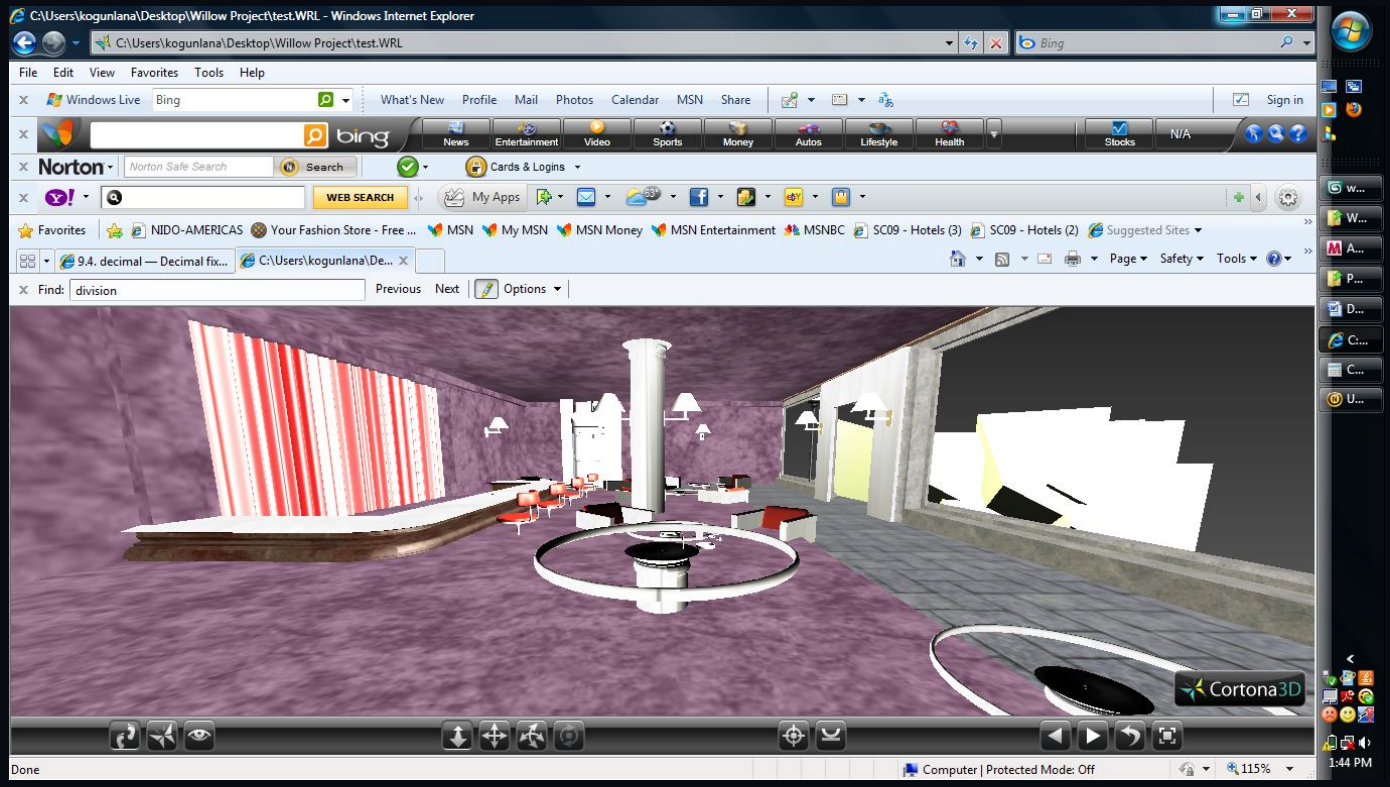
Crowd Behavior outside restaurant



Crowd Behavior inside restaurant



Crowd Behavior inside restaurant

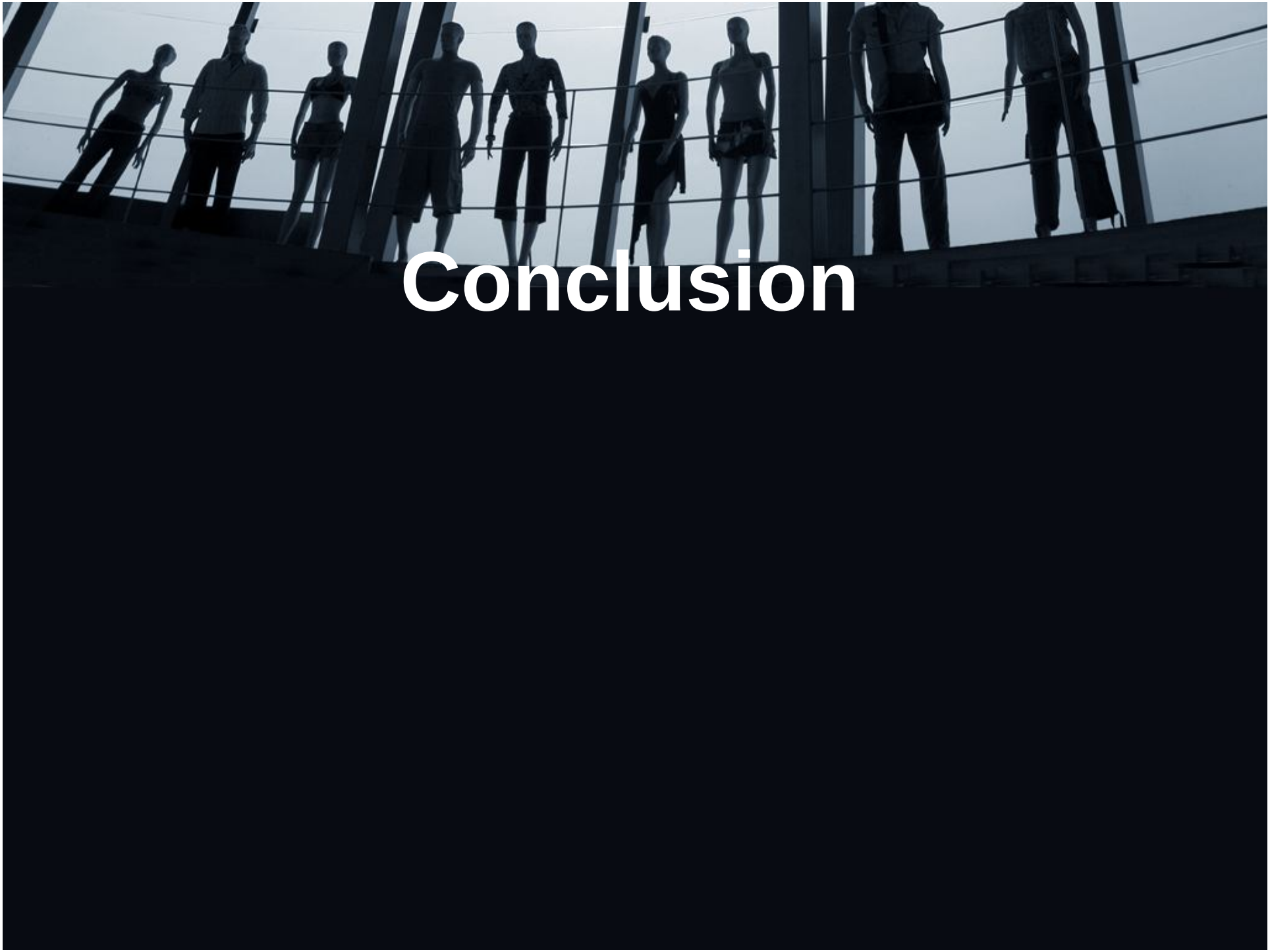


Advantages and Barriers

- Advantages of Adopting VR Restaurant Modeling
  - **Enhanced communication and easy to explore restaurant context**
  - **Freedom of movement (movement between different scales and levels of details)**
  - **Different levels of immerseveness.**
  - **Ability to attach qualitative data to the models**
  - **Portability**

Advantages and Barriers

- Barriers of Adopting VR Restaurant Modeling
  - **Technical Issues**
  - **Organizational Issues**
  - **Ownership of the models**
  - **Privacy and security**
  - **Time constraints**



Conclusion

References

- http://www.renderosity.com
- http://thefree3dmodels.com
- http://www.vrmlsite.com
- http://www.emory.edu/BUSINESS/vr.html
- http://usa.autodesk.com

Demo