

(i) Overview: In beginning of the manual, you should succinctly describe the key theme and main ideas of your virtual world to inspire the user to try your program, including a number of appealing snapshots from your program.

Key theme:

You are a hired driver who gets loads and loads of money for transporting different types of passengers.

You work 4 jobs because you bought a new car, lost all your money to the stock market, got robbed, and had to pay Biola all of your money.

In the morning you are driving kids to school.

In the afternoon you are driving a charter bus and pick up public passengers. Your mother talked around at church and got you a connection for this job. She is so nice.

At twilight you are driving an animal control bus because your brother in law gave you a good reference for the job. Pick up the animals.

At midnight you are driving a garbage truck and picking up garbage. This job you got yourself, but it cost you dearly. You traded your favorite pair of shoes for the hire.

The main idea is to gain the most points possible. There is a limit, but you will have difficulty getting to the limit. Serve the people and get them to where they need to go. You will be gaining levels

and experience, but your real reward will be in heaven.

After you pick up every passenger for one level, the level will increase and you will start your next job.

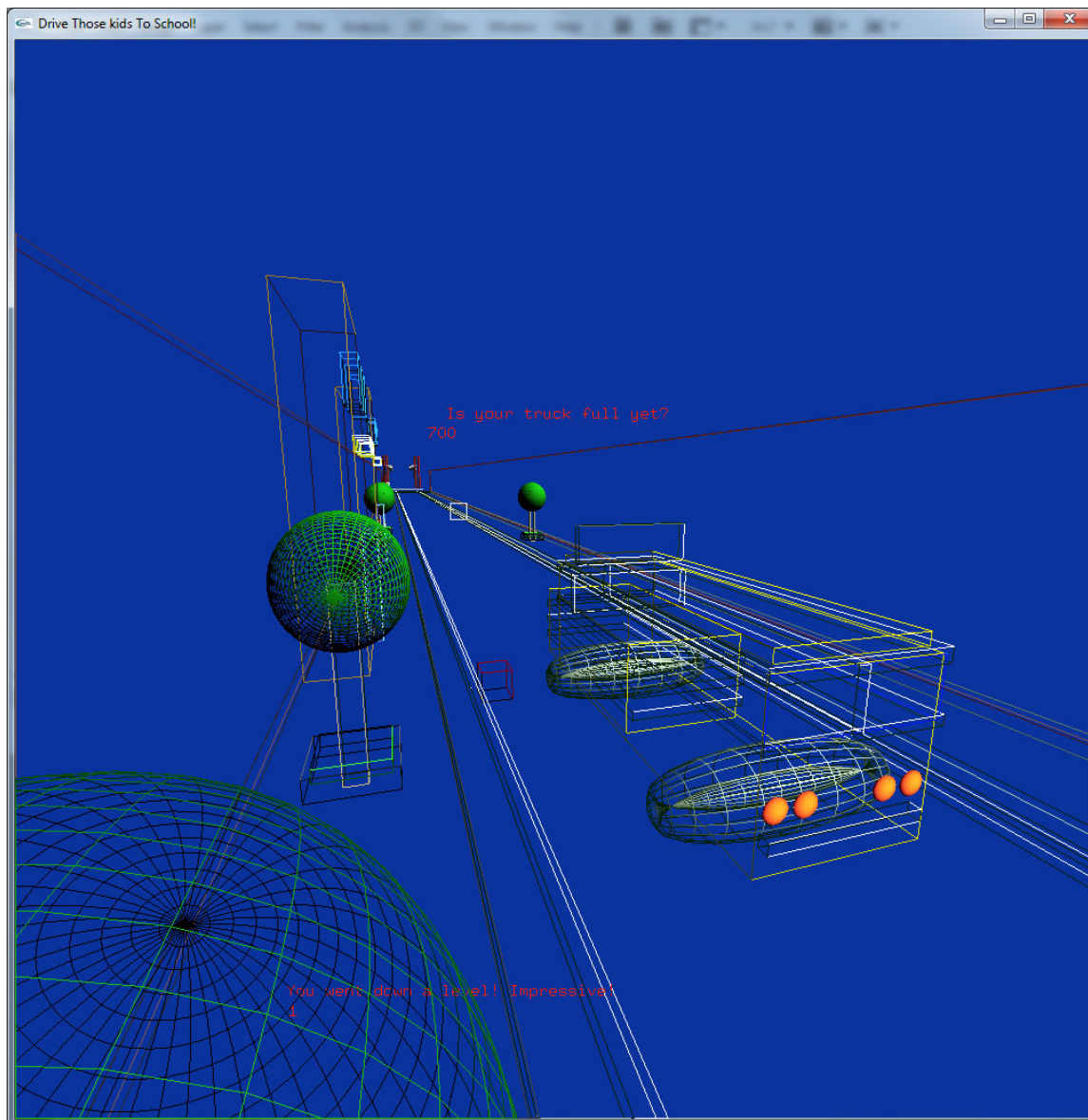
Every passenger is worth 100 points. Gain as many as you can before you go crazy.

There are 7 different level styles, but once you finish all seven, you can continue to play the last level until you don't enjoy the game anymore.

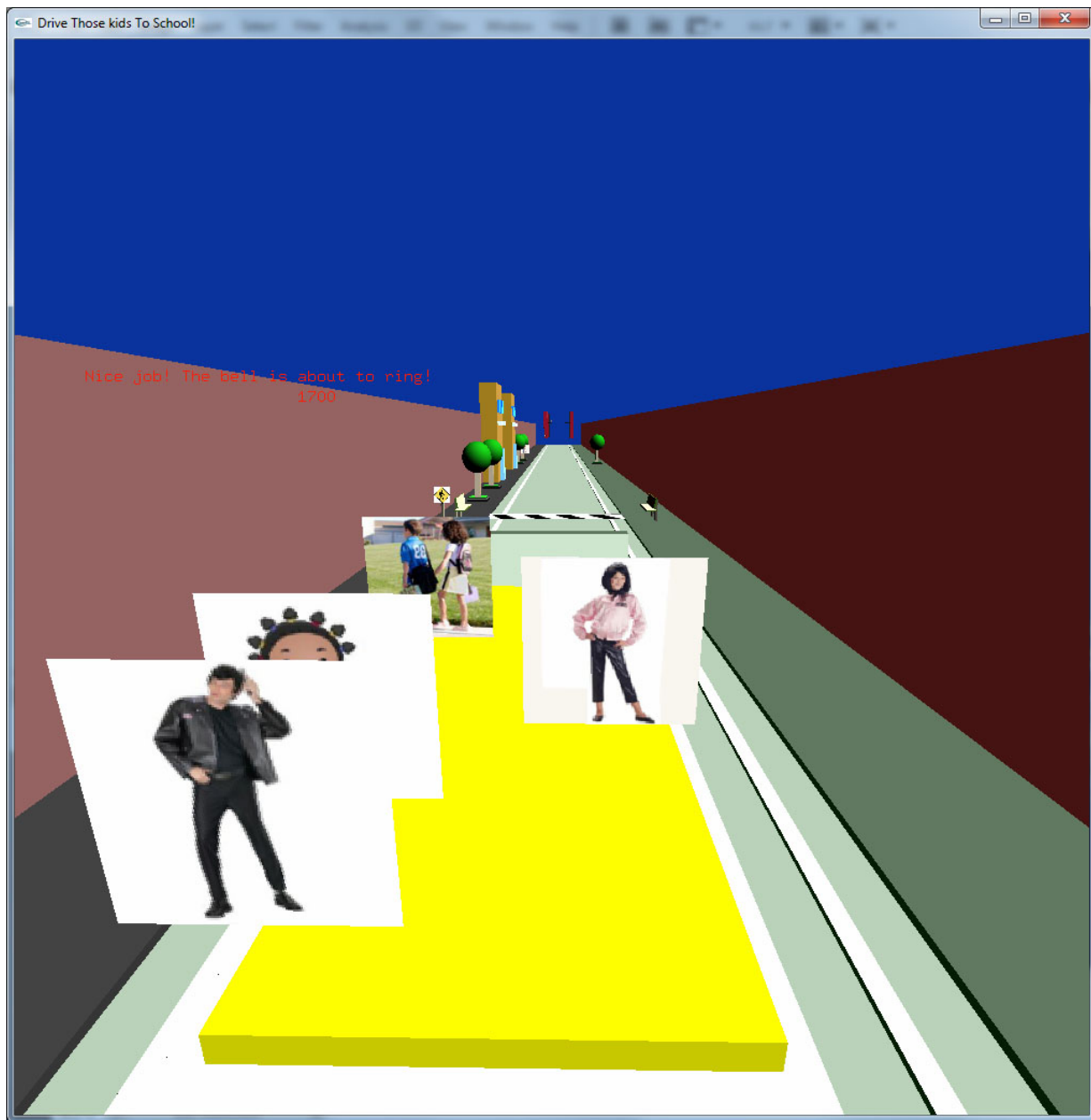
Here are the screenshots of the levels:

Level 1:

switches between lines and polygons. Did you get enough sleep last night? Maybe not.

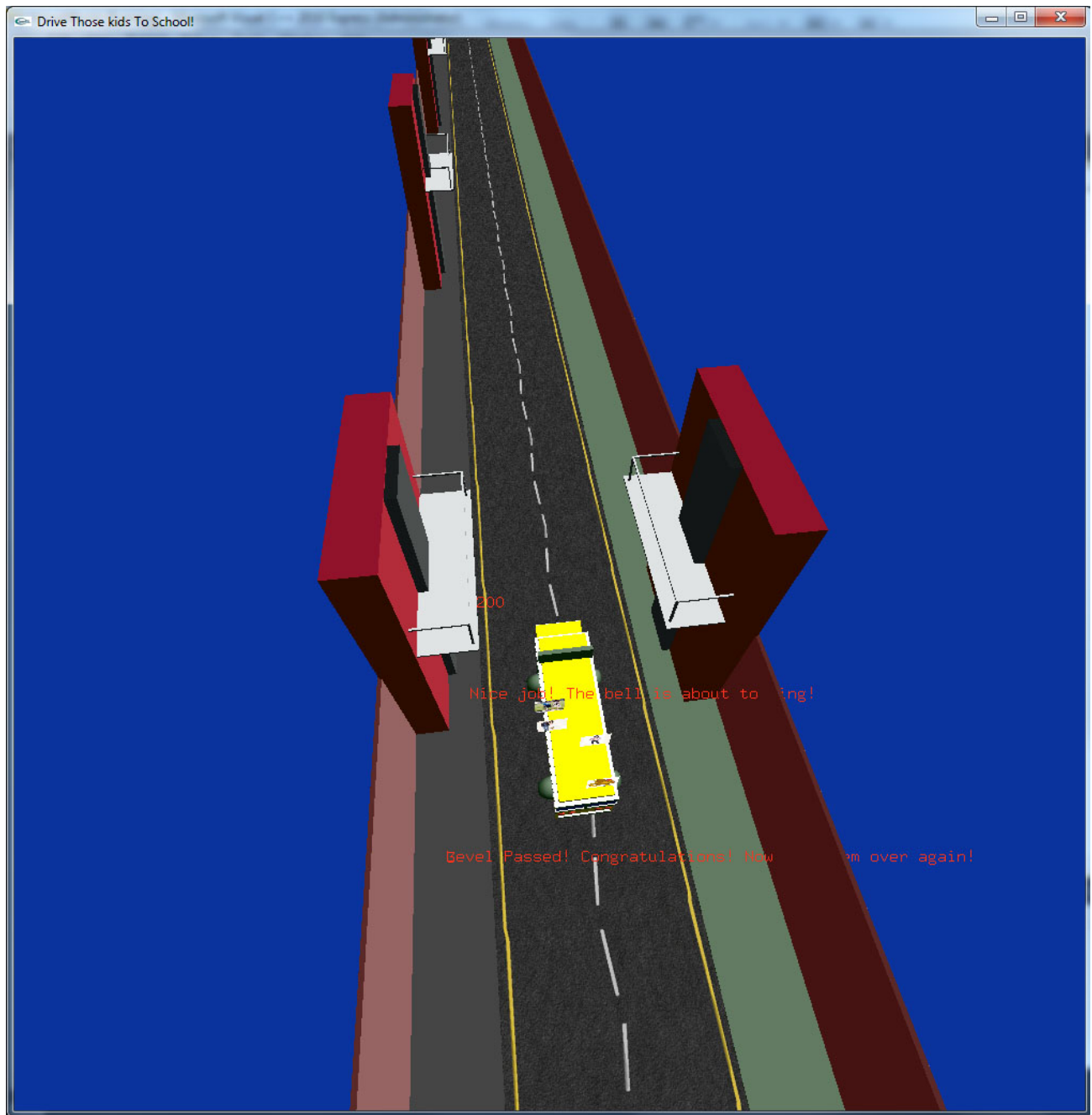


Level 2:
Picking up the kids for school in the
morning.



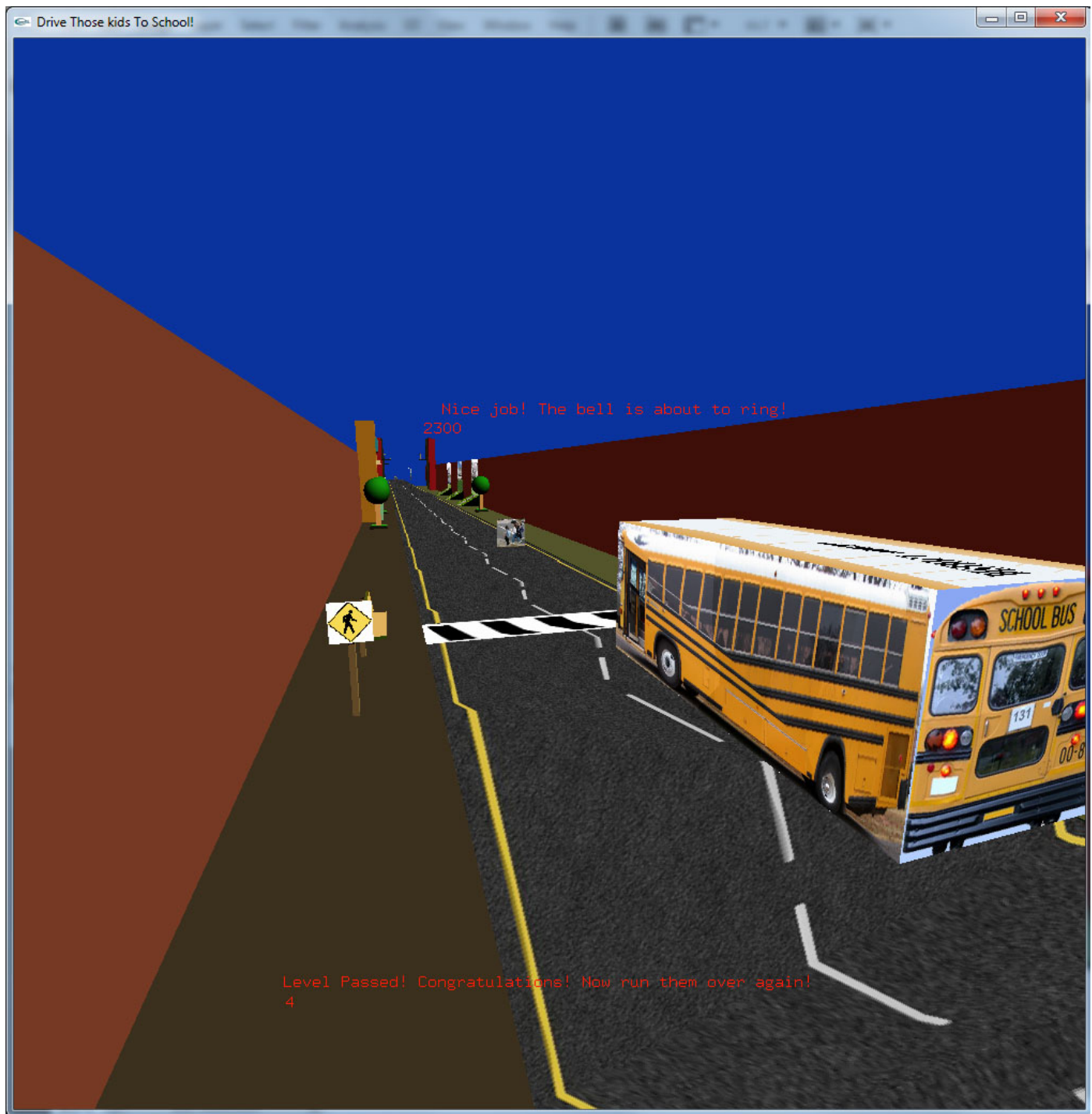
Level 3:

Pick up the kids again, but you get a road this time instead of the slab of grey road!

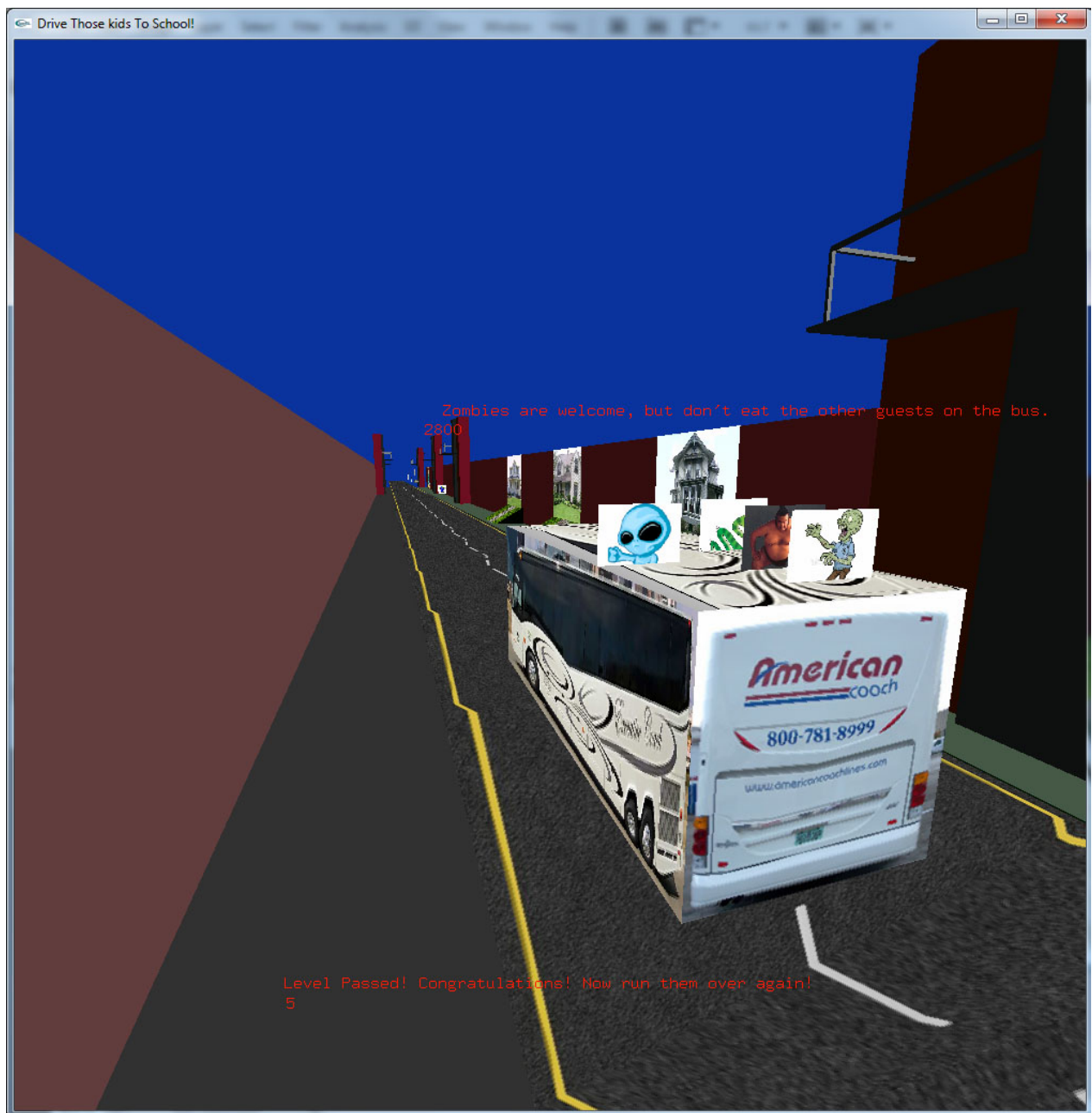


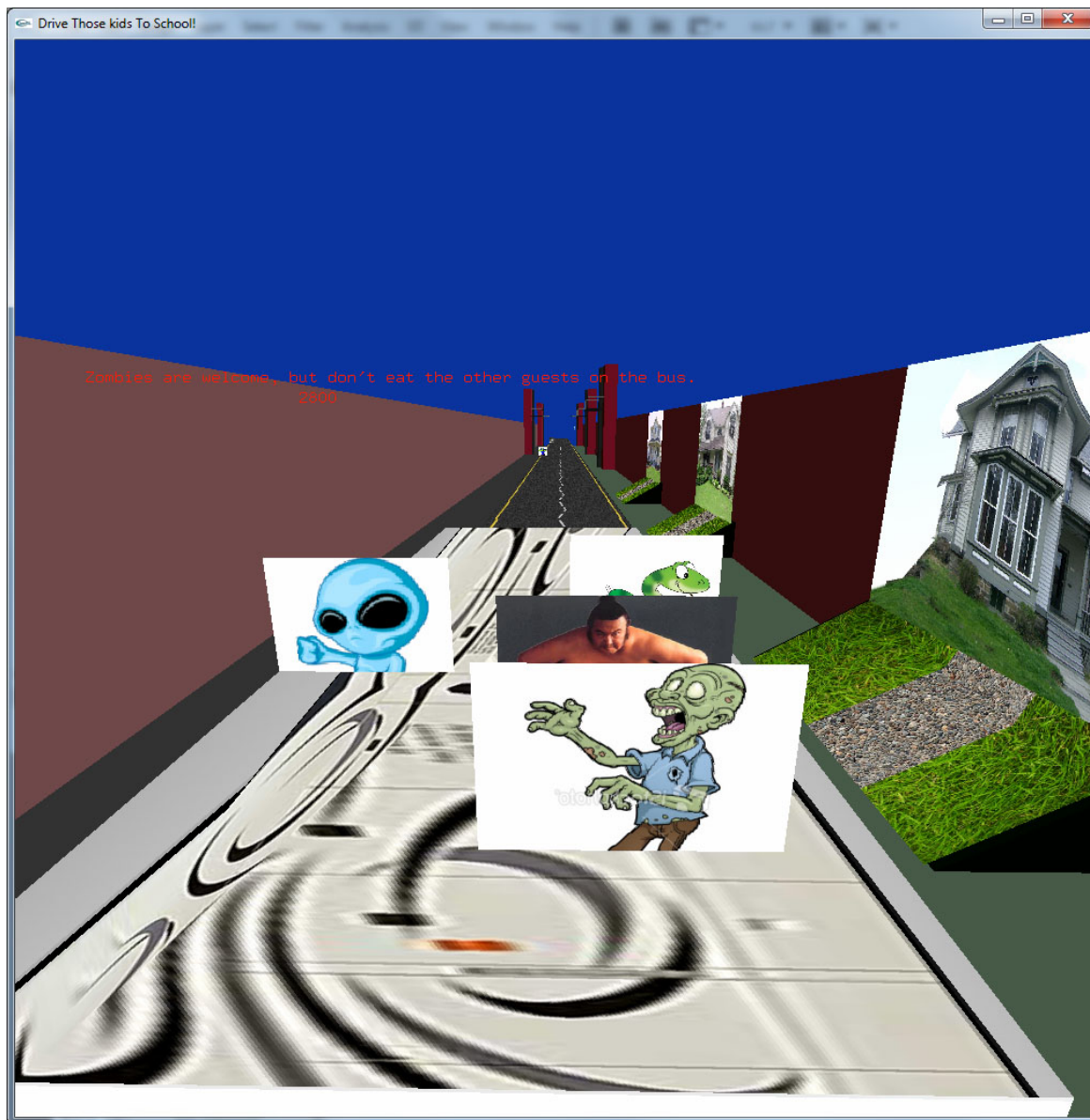
Level 4:

This is the last bunch of kids! Pick them up with your styling bus!



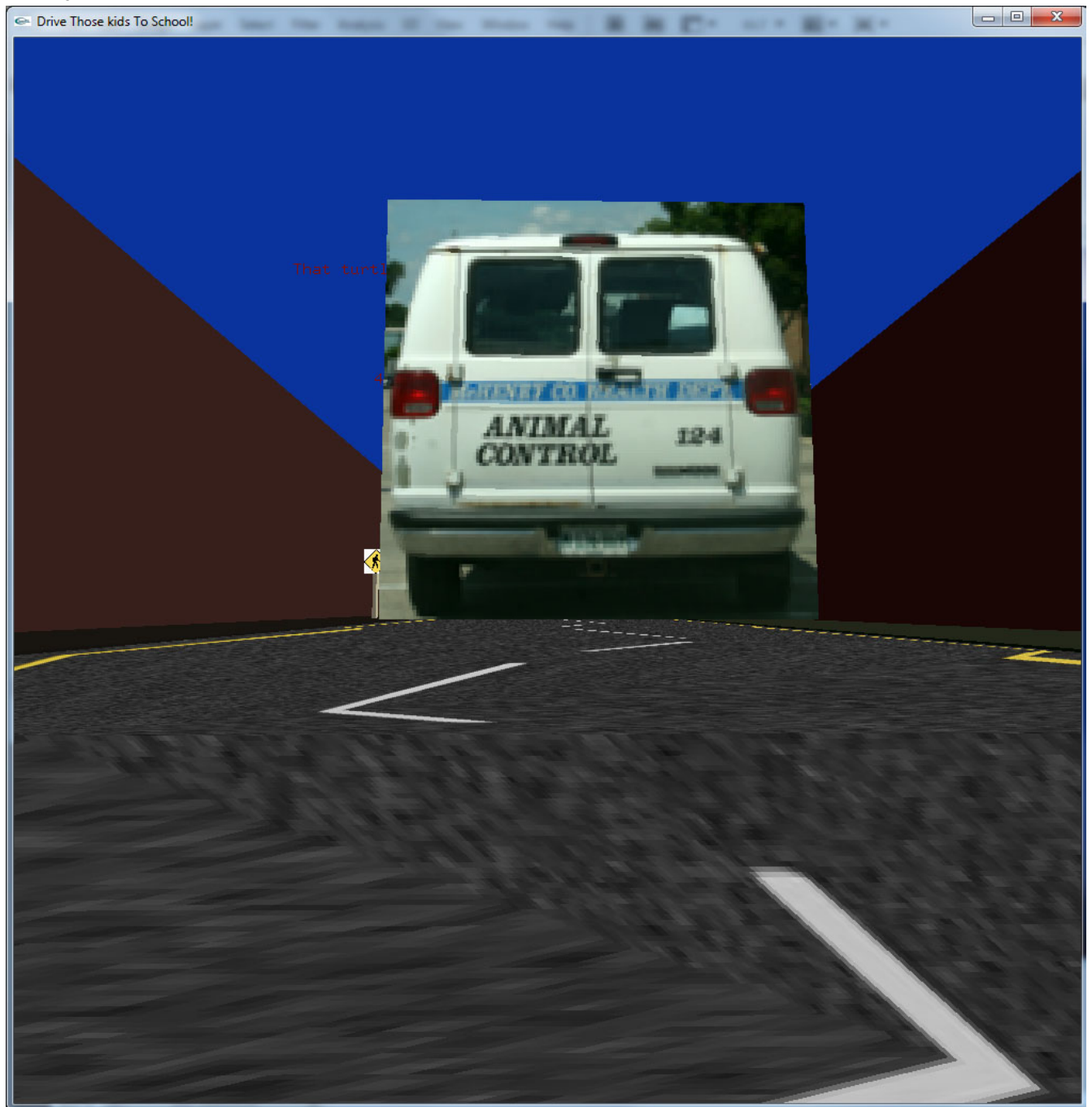
Level 5:
All the kids are at school, so now pick up the general public.





Level 6: The public is where they need to be, so now pick up the

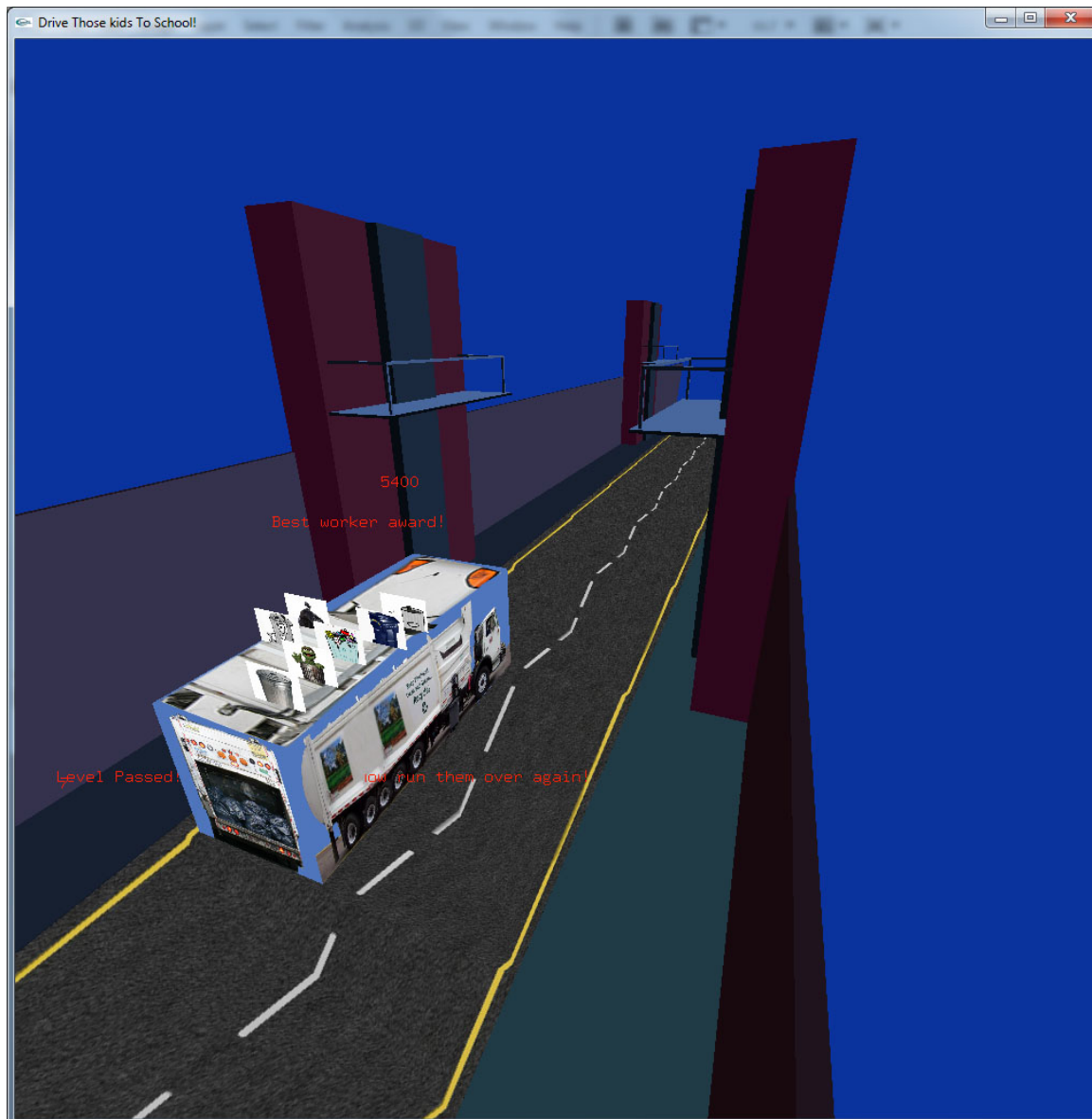
stray animals!



Level 7:

Clean the streets! Pick up all the trash at night!





(ii) **Commands:** The manual should then inform the details

of how the user can interact with the virtual world through the keyboard and the mouse.

keyboard:

Make sure the Num Lock is on

8 is move faster/forward

2 is move slower/reverse

4 is left

6 is right

/, *, -, + are all preset camera options

q, If you would like to see the virtual world while rotating

w, if you would like to stop rotating

x,y,z are to choose a different rotation axis

j,k are to increase/decrease rotation of camera while spinning

i,m are to increase/decrease radius of camera while spinning

SPOILER!

[is to cheat and increase your level

] is to cheat and decrease your level

END SPOILER

mouse:

right click to see menu

to move this selected object: click and drag to play with the position of a red cube in the world.

to move this selected camera: click and drag to move position of camera

to move looked at point : click and drag to move direction camera is looking

(iii) Self evaluation: In the end of manual, very succinctly explain how your implementation fulfills the [specification and requirements](#) of the project.

- **Requirement A1 (Complexity of the environment):** It must be a colorful and somewhat photo-realistic 3D environment. For example, you can model your room, an area of the campus such as the bell tower or the fountain neighborhood, the computer science alcove, or other places of significant complexity. There should be at least **twenty** objects in the scene (for example, desks, chairs, floors, walls, ceiling, lamps, books, bookshelves, windows, curtains, hills outside the windows, doors, closets, teapots, cups, vases, vessels,...)

There are more than 20 objects.

10 people
Tree
5 vehicles
3 buildings
2 roads
crosswalk
wall

- **Requirement A2 (Dynamics in the environment):** Your virtual environment should have at least **two** mobile objects that either automatically move around the environment all the time or will be triggered into dynamic movement when the user interact with the environment in some way. For example, you may have a toy vehicle or a wumpus monster automatically moving around all the time, or you may have the toy vehicle or

wumpus monster escaping from user when the user is close to it in the virtual world.

the bus moves

the people move

the buildings, and environment moves.

- **Requirement A3 (Rewarding mechanism in the environment):** Your virtual environment should have a mechanism for rewarding or encouraging the user for exploring the environment. If you want, you can well craft the rewarding mechanism to create an interesting 3D game essentially. For example, the user may receive a number of points to begin with, finding an energy charge may gain points, while jumping over an obstacle or driving away a monster by firing a shot may consume certain some points. Or for simplicity, you focus more on the modeling of the photo-realistic aspect of virtual environment and just include a couple of simple incentives like finding a hidden treasure into the environment .

points and levels

pick up all the passengers

- **Requirement A4 (Lighting):** You must have at least one light source in the environment, and set different material properties to some of the geometric objects to create variation of colors, shininess, and or other attributes.

All objects deal with lighting

- **Requirement A5 (Texture mapping):** You must apply texture mapping to some surfaces. For example, you may consider texture mapping used on the ground, the floor, the walls, the ceiling, the desks, and so forth.

people

vehicles

sign

crosswalk

graffiti

road

- **Requirement A6 (Automatic bird-eye view of the environment):** You must provide some mechanism of automatic movement of the camera (for example, rotation of camera around a circle or a sphere while looking at the center of the environment) to provide an easy dynamic overview of the environment.

q,w,i,m,j,k all do this

- **Requirement A7 (User interface supporting manual walk-through):** You must provide a convenient user interface (through mouse and/or keyboard operations) for the user to manually move around (i.e. change the location of the camera) and to look at the environment in flexible ways (for example be able to change the focus point they look at, to zoom in and room out by changing the perspective angle).

mouse menu functions

(iv) Bug list: Provide a list of know bugs or flaws in your current implementation.

the rotation of the x, y, z are not flawless.

You can overflow the points at the 2147483647

The text is not always visible

(v) User feedback: Find someone to play with your program and write a paragraph of their comments on their experiences at least a classmate, a friend or family

will allison, ryan hall, kevin chin, Ashley Davenport.

they all enjoyed it. enjoyed the movement of the bus. The comments are also a strong point. A weak point is the displayed text. Very fun to see the different vehicles. the buildings are fun as well.

(vi) Permission for accessing the executable: Write down some statements about whether you permit the department to post your executable as a demo example or a link to your own site to get to your executable for future prospective students or students in the computer graphics class.

Yes. I give you permission to post my exe online. I gave you two zip files. One that is the exe zip and one that is the code and project file.