CSC8502 Coursework 2019/20

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Keyboard and Mouse Controls

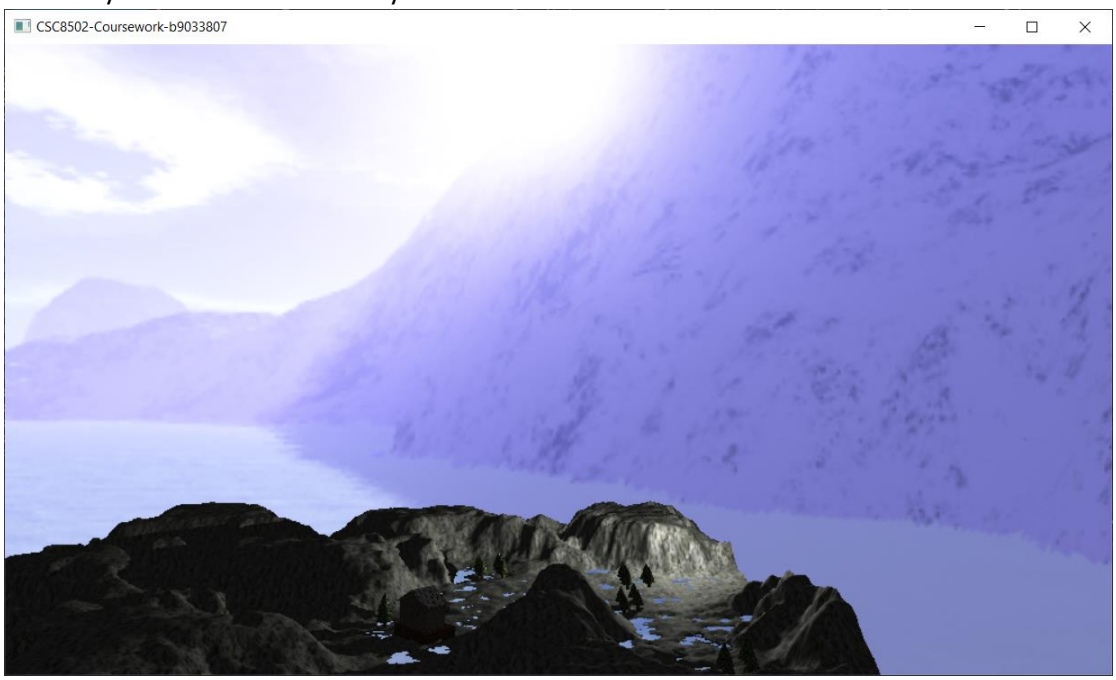
Navigation/camera controls

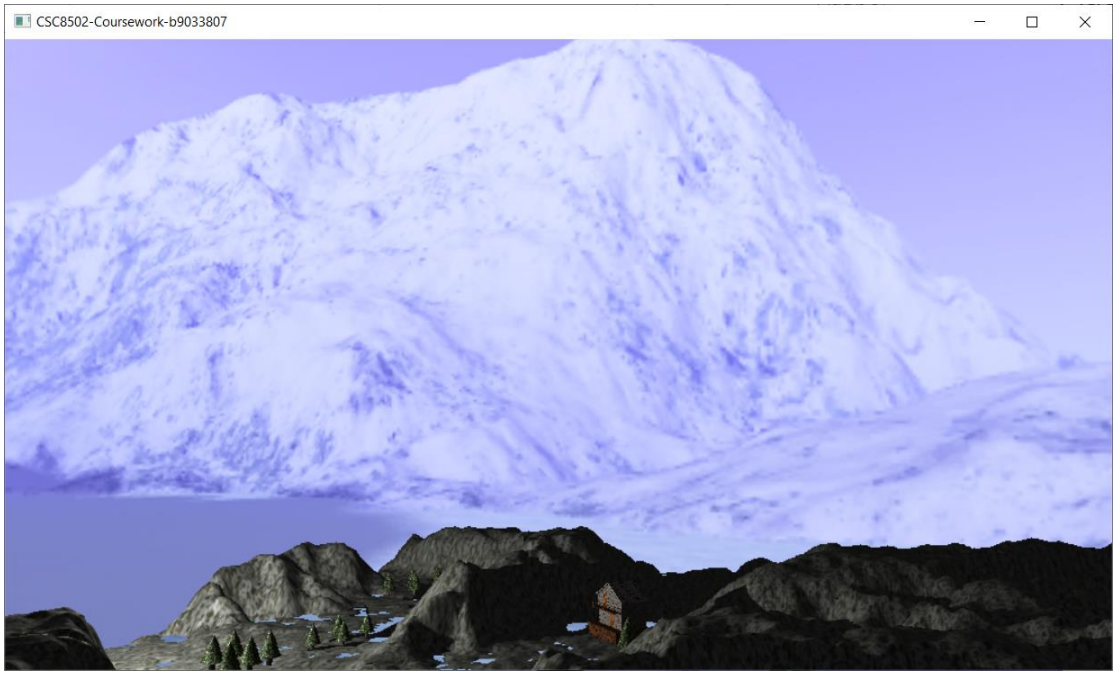
W	move forward
S	move backward
A	move left
D	move right
move mouse to the left/right	look left/right (increase/decrease yaw)
move mouse forward/backward	look up/down (increase/decrease pitch)
↑	move camera higher
↓	move camera lower
C	enable/disable automated camera movement
1-9	move camera straight to the pre-set (n) position
ESC	closes the window and terminates the program

Descriptions and screenshots

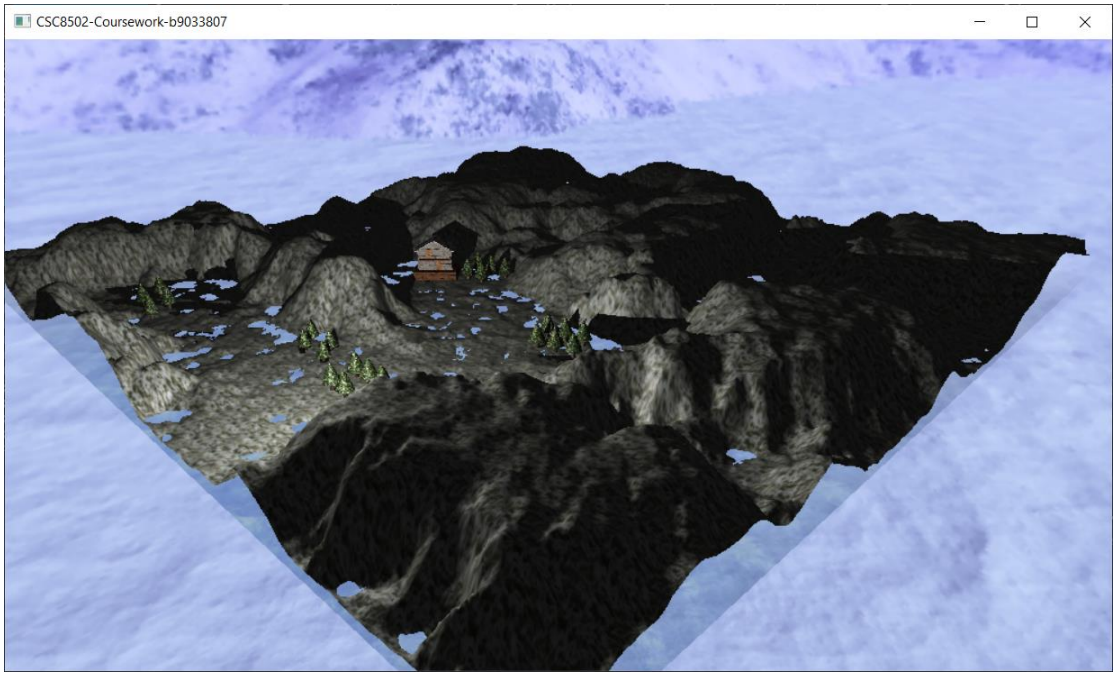
The scene includes :

- a snowy-mountain seamless skybox

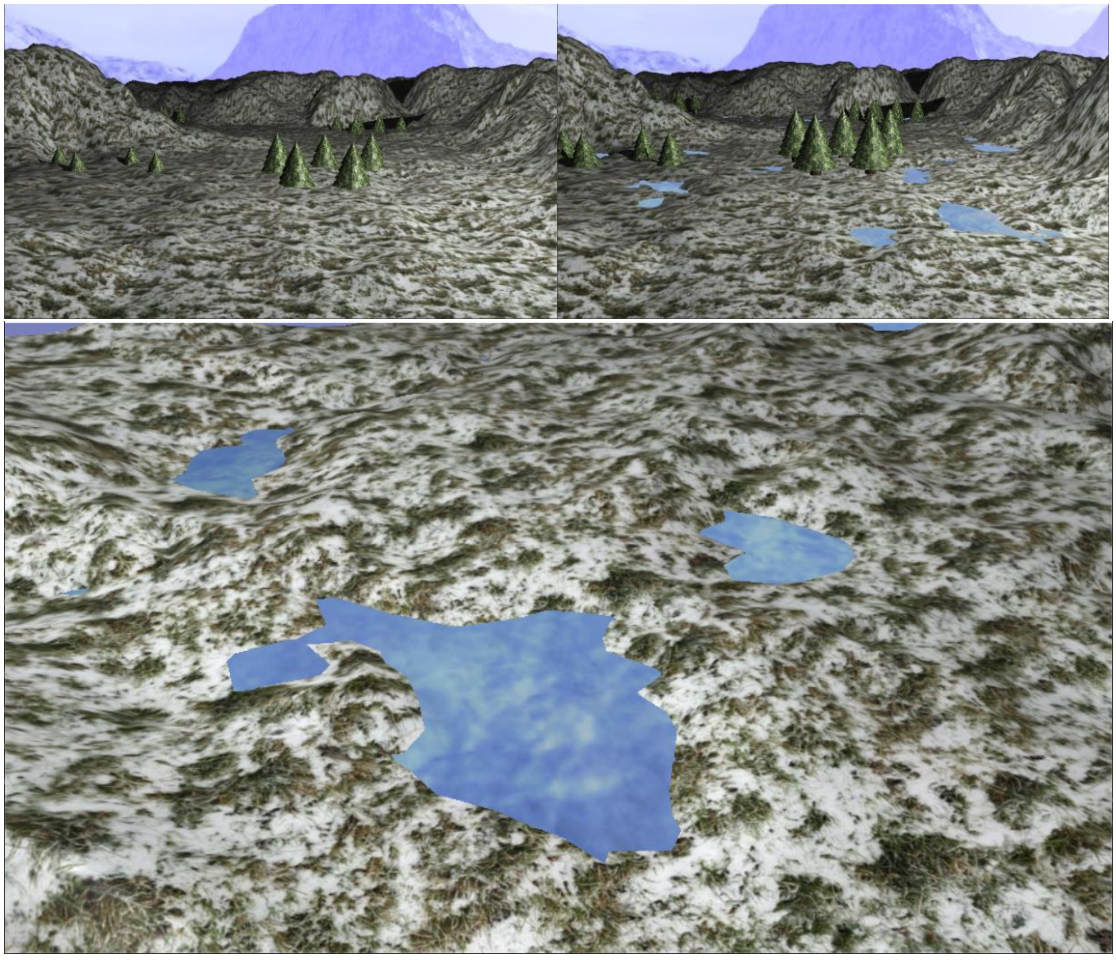




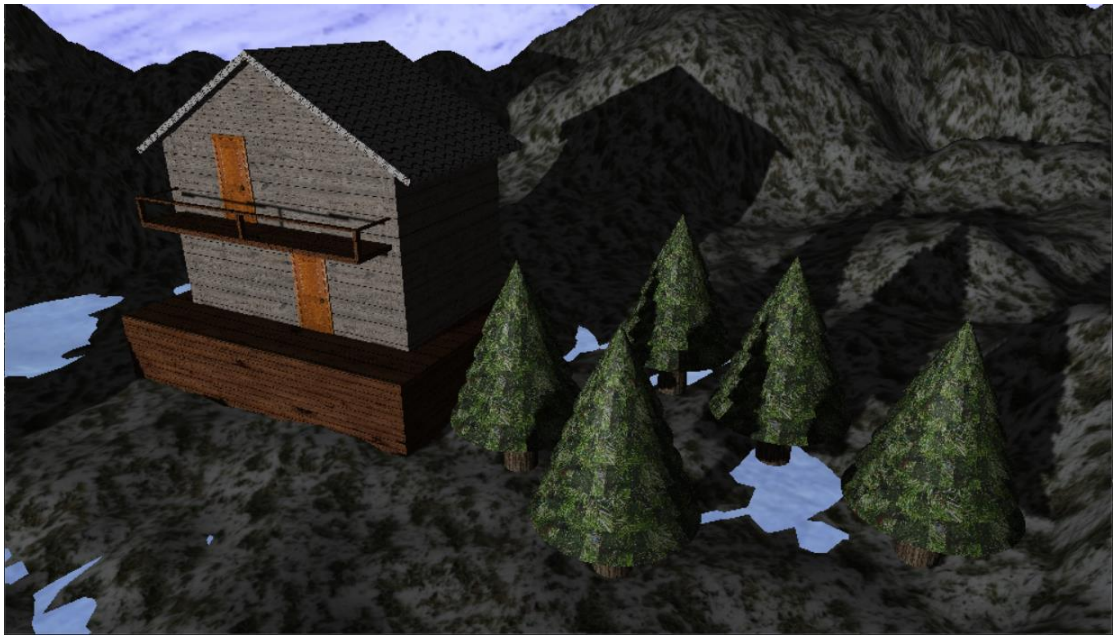
- a heightmap with texture of grass with snow on it, a bump map, to create nice more realistic lighting around the surface and shadows from itself and other objects projected on it

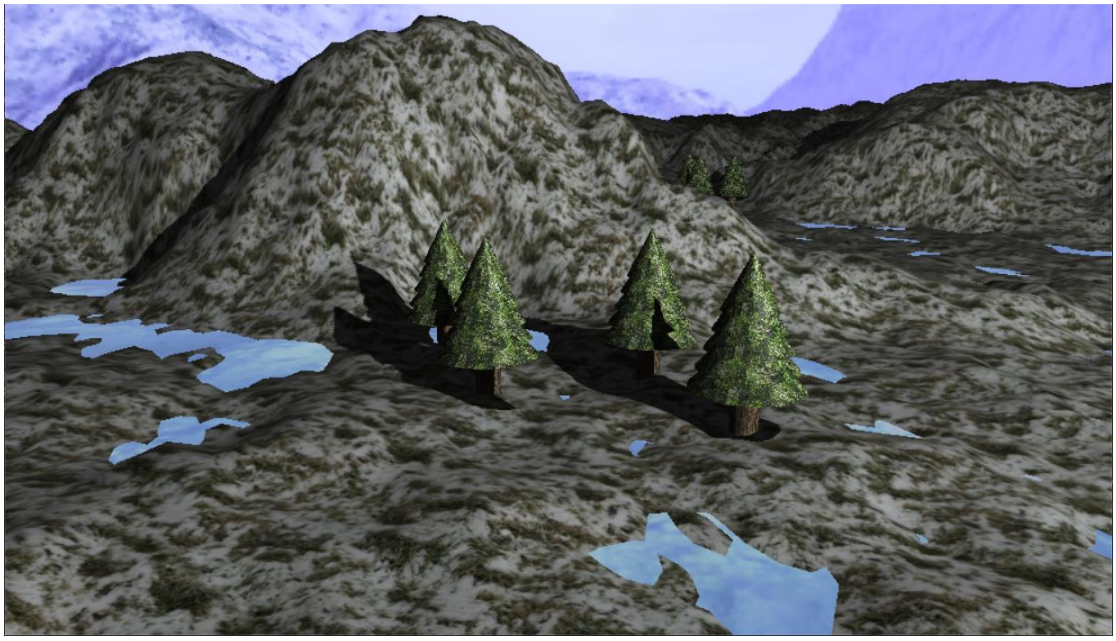


- a water plane that has texture, transparency and reflections made from a cubemap, rises progressively to create small ponds on the heightmap and at the same time, its texture is rotated around z axis creating the effect of circulating water



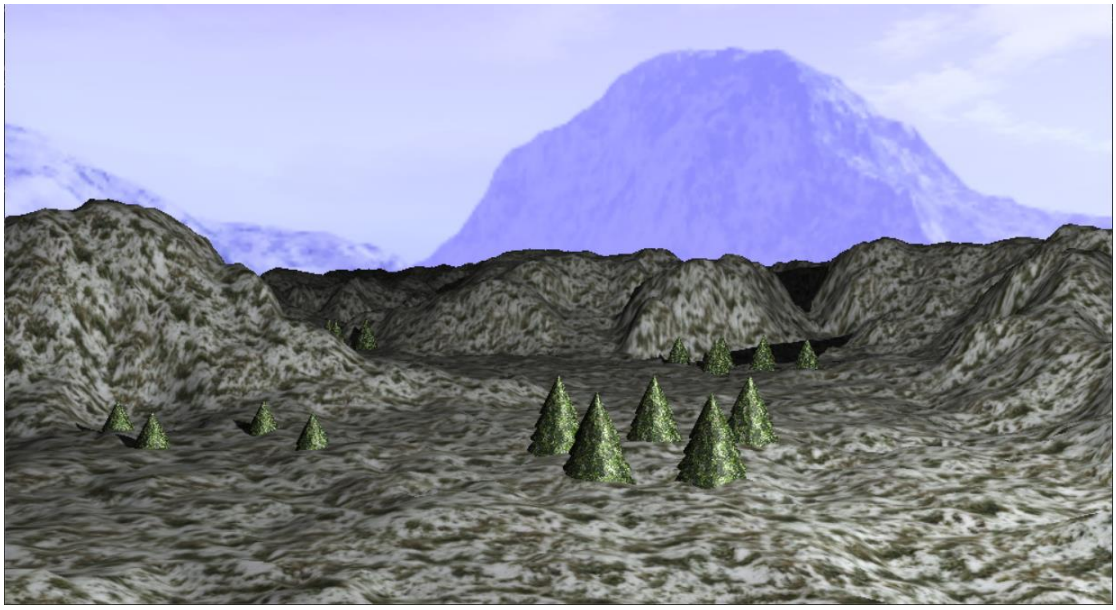
- a single-point light almost-positioned to look like it is the sun from the skybox (visible in the first screenshot) casting shadows all over the place

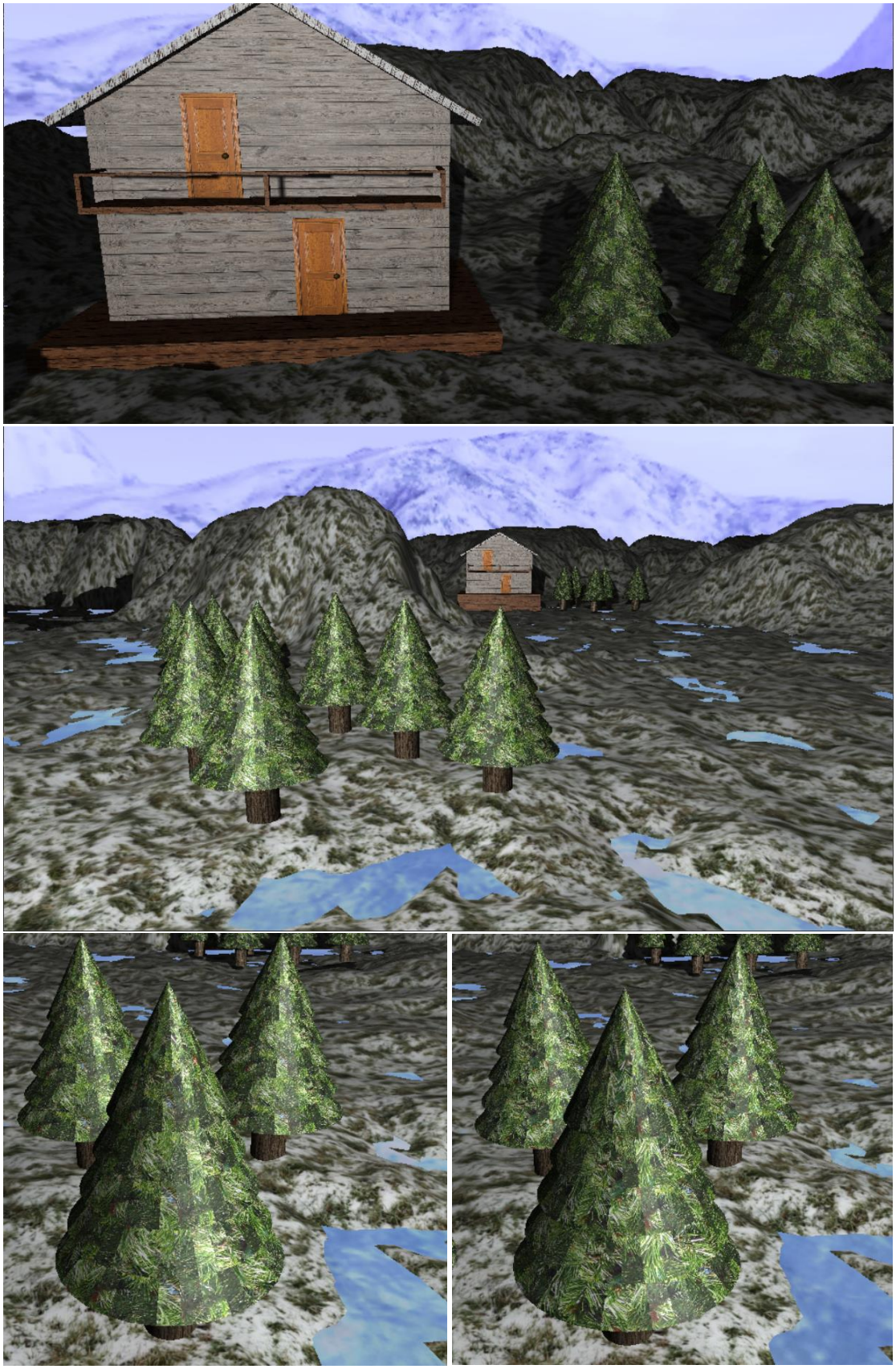




- a camera that is either manually controllable, or it follows a pre-defined trace around the scene and provides the user the ability to move in any if the trace's positions, by pressing a number

- objects, like trees(meshes used: cones and cylinders) and a house(meshes used: cubes and triangles) that are part of a scene graph and they appear on the heightmap from the ground and get stabilized when they reach a proper height - the trees' leaves are rotating slowly and continuously, giving a more realistic impression





- and last but not least, a slight blur as a post-processing effect throughout the scene.